

Sense of Community and Posttraumatic Growth among Tigrayan Refugees in Nairobi, Kenya

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DOI: <https://doi.org/10.51244/IJRSI.2025.12060060>

Received: 07 June 2025; Accepted: 17 June 2025; Published: 07 July 2025

ABSTRACT

The study investigated the association between the Sense of Community (SOC) and Post-traumatic Growth (PTG) among Tigrayan refugees in Nairobi, Kenya. Its objectives were to: assess the prevalence of SOC; assess barriers to PTG (BPTG); establish the PTG levels; establish the relationship between the SOC and PTG among Tigrayan refugees. The hypothesis posited that there was no association between SOC and PTG. The theoretical framework comprised PTG by Tedeschi and Calhoun (1996), SOC by McMillan and Chavis (1986), and Ubuntu theory. A mixed-methods approach with a convergent-parallel design was employed. Data collection utilised questionnaires and FGDs. Pretesting yielded a Cronbach's Alpha coefficient of 0.836. Cluster sampling categorised the participants into three clusters, while simple random sampling identified 266 respondents from the clusters. The study recorded 80.5% response rate. Despite trauma, refugees exhibited moderate mean scores with positive significant correlations between SOC, BPTG, and PTG. The younger the refugees, the more likely they were to demonstrate stronger SOC and higher levels of PTG. Linguistic diversity was positively correlated with stronger SOC, but PTG scores remained unchanged. The improved model accounted for 33% variation in PTG compared to 22.2% variation in PTG less BPTG; thus struggling with BPTG fosters enduring PTG. The results suggested the need to appreciate the paradox that out of loss, refugees can gain wisdom to positively live with the uncertainty of poly-crisis. The SOC is positively associated with PTG among Tigrayan refugees at a 95% significance level. Future research may benefit from longitudinal designs with experimental variations.

Keywords: Sense of Community, Barriers to Posttraumatic Growth, Posttraumatic Growth, Tigrayan Refugees

INTRODUCTION

Background to the Study

In today's poly-crisis era, with the increasing number of individuals and communities experiencing trauma, people should be buoyed to freely grow and become fully functioning individuals of their communities. Tedeschi and Calhoun (2004) characterised Post-traumatic Growth (PTG) as a favourable psychological transformation that arises from grappling with particularly trying life situations, which disproportionately damages a significant aspect of an individual's worldview. It is a truism that the growth from traumatic experiences is core to PTG. Alleaume, Goutaudier and Fouques (2023) exude that PTG entails exceeding previous levels of functioning; not only returning to pre-event levels. It then follows that despite individuals and communities experiencing trauma, PTG enables people to function better as individuals in communities.

Human beings are destined to live in a community. McMillan and Chavis (1986) observed that the Sense of Community (SOC) is a pivotal aspect of community-living that fulfils the human desire for social connectedness. This premise has been widely acknowledged as a robust indicator of social bonding among community members. Despite this, disasters such as floods, storms, and volcanic eruptions (Anderson, 2018), wars and economic downturns (UNHCR, 2023), and COVID-19 (Gómez-Acosta et al., 2023), among others, continue to challenge the SOC, in the affected societies, thus exposing people to adversities, especially in post-traumatic context. Nevertheless, enhanced SOC can necessitate resilience as noted in a study in China by

Zhang et al. (2023) that established that SOC enabled international students to endure and recover from the adverse effects of the COVID-19 pandemic. Despite that these studies do not inadvertently focus on refugees, they indicate the essential role played by SOC in helping people cope with the adverse effects of devastating post-traumatic context.

This study adopts MacMillan and Chavis' (1986) conceptualisation that the Sense of Community (SOC) is the shared feeling of belonging and being significant to each other with a view of meeting each other's needs in the community. In light of the present study, SOC is relevant as it not only emphasizes the essence of environment triggering trauma but also explores how refugees' togetherness is related to their growth out of post-traumatic experience. Similarly, an increased SOC mitigates negative consequences attributed to disastrous events (Kashy-Rosenbaum & Aizenkot, 2020; Rui & Guo, 2022). It is therefore essential to highlight that refugees, around the world, often go through devastating experiences, while at home or even in host countries. This may often hinder their growth through traumatic experiences. Sometimes, as if the ugly experience of displacement by disastrous events in homeland is inadequate, refugees are prone to social exclusion, discrimination, marginalisation, and prejudice while away from home or in host countries (Le, Polonsky & Arambewela, 2015). It is such challenges that compound the main reason behind displacement of refugees. Often, these challenges push them to form alliances, while away from home, to foster a sense of attachment to their homeland and preserve their heritage (McClinchey, 202) while in host countries. These assertions highlight the significance of SOC among refugees while away from home. It is, therefore, appropriate to explore various research on refugees exposed to trauma while in different areas of the world.

In a UNHCR global report (2023), 108.4 million people worldwide had fled their homes by the end of 2022 due violence, human rights abuses, or serious public order disturbances. As of June 2024, more than 122 million people had been displaced from their homes worldwide (UNHCR, 2024). The latest data meant that one person in every 66 people worldwide had fled their home due to the global poly-crisis. Again, in an earlier study, Varvin (2019) established that approximately 65 million displaced people worldwide were as a result of conflict and persecution, out of which more than 25 million were refugees. Moreover, a World Migration Report by the International Organization for Migration (2022) showed that the number of refugees between 2000 and 2022 increased from 14 million to 26.4 million. The above studies demonstrate that the number of refugees worldwide has nearly doubled in the last two decades. These studies indicate that millions of refugees are subjected to trauma in their homeland, thus fleeing to safer places. For instance, an earlier UNHCR (2022) report showed that over one-third of the world's refugees live in Africa, with East Africa and the Horn of Africa hosting the highest number. Therefore, East Africa and the Horn of Africa in particular were hosting the highest number of refugees, as shown in the UNHCR report. Precisely, the UNHCR's (2022) report indicated that Ethiopia was home to 844,589 refugees, with the bulk of these refugees hailing from South Sudan (46%), Somalia (28%), Eritrea (19%), and Sudan (6%). Unfortunately, many of these refugees are exposed to a wide range of traumas. For example, a study by Yousef et al (2021) found that 86.4% of the participants had been exposed to at least one traumatic event. These studies indicate that war-related conflicts had negatively affected the mental health of the victims, hence the need for huge numbers of individuals to overcome such traumatic experiences or rather, embrace Post-traumatic Growth (PTG).

In France and Brazil, a comparative study of 203 migrants conducted by Brunnet et al. (2022) established that the levels of Post-traumatic Growth (PTG) were low in France and moderate in Brazil. Further, the same study found that lack of basic human needs like food and shelter was negatively related to PTG, while concerns about family members in the home country were identified as positive predictors in both countries. The same authors further noted that PTG has three broad categories of perceived change benefits in self-perception, interpersonal relationships, and philosophy of life. In an earlier study, Acquaye (2017) noted that PTG is a concept associated with a meaningful change from a traumatic experience. In yet another study, Tedeschi et al. (2018) noted that PTG is often experienced alongside significant levels of post-traumatic stress and can occur in several domains, including improved relationships with others, a new appreciation for life, new possibilities, increased personal strength, and spiritual or existential growth. Moreover, Tedeschi and Moore (2016) noted that PTG is the ability to manage trauma in the future. The study by Brunnet et al. (2022) found that regular migratory status was found to positively predict PTG, while post-traumatic stress disorder had a negative impact in France. Yet, focusing on a different study by Pargament and Mahoney (2012), it was noted that participants often identified themselves as both religious and spiritual, which can be expressed both

individually and socially, and such self-identification can either promote or hinder well-being. Furthermore, another study found that spirituality and religiosity were highly correlated with physical and mental health after a collective trauma (McIntosh et al., 2011). In a nutshell, the above studies highlight various factors contributing either positively or negatively to an individual's growth following traumatic experiences.

In Europe, Turkey, and Uganda, a longitudinal study of 912 asylum seekers and refugees by Purgato et al. (2022) found that the improvement of psychological symptoms and well-being of participants was 64.7% in Europe and Turkey, while Uganda recorded 31.5%. The comparative study concluded that many participants adapted to adversity; however, contextual factors were critical in determining mental health outcomes. Dunn et al. (2022) suggested that gene-environment interactions determine the degree of PTG.

In a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) of 66 studies by Pop et al. (2025), it was reported that the studies recorded a moderate to high degree of Post-traumatic Growth (PTG), with the strongest endorsement being among the younger people. Thus, age is an important predictor of PTG. Moreover, Thoresen et al. (2022) reported that high continuity of treatment facilitates commitment to treatment, limits avoidance behaviour, reduces drift in therapy, and prevents session cancellation. This observation indicated that intensive treatment is demanding but worthwhile. In addition, Hamrah et al. (2021) proposed that health promotion, prevention, and early intervention programs should address communication difficulties, family separation, isolation, and mental health literacy factors that may discourage people from seeking help. These authors, therefore, suggested that the uptake of post-traumatic stress disorder (PTSD) treatment is correlated with other factors like the intensity of treatment and variation in intervention programs.

In an exploratory study of 21 articles by Fayaz (2023) on the barriers to PTG in children and adolescents, it was noted that most disasters with a child's microsystem or immediate environment (family, friends, peers, etc.), macro-system (laws, customs, cultural practices, etc.) and ecosystems (institutions, services affecting them, etc.) adversely affected PTG in children and adolescents. Fayaz further emphasized that disaster trauma is experienced collectively and can lead to compromised social support from family, friends, relatives, peers, teachers, schools, and other community members. This could hinder recovery from traumatic experiences. It is clear that the immediate environment is essential in necessitating or hindering recovery from post-trauma following various disasters. For example, a cross-sectional study of 146 caregivers of Schizophrenic patients in Turkey by Bakar and Durmaz (2022) established that as the education level and marital status increased, the level of PTG increased too. Friedman, Resick, and Keane (2014) also observed that despite greater traumatic experiences in males than in females, PTG is higher in females. An interesting observation made by Tedeschi and Moore (2016) noted that being extroverted, open to experiences, or older are key indicators of growth through post-traumatic experiences. Similarly, Kadri, Gracey, and Leddy (2022) indicated that social support is a critical element in PTG with older adults. In addition, Tedeschi and Moore (2016) reported that 33.3% to 50% of those who experience simple trauma come out of it successfully. Evidently, age, level of social support, level of education, marital status, personality, type of trauma, and gender are some factors affecting PTG.

In South Africa, a multi-method qualitative study of 33 participants from seven countries by Yusuf and Umejesi (2024) found that the social displacement resulting in migrations had caused different levels of vulnerability among refugees in host countries, with the elderly, for example, facing the challenges of accessing refugee documents, access to education, and many more. Again, another study of South African students by Makalela (2018) found that the Ubuntu way of life fostered a Sense of Community (SOC) during the learning process. These studies identified education and Ubuntu way of life as important in fostering SOC. In Rwanda, a systematic study by Saaida (2023) found that cultural differences posed challenges toward reconciliation and healing following the 1994 genocide. These studies therefore ascertain that the community contexts shape the lives and identities of individuals (Lardier, Opara, & Roach, 2022). It is worth noting that although these studies were conducted in varying geographical locations and with different populations, they all emphasize the significance of community context in shaping SOC among members of disrupted societies. In Mogadishu, Somalia, a cross-sectional quantitative study of 401 Internally Displaced Persons (IDPs) by Ali, Mburu, and Mathai (2023) found that 59% of the IDPs met the symptom criteria for depression, while 32% met the symptom criteria for post-traumatic stress disorder. It can, therefore, be observed that war-related

conflicts often result in negative effects on the mental health of victims, thus hindering Post-traumatic Growth (PTG).

In Kenya, an explanatory sequential mixed-methods research by Asatsa (2018) on 257 participants who survived the Garissa University terrorist attack, Post-traumatic Growth (PTG) and early trauma processing strategies were positively correlated with the counselling sessions attended. This study, however, focused on survivors of terrorist attacks, whereas the current study used a convergent-parallel design in assessing the constructs, the Sense of Community (SOC) and Post-traumatic Growth (PTG) among Tigrayan refugees in Nairobi, Kenya. Yet, in a recent qualitative study of 28 Ethiopian refugees in Nairobi by Fernandez and Athukorala (2023), it was demonstrated that multiple forms of violence were deeply imbricated in the spaces and temporal dimensions of the refugee experience and severely undermined refugees' capacity for social reproduction. The authors further argued that the consequences of violence, disintegration of families, and the bodily harm suffered by some refugees due to torture were traumatic, and severely damaged the physical and/or mental health of the refugees. Despite that this previous study used a qualitative research design in understanding the constructs, it emphasized the multiple challenges (violence, loss of home, families, belongings, land, country and citizenship) faced by Ethiopian refugees while in Nairobi, Kenya. The present study, however, employed a mixed methods approach and a convergent-parallel design in assessing the SOC and PTG among Tigrayan refugees in Nairobi, Kenya.

The reviewed literature reveals that the pervasive and increasingly poly-crisis global environment exposes each of us to serial post-traumatic events than at any other time in human history. Consider fatal heat waves, floods, storms, and volcanic eruptions (Anderson, 2018), conflicts such as Russia's invasion of Ukraine (UNHCR, 2023), chronic illnesses like cancer (Choi et al., 2023), and the impact of pandemics like COVID-19 (Gómez-Acosta et al., 2023). These events underscore the increasing universal vulnerability of human beings. Kangaslampi, Peltonen, and Hall (2022) observed that it is possible to develop post-traumatic symptoms as a result of traumatic events related to war and displacement. Similarly, Fernandez and Athukorala (2023) noted that the general global perception of refugees as unwanted runaway persons, deserving of disdain and hostility, is a stereotype that needs to be addressed. Therefore, just like any other person in the world, refugees too deserve beautiful things in life, including a chance to live a fulfilling life. Although refugees may face many hurdles in life, Fernandez and Athukorala (2023) observe that many develop the ability to survive and thrive in new environments. Accordingly, one might argue that refugees may have the best opportunity to rebuild a strong Sense of Community (SOC) that propels them to Post-traumatic Growth (PTG). Pretty (2007) and Cretney (2018) reiterate that though SOC is important to the quality of life and everyday well-being, in times of crisis, it aids members to effectively respond while fostering collective resilience. Notwithstanding that individuals exposed to war may readily develop post-traumatic symptoms as well as weaken their SOC, all is not lost since many trauma survivors report experiencing PTG (Kangaslampi et al., 2022).

In particular, the outbreak of the civil war in Tigray in November 2020 exposed many individuals to deeply traumatic experiences (Ibreck & de Waal, 2022). Following the civil war in Ethiopia, over 865,000 refugees fled to neighbouring countries, with the Tigray region bearing the brunt of displacement (UNHCR, 2022; Fraioli, 2021), with 788 Tigrayan refugees seeking refuge in Nairobi, Kenya (TCWA, 2022). This disrupted the social fabric or the Sense of Community (SOC) that once held the community together. Displacement alone is a harrowing ordeal, yet for refugees, the trauma does not end at the border. As Le et al. (2015) assert, those forced to flee their homes are frequently confronted with new adversities like social exclusion, discrimination, marginalization, and prejudice in the host countries. These challenges are not inherently negative. As noted by Kangaslampi et al. (2022), survivors of war-related trauma may also report signs of Post-traumatic Growth (PTG) - a testament to human resilience. In line with this, Tedeschi and Moore (2021) emphasize that individuals should strive to form new identities that can survive trauma or develop the wisdom to function better in life or PTG. Tedeschi and Calhoun (1996) conceptualized PTG as a transformative process wherein individuals report positive psychological change through their struggle. Since PTG is linked to positive changes following trauma (Wang et al., 2021) there was an urgent need for research on the SOC and PTG among Tigrayan refugees in Nairobi. Owing to these reasons, this study assessed the association between the Sense of Community and Post-traumatic Growth among Tigrayan refugees in Nairobi, Kenya.

Objectives of the Study

- i. To assess the prevalence of the Sense of Community among Tigrayan refugees in Kenya.
- ii. To assess the barriers to PTG among Tigrayan refugees in Kenya.
- iii. To establish the levels of PTG among Tigrayan refugees in Kenya.
- iv. To establish the relationship between SOC and PTG among Tigrayan refugees in Nairobi, Kenya.

Hypothesis

H0: There is no association between the SOC and PTG among Tigrayan refugees in Nairobi, Kenya.

METHODOLOGY

The study employed a mixed-methods approach that utilised a convergent-parallel design to collect quantitative and qualitative data on the 'Sense of Community' (SOC) and 'Post-traumatic Growth' (PTG) among 788 Tigrayan refugees in Nairobi, Kenya. The target population consisted of Tigrayan refugees residing in Eastlands, Adams Arcade, and Lang'ata centres in Nairobi County (TCWA, 2022). These Tigrayan refugees were proficient in speaking at least one language (Tigrigna, Irob-Saho, Kunama or Amharic) spoken in the Tigray region. Similarly, Tigrayan refugees in Nairobi were targeted because the participants shared a common social and cultural context, thus having characteristics to represent the larger Tigrayan refugee population in Kenya.

In identifying participants to complete the questionnaire, two stages of cluster sampling were employed. According to Mugenda and Mugenda (2019), the cluster sampling technique involves the selection of an intact group. In this study, the first stage of cluster sampling involved identifying all 788 Tigray refugees (TCWA, 2022) residing in Nairobi County to constitute the units of observation. The second stage involved identifying the three clusters (Eastlands, Adams Arcade, and Lang'ata centres) hosting the Tigrayan refugees in Nairobi County (TCWA, 2022). Hereafter, simple random sampling was used in identifying respective participants from each of the three clusters. Kothari and Garg (2019) assert that 'simple random sampling ensures that each item in the target population has an equal chance of inclusion'. This study, therefore, provided every Tigrayan refugee residing in each of the three clusters with an equal chance of inclusion.

In identifying 25 participants, in the Focus Group Discussion (FGDs), a two-stage purposive sampling technique was used. The first stage involved purposive sampling involved identified the three locations in Nairobi, hosting the participants (Tigrayan refugees). In this regard, the researcher identified three centres (Eastlands, Adams Arcade, and Lang'ata) hosting Tigrayan refugees in Nairobi, Kenya. In the second stage of purposive sampling, the researcher handpicked 7, 8, and 10 participants from Eastlands, Lang'ata, and Adams Arcade refugee centres, respectively. Mugenda and Mugenda (2019) justified the use of purposive sampling by noting that it is applied to get participants who possess the required characteristics for the study.

The questionnaire was a self-administered instrument with closed-ended questions only. It consisted of two major parts, with the first part collecting the participants' biographical data. The second part assessed the association between 'Sense of Community' (SOC) and 'Post-traumatic Growth' (PTG) among Tigrayan refugees in Nairobi, Kenya.

The first section in part two assessed the construct 'Sense of Community' among Tigrayan refugees in Nairobi. The 'Brief Sense of Community Scale' (BSCS) was employed in examining the variable 'Sense of Community'. Originally, the SOC scale was developed as the 'Sense of Community Index' (SCI) based on McMillan and Chavis (1986) theory, then improved by Perkins et al. (1990). However, this study used the BSCS, which was later condensed and validated by Peterson et al. (2008). Peterson et al. (2008) BSCS is 'an eight-item scale that includes: needs fulfillment, membership, influence, and emotional connection domain'. In this study, the term 'neighbourhood' in the BSCS items is revised to 'Tigray Community in Nairobi'. Each

item is, therefore, 'rated on a Five-point Likert scale (Strongly Disagree, Disagree, Neither Disagree nor Agree; Agree, Strongly Agree) with higher scores indicating a stronger SOC' (Peterson et al. 2008).

The second section, part two of the study, assessed the construct 'Barriers to Post-traumatic Growth' among Tigrayan refugees in Nairobi, Kenya. The seven-item scale was developed and pre-tested for reliability and validity. Each item was rated on a Five-point Likert scale (Strongly Disagree, Disagree, Neither Disagree nor Agree, Agree, Strongly Agree) with higher scores indicating a stronger BPTG.

In section three, part two of the study, the 'Post-traumatic Growth Inventory' (PTGI) scale, developed by Richard Tedeschi and Lawrence Calhoun, was utilized to assess any positive psychological outcomes following trauma (Tedeschi & Calhoun, 1996). The 'PTGI is a 21-item scale that evaluates five domains: new possibilities, relating to others, personal growth, appreciation of life, and spiritual change' (Tedeschi & Calhoun, 2004). The original PTGI scale was revised by Tedeschi et al. (2017) to include 'existential items and is based on a 6-point Likert scale (0-5) where participants indicate the extent to which they have experienced a particular change'. The responses to each factor item were summed to obtain the individual factors' scores, and all responses were added to obtain the overall PTGI score, which can range from 0-105 (Tedeschi et al., 2017). The higher the scores, the greater the degree of PTG experience by an individual. This study, therefore, used the PTGI scale by Tedeschi et al. (2017).

The pre-testing was carried out on 16th May 2024 among the Tigrayan refugees living in Dagoretti Corner, Nairobi, Kenya. It was a single test among 30 Tigrayan refugees. 30 pre-testing participants represented 11.3% of the sample size. Mugenda and Mugenda (2019) recommended that 'one to 10% of the pre-test sample is sufficient for a study'. Thus, the pre-testing sample was far above the threshold recommended by Mugenda and Mugenda (2019). The pretesting was carried out in a controlled environment within 20 minutes.

Discourse analysis was employed in analysing qualitative data from the Focus Group Discussions. Discourse analysis was carried out using MAXQDA to identify and validate themes related to SOC, BPTG and PTG among Tigrayan refugees in Nairobi. The participants' impressions on the domains or items under SOC, BPTG, and PTG were coded, and various expressions related to the variables of this study were identified. Thematic validation was ensured through code co-occurrence matrix, frequency counts, and visualization of discourse patterns. These themes reflected experiences on SOC, BPTG, and PTG within the context of Tigrayan refugees in Nairobi. Triangulation was enhanced by comparing themes across the data from the objectives of the study.

Quantitative data was analysed in descriptive and inferential statistics. Statistical Package for Social Sciences (SPSS) version 28 was employed in computing numerical responses from quantitative data. The data were computed in relevant indices [frequencies, percentages, mean, standard deviation statistic; Correlation Coefficients (r), Coefficient of determination (R-Square); One-Way Analysis of Variance (ANOVA); Regression Coefficients (β_n)]. Hereafter, numerical and non-numerical data were triangulated to provide rich results for the study. All ethical requirements were strictly adhered to during and after the data collection process.

RESULTS

The pre-testing yielded an overall Alpha (α) of 0.836. The computed overall reliability score represents a high internal consistency, which is way above the threshold of .70 recommended by Mugenda and Mugenda (2019) as the rule of thumb. Based on these results, the reliability scores of all the indicators of SOC, BPTG and PTG were acceptable. The Confirmatory Factor Analysis (CFA) validity results supported all factors measuring SOC and PTG. However, one item measuring BPTG failed to meet the threshold. The failed indicator was, therefore, omitted from the improved questionnaire. Out of the 266 distributed questionnaires, 216 were returned. But two of them were invalid, thus leaving 214 valid questionnaires for analysis. The study, therefore, recorded 80.5% response rate.

Out of the 214 respondents, a majority (66.4% or 142) were male, while a minority (33.4% or 72) were female. The oldest respondents (34 years and older) constituted the majority (34.1% or 73) while the youngest (18 - 21

years) were the minority (1.4% or 3). The respondents with college or university education were the majority (73.4% or 157) while those with primary school education qualifications constituted the minority (2.3% or 5). Further, 61.7% or 32 respondents spoke two languages, followed by 34.1% or 73 respondents who spoke three languages, and lastly, 4.2% or 9 respondents spoke only one language. Moreover, a majority of the respondents (92.1% or 197) were Christians, whereas a minority (7.9% or 17) were Muslims. Lastly, a majority (86% or 184) had not received trauma-related therapy, as opposed to 14% or 30 respondents who had received trauma-related therapy.

The Sense of Community

Objective one sought to assess the prevalence of the Sense of Community among Tigrayan refugees in Nairobi, Kenya. As to whether the respondents got the social support they needed in the Tigray Community in Nairobi, a majority ($M = 2.90$; $SD = 1.356$) neither disagreed nor agreed, and there was a significant variation. This indicated that the respondents were ambivalent regarding the support they were receiving from the immediate Tigray community in Nairobi. Similarly, on whether the Tigray Community in Nairobi helped the respondents to fulfil their needs, a majority of respondents ($M = 2.82$; $SD = 1.154$) neither disagreed nor agreed with the statement. This is an indication that the respondents were neutral regarding the help they were receiving from the Tigray community to fulfil their needs while in Nairobi. Nonetheless, a majority of the respondents ($M = 3.29$; $SD = 1.299$) agreed that they felt like a member of the Tigray community in Nairobi, and there was a significant variation. Similarly, on whether the respondents felt they belonged to the Tigray community in Nairobi, a majority of respondents ($M = 3.44$; $SD = 1.558$) agreed with the statement, and there was a significant variation. These responses indicated that despite the perception of moderate support or help from the Tigray community in Nairobi, the respondents acknowledged there was a higher sense of belonging from the Tigray community in Nairobi, Kenya.

Regarding whether the respondents' voice about the Tigray community in Nairobi was appreciated, a majority of respondents ($M = 2.83$; $SD = 1.271$) neither disagreed nor agreed, and there was a significant variation. This indicated a notable diversity of perspectives regarding their voice in the Tigray community. Thus, despite the moderate affiliation to the Tigray community in Nairobi, the respondents felt that the community did not value their voice as much as it should have. Similarly, a majority of the respondents agreed ($M = 3.04$; $SD = 1.301$) that individuals in the Tigray Community in Nairobi had moderate influence on each other, and there was a significant variation. Again, the respondents were ambivalent about their influence on one another. Moreover, a majority of respondents ($M = 3.38$; $SD = 1.253$) felt connected to the Tigray community in Nairobi, and there was a significant variation. Thus, despite their moderate influence on one another, the respondents moderately felt connected to each other. No wonder a majority ($M = 3.64$; $SD = 1.111$) felt they had a good bond with others in the Tigray Community in Nairobi, Kenya.

The results on the Sense of Community (SOC) among the Tigrayan refugees indicated a moderate level of perceived influence among participants ($2.82 > M < 3.64$; $1.111 > SD < 1.558$). The results suggested a notable variation of perspectives on SOC among the Tigray community residing in Nairobi, Kenya. These descriptive results align with the sentiments expressed in Focus Group Discussions (FGDs), whereby there was emphasis on strengthening the Tigrayan associations within Kenya and across borders to facilitate advocacy efforts and shared emotional well-being as a community. Thus, the participants shared the view that, despite the existing bond amongst themselves, there was a need to build a stronger bond. These sentiments are captured in the following excerpt from the FGDs:

"Most of us, like 90% of Tigrayans, came without anything; we live on support from relatives, family members and friends... we need legal and professional psychosocial support for our healing as refugees. I have learnt to respect work and do any work without cultural biases – like a man baking an 'enjera' or a pancake – that was culturally a role of women. But now I have learned to do anything to survive. Our interconnectedness, as Tigrayans, after the war is somehow intense... whether as a Tigrayan in Sudan, Kenya, Ethiopia, or even in Tigray... we are surviving and sharing due to our interconnectedness."

The findings from descriptive and qualitative data show there was a moderate Sense of Community (SOC) amongst the Tigrayan refugees living in Nairobi, Kenya. The existence of moderate SOC amongst the

Tigrayan refugees in Nairobi, nonetheless, indicated the need for the Tigrayan community to work on the SOC to live and thrive in the post-war context.

The F-statistic showed that all biographical data (age, gender, level of education, number of languages, religious affiliation, and trauma-related therapy) of the study had a statistically significant ($p < .001$) effect on the Sense of Community (SOC) among Tigrayan refugees in Nairobi. After conducting Tukey's Honestly Significant Difference (HSD) post-hoc analysis, combination of the 'younger age groups' and 'many languages spoken' within the Tigray region yielded statistically significant differences while other permutation on these factors did not make considerable differences in SOC.

Barriers to Post-traumatic Growth

Following the assessment of the Barriers to PTG (BPTG), a majority of respondents ($M = 4.03$; $SD = 1.19$) strongly agreed that the condition of their family members, friends, and relatives in Tigray was hindering their healing from traumatic experiences. The findings suggest that the situation of loved ones in Tigray was terribly worrying a majority of participants. Surprisingly, the participants depended on the same family members, friends, and relatives that they were anxious about, for their daily needs. This anxiety is captured by sentiments in the following excerpt from the Focus Group Discussions (FGDs):

"Most of us, like 90% of Tigrayans came without anything; we live on support sent by relatives from family, friends, and relatives."

Such sentiments suggest that despite the participants' dread about the circumstances of their family, friends, and relatives, their lack of basic necessities ($M = 2.41$; $SD = 1.241$) was the least significant impediment to their Post-traumatic Growth (PTG). This implied that the participants' concerns were beyond the need for support with basic needs, to perhaps growth through traumatic experience or PTG.

On the lack of intervention programs, a majority of respondents ($M = 3.76$; $SD = 1.334$) agreed that they felt there were insufficient programs to help them heal from traumatic experiences or Post-traumatic Growth (PTG). These results indicated that the respondents recognized that there were insufficient intervention programs to support their healing from traumatic experiences or to foster PTG. Again, a majority of respondents ($M = 3.51$; $SD = 1.475$) agreed that there were legal processes related to their refugee status in Kenya that were inhibiting their growth from traumatic experiences. The results suggest that most respondents believed that legal processes related to their refugee status in Kenya inhibited their healing or the experience of PTG. Again, a majority of respondents ($M = 3.44$; $SD = 1.283$) agreed that they were living in an environment that was inhibiting their mental health, and there was a significant variation. Similar sentiments on an unfriendly environment were expressed in FGDs as captured in the excerpt:

"We are unfamiliar with the environment... a few of us ventured into business lately... However, the police and security people don't view us like people who are here due to problems at home, but as if we have a lot of resources... it's hard to pay all the money officials ask every now and then... extortion of money we don't have... we are here due to war in Tigray... Cruelties like the burning of Tigrayans alive left indelible marks in our lives and justice must prevail for us to heal from trauma. If the politics that triggered the war in Tigray are not evaluated and the narratives flaring animosity addressed, another wave of attack against Tigrayans might recur. We are lobbying for the improvement of political life in Ethiopia so that we can return to our country."

The aforementioned excerpt suggests that, despite the unfavourable environment in their host country, the participants expressed ambivalence about their aspirations to return to their homeland. Furthermore, the majority of respondents ($M = 3.11$; $SD = 1.361$) moderately concurred that certain elements of their customs were impeding their recovery from traumatic experiences, with a significant variation observed. These results indicated that most respondents were dissatisfied with some aspects of their 'Tigrayanness'.

On whether some religious beliefs hindered their healing from traumatic experiences, a majority ($M = 2.45$; $SD = 1.220$) neither disagreed nor agreed, though with a significant variation. The finding suggests that the participants were ambivalent that religious beliefs were hindering their Post-traumatic Growth (PTG). These results concur with the sentiments expressed in the Focus Group Discussions (FGDs) that there was a decline

in faith, spiritual or religious teachings, especially amongst those who witnessed religious leaders supporting the violence against the Tigrayans. This interpretation is demonstrated in the following excerpt from the FGDs:

“...after witnessing atrocities like the burning of Tigrayans alive and the Orthodox Church leaders supporting the war against Tigrayans, I am convinced that my faith and religion are illusory... they don’t exist. I believe religious leaders were the architects of this war. While in Addis, I heard a religious leader praying, ‘Lord, destroy the “Junta,” referring to Tigrayans. I wondered why our identity had become a crime. But, I am grateful it happened because I understand the reality. I’ve had a profound spiritual awakening and an identity as a Tigrayan. This suffering has revealed some positive aspects of reality—surviving through hardships, and persevering through resilience rather than mere faith in deities or religious beliefs.”

These findings indicate that the war in Tigray had inflicted enduring traumatic effects on those who witnessed the perpetuation of atrocities on innocent people. It can be inferred that most of these respondents experienced profound disillusionment with previously deep-rooted religious identities. The participants’ diminished faith in religious beliefs had triggered significant spiritual metamorphosis. This assertion is supported by both quantitative and qualitative results, which indicate that religious beliefs no longer play a significant role in PTG among Tigrayan refugees in Nairobi, Kenya.

Again, the F-statistic showed that all biographical data (age, gender, level of education, number of languages, religious affiliation, and trauma-related therapy) had a statistically significant ($p < .001$) effect on BPTG among Tigrayan refugees in Nairobi, Kenya. After conducting Tukey’s Honestly Significant Difference (HSD) post-hoc test, neither permutation based on age nor the number of languages spoken by refugees, yielded statistically significant differences in relation to the Barriers to Post-traumatic Growth (BPTG).

Post-traumatic Growth

The third objective sought to establish the levels of Post-traumatic Growth (PTG) among Tigrayan refugees in Nairobi, Kenya. The results of all five domains of PTG (Relating to Others; New Possibilities; Personal Strength; Spiritual Strength; Appreciation of Life) are presented under this section. Table I presents the first domain (Relating to Others) of PTG.

On the first domain, Relating to others (RTO), a majority of respondents ($M = 3.45$; $SD = 1.406$) indicated that they had experienced a moderate degree of change in establishing a new path for their lives. These results show that the Tigrayan refugees were accepting the reality of changes in the new courses of their lives. Again, a majority of respondents ($M = 3.29$; $SD = 1.418$) indicated that they had experienced a moderate degree of change in developing new interests in life. These findings show that a majority of respondents had experienced a moderate degree of change in developing new interests, which marked a new path in their lives. These results are reiterated in sentiments in the Focus Group Discussions (FGDs) when the participants expressed positive relationships amongst themselves and with other communities, noting a growing mutual curiosity about each other’s cultures, especially in learning new languages and cultures. These sentiments are captured in the following excerpt from the FGDs:

“I have learnt to respect work and do any work without cultural biases – as a man I bake an ‘enjera’ or a pancake – a role assigned to women in Ethiopia. But now I have learned to do many things to survive. We interact with other ethnic Ethiopian and Eritrean refugees here in Kenya. As well, we interact very well with local Kenyans... we’re picking some Kiswahili phrases from Kenyans and some Kenyans have picked some Tigrigna phrases too... we deeply appreciate Kenyans. As Tigrayans, our interconnectedness after the war is so intense... whether as a Tigrayan in Sudan, Kenya, Ethiopia, or even in Tigray... we are surviving and sharing due to our interconnectedness.”

The sentiments expressed in FGDs emphasized the vital role of community support in the healing and adaptation process for Tigrayan refugees. Personal resilience and social connections were central in realization of Post-traumatic Growth or PTG. The participants’ experiences illustrated a transformative shift in cultural roles and practices as they navigated survival in a new challenging environment while fostering positive relationships within themselves, the local communities, and the wider Tigrayan nation across the globe.

Table I: Relating to Others

Item	N	Min	Max	Mean	Std. Dev.
I developed new interests	214	0	5	3.29	1.418
I established a new path for my life	214	0	5	3.45	1.406
Valid N (listwise)	214				

As shown in Table II, a majority of respondents ($M = 3.28$; $SD = 1.425$) had experienced a moderate degree of change in trying to change things that needed changing. This indicated that the refugees were moderately changing that which could make them thrive in the new life. Again, a majority of respondents ($M = 3.04$; $SD = 1.458$) indicated that they had experienced to a moderate degree of change in available new opportunities that otherwise would not have existed. This is an indication that the change in changing things that needed changing was creating new opportunities that would not have ordinarily existed for the refugees. These results are captured in Focus Group Discussions (FGDs) when the participants expressed that they had learned to engage in various activities that are culturally unacceptable in Ethiopia. These sentiments are captured in the following excerpt in FGDs when one participant retorted:

"I have learned to do many things to survive. As a man I bake an 'enjera' or a pancake – a role assigned to women in Ethiopia."

On whether the respondents can do better things in life, a majority of respondents ($M = 2.96$; $SD = 1.479$) had experienced change to this crisis to a small degree. Thus, they felt they could do better things in life, only to a small degree. Interestingly, this is despite recording to a moderate degree of experiencing changes in changing things that needed changing, thus creating new opportunities. This is an intriguing observation because there was acknowledgement of changing what needed changing to create new opportunities to a moderate degree, yet there was expression of slight desperation by indicating that they can do better things in life, only to a small degree. Such desperation indicated that refugees were struggling to grow through the traumatic experiences in the post-war refugee context.

Table II: New Possibilities

Item	N	Min	Max	Mean	Std. Dev.
I can do better things in life	214	0	5	2.96	1.479
I have new opportunities available that otherwise wouldn't have existed	214	0	5	3.04	1.458
I am more likely to try to change things that need changing	214	0	5	3.28	1.425
Valid N (listwise)	214				

On the third domain, on Personal Strength, a majority of respondents ($M = 3.11$; $SD = 1.493$) expressed a change in having a greater feeling of self-reliance to a moderate degree. This implied that the respondents were slowly becoming self-reliant while in the new environment. Similarly, a majority of respondents ($M = 3.17$; $SD = 1.360$) expressed experience of being better at handling difficulties than there before to a moderate degree. This indicated that the respondents were slowly taking responsibility of their lives while in the new environment. Moreover, a majority of respondents ($M = 3.34$; $SD = 1.388$) expressed that they were better at accepting the way things worked out to a moderate degree and the change had significant variation as well. This is an indication that the respondents were slowly accepting the reality in the new environment. Finally, a majority of respondents ($M = 3.76$; $SD = 1.331$) expressed change in having discovered that they were stronger than they thought to a moderate degree and the change recorded a significant variation. This was an indication that the respondents were slowly realising and embracing their hidden strengths while in the new environment. These sentiments are reiterated in the excerpt from the Focus Group Discussions (FGD):

"This suffering has some positive side in knowing the reality. I have realized that to survive through hardships, one survives by being resilient. After the war, I realized that suffering had made me strong."

It can therefore be observed that the change of greater feeling of self-reliance, being better at handling difficulties, being better at accepting the way things work out, and the discovery that one was better than one thought to a moderate degree, was an expression of greater personal strength as a Tigrayan refugee. These

observations point at the struggles as well as the achievements that the refugees were gradually embracing while in the new environment.

On the forth domain, Spiritual Change (SC), a majority of respondents ($M = 2.89$; $SD = 1.135$) indicated having experienced change to better understanding of spiritual matters to a small degree though the change had a significant variation. Among all the other domains of Post-traumatic Growth (PTG), having experienced change to a better understanding of spiritual matters recorded one of the lowest score. Perhaps the respondents felt that the new environment was not so conducive for practicing spiritual matters. Nevertheless, a majority of respondents ($M = 3.25$; $SD = 1.283$) indicated having a change to a stronger religious faith at a moderate degree and the change also recorded a significant variation. Despite changes in spiritual matters recording one of the lowest mean score ($M = 2.89$), though with a significant variation ($SD = 1.135$), changes to a stronger religious faith, however, recorded a moderate mean score (3.24) with significant variation ($SD = 1.283$) too. This is an indication that there was a higher number of respondents changing to have a stronger religious faith while not so much caring to understand the changes in their spiritual matters. On the contrary, the Focus Group Discussions (FGDs) emphasized personal resilience as participants had to adapt based on practical skills and inner strength rather than dogmatic religious beliefs. This assertion is reiterated in the following excerpt from FGDs:

“When Ethiopian religious leaders started campaigning against the Tigrayans I wondered why our identity became a crime. I finally realized that despite the high cost that Tigrayans paid in this war, I am somehow happy that this war helped me realize the reality...a deep spiritual awakening that has sown a new meaning as a Tigrayan.”

The excerpt reveals that personal resilience, rooted in practical skills and inner strength, emerged as a crucial coping mechanism for Tigrayans during the conflict, thus leading to a profound spiritual awakening and a redefined sense of identity despite the challenges. Perhaps, this was the reason why the respondents held the view that the Spiritual Change (SC) domain had only contributed a small or moderate degree of change in their lives as refugees, as they had inner strength to hang onto.

As shown in Table III, the fifth domain, Appreciation of Life (AOL), a majority of respondents ($M = 3.97$; $SD = 1.296$) indicated that they had experienced a change to a greater appreciation of the value of their life to a great degree as a result of the refugee crisis. This showed that most refugees had a greater appreciation of their lives. Moreover, a majority of respondents ($M = 3.83$; $SD = 1.404$) had experienced changes to better appreciate each day to a great degree as a result of the Tigray refugee crisis. This is an indication that the respondents were appreciating each day of their new lives as refugees. Again, a majority of respondents ($M = 3.81$; $SD = 1.313$) had experienced changes in their priorities about what was important in their lives to a great degree as a result of the Tigray refugee crisis. Thus, apart from greater appreciation of each day of their live, the respondents indicated that their priorities about what was important in their lives had changed too. This reality is captured in the participants' expression of dissociation from Ethiopian national identity to appreciation of the inner being or strength. For example, in the Focus Group Discussions (FGDs), it was reiterated that:

“I have completely re-evaluated my concept of Ethiopia. I now believe we no longer share a common history. Before the war, I was concerned about our country's growth, but after witnessing atrocities of war... my sense of 'Ethiopianness' feels fake.”

Participants in the FGDs revealed that their Ethiopian identity had been profoundly affected. The participants had only themselves to hold onto. Perhaps this is why the results of descriptive analysis indicated that in all three items under AOL (better appreciation of each day; priorities about what is important in life; greater appreciation for the value of life), the respondents had experienced changes to a great degree. Therefore, among the five domains of PTG, AOL recorded the highest mean scores with significant variations.

The F-statistic, for levels of Post-traumatic Growth (PTG) established statistically significant scores across various demographic factors. Following a subsequent Tukey's Honestly Significant Difference (HSD) post-hoc analysis, the results showed that the only statistically significant difference ($p < .05$) in Post-traumatic Growth

(PTG) was between age groups 18 -21 years and 22-25 years ($p = 0.037$). It is only the young age permutation that were found to have statistically significant differences. This is an indication that the younger the refugees the more likely they were to experience PTG. The results, however, recorded no permutation about the number of languages spoken by refugees that had significant difference in the level of PTG in this study.

Table III: Appreciation of Life

Items	N	Min	Max	Mean	Std. Deviation
I have changed my priorities about what is important in life	214	0	5	3.81	1.313
I have a greater appreciation for the value of my life	214	0	5	3.97	1.296
I can better appreciate each day	214	0	5	3.83	1.404
Valid N (listwise)	214				

Correlation Analysis of SOC, BPTG, and PTG

The study sought to establish the linear relationship between explanatory variables ‘Sense of Community’ (SOC), Barriers to PTG (BPTG) and the dependent variable ‘Post-traumatic Growth’ (PTG). Karl Pearson correlation coefficient results are presented in Table III.

Table III: Relationship between PTG, SOC, and BPTG

Variables	Parameter	Post-traumatic Growth (PTG)	Sense of Community (SOC)
PTG	Pearson Correlation	--	
SOC	Pearson Correlation	.471**	--
BPTG	Pearson Correlation	.522**	--
	Sig. (2-tailed)	.000	
	N	214	214

** . Correlation is significant at the 0.01 level (2-tailed)

As shown in Table III, Karl Pearson’s Correlation Coefficient (r) for the Prevalence of ‘Sense of Community’ (SOC) is .471 with a significant p -value of 0.000. This significant value is less than the p -value of 0.05. Therefore, there is a positive and statistically significant linear relationship between Prevalence of SOC and Post-traumatic Growth (PTG). These results indicate that as the independent variable ‘SOC’ increases so did the dependent variable ‘PTG’ at a significant level. Again, Karl Pearson’s Correlation (r) for Barriers to Post-traumatic Growth (BPTG) is .522** with a significant value of 0.000. Therefore, since the computed coefficient alpha is less than 0.05, there is a positive linear relationship between BPTG and PTG among Tigrayan refugees in Nairobi, Kenya. These results indicate that as the explanatory variable ‘BPTG’ increases so did the dependent variable ‘PTG’ at a significant level.

Regression Analysis Models

Coefficient of determination (R^2) was used to determine the proportion of Post-traumatic Growth (PTG) that was explained by the independent variable Prevalence of ‘Sense of Community’ (SOC) among Tigrayan refugees in Nairobi, Kenya. As shown in Table IV, the regression results indicate a positive general correlation ($R_1 = .471^a$) between SOC and PTG, before introducing the moderating variable of the study. Model 1 shows a coefficient of determination (R-Square) of .222. The R-squared of .222 indicates that 22.2% of the variation in the construct levels of PTG is explained by the SOC among Tigrayan refugees in Nairobi, Kenya. The variable prevalence of SOC had a positive significant F-Change ($<.000$) and a coefficient of determination (R-Square) of .222 that explained 22.2% variation in PTG. Following regression analysis of Model 1, the researcher undertook analysis after introducing the moderating variable ‘Barriers to Post-traumatic Growth’ (BPTG) to the initial Model (M1). The results of Model 2 (M2), after introducing ‘Barriers to Post-traumatic Growth’ (BPTG) moderation, there was a positive general correlation ($R_1 = .575^b$) and a coefficient of determination (R Square) of .33. These results indicated that following introduction of BPTG, the coefficient of determination (R-Square) increased from .222 to .330. These results indicate that the explanatory variables (SOC and BPTG)

together managed to explain 33% of variation in the Post-traumatic Growth (PTG) among Tigrayan refugees in Nairobi, Kenya.

Table IV: Regression Models

					Change (CH.) Statistics				Durbin-Watson
M	R	R-Sq.	Adjusted R-Sq.	Std. Error of the Est.	R Sq. Change	F Change	df1	df2	Sig. F Change
1	.471 ^a	.222	.218	12.74114	.222	60.421	1	212	<.001
2	.575 ^a	.330	.324	11.84832	.108	34.154	1	211	<.001
Predictors: (Constant), SOC, BPTG									
Dependent Variable: PTG									

The introduction of the variable Barriers to Post-traumatic Growth (BPTG) significantly impacted the dependent variable Post-traumatic Growth (PTG), as indicated by an F-Change value of <.000. With BPTG's moderation, the optimal Model (M2) explained 33% of the variation in PTG; a notable increase from 22.2% in the initial Model (M1). This suggests that while SOC alone accounts for less than a quarter (22.2%) of PTG among refugees, the combination of SOC and BPTG explained more than a quarter (33%) of the variation in PTG, highlighting the importance of considering both variables in this context. This called for the analysis of the variance between SOC, BPTG, and PTG

Analysis of Variance (ANOVA)

The study further examined the significance of the regression model. Analysis of variance (ANOVA) was used to test the significance of the multiple regression model. The regression results are shown in Table 4.19. $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \mu_i$

Table V: Analysis of Variance (ANOVA^a)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	14603.189	2	7301.594	52.012	<.001 ^b
	Residual	29620.722	211	140.383		
	Total	44223.911	213			
a. Dependent Variable: Post-traumatic Growth (PTG)						
b. Predictors: (Constant) Sense of Community (SOC), Barriers to Post-traumatic Growth (BPTG)						

Analysis of Variance (ANOVA) results in Table V show that the model linking explanatory variables (Sense of Community; Barriers to Post-traumatic Growth) to the dependent variable (Post-traumatic Growth) were significant (F= 52.012; p = <.001). The F-statistic was large and the p-value was less than 0.01 level of significance, hence the multiple regression model was appropriate for subsequent analysis and interpretation.

Regression Analysis

The results in Table VI outline the regression coefficients (β_n) that illustrate the extent to which the analysed explanatory variables (Prevalence of Sense of Community; Barriers to Post-traumatic Growth) effected variation in the dependent variable (Levels of Post-traumatic Growth) among Tigrayan refugees in Nairobi, Kenya.

Table VI: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.766	3.488		3.660	<.001
	SOC	.498	.116	.279	4.282	<.001
	BPTG	.958	.164	.381	5.844	<.001
a. Dependent Variable: Levels of PTG						

The regression model is interpreted using the results in Table VI:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \mu_i$$

The (β_n) substituted with numerical values:

$$Y = 12.766 + 0.498X_1 + 0.958X_2 + e$$

Where: Y = Post-traumatic Growth or PTG; X₁ = Sense of Community or SOC; X₂ = Barriers to Post-traumatic Growth or BPTG; e = Error Term

The substituted model therefore becomes: PTG = 12.766+0.498SOC+0.958BPTG

The resulting regression model indicates that for every unit change in levels of Post-traumatic Growth (PTG) among Tigrayan refugees in Nairobi to be effected, there ought to be 0.498 unit change in the Prevalence of Sense of Community (SOC) and 0.958 unit change in Barriers to Post-traumatic Growth (BPTG) while holding other factors, not addressed by this study, constant ($\beta_0 = 12.766$). In the resulting model (M2), therefore, the variables 'SOC' and 'BPTG' are significant predictors of 'PTG' among Tigrayan refugees in Nairobi, Kenya since their p-values ($P < .001$; $P < .001$) were less than 0.05 level of significance. Thus the optimal model remains as: PTG = 12.766+0.498SOC+0.958BPTG

Hypothesis Testing

Hypothesis testing yielded t-statistic score of 4.282 for the prevalence of the Sense of Community (SOC) and 5.844 for barriers to Post-traumatic Growth (BPTG) and a p-value of 0.000 for both SOC and BPTG coefficients. This meant that the probability of obtaining the sample result if the null hypothesis was true was zero because the p-value was 0.000. The null hypothesis, therefore, was rejected and it was concluded that there is an association between the Sense of Community (SOC) and Post-traumatic Growth (PTG) among Tigrayan refugees in Nairobi, Kenya, at 95% significance level.

DISCUSSION

Descriptive results indicated that a majority of respondents neither disagreed nor agreed (neutral) with the domains of the Sense of Community (SOC). These results are consistent with the findings of an online study by Laffan, Stenson and Flood (2023), which found that although 19% of participants reported online victimization, there was a low correlation between online victimization and psychological SOC. Despite the differences in the modes of data collection - remote and physical - this current study produced similar findings to those of an online survey by Laffan et al. (2023) regarding the participants' opinions on the psychological SOC. Nevertheless, in an online survey of 142 members of four ethnic groups in New Zealand by Cui et al. (2023), those who participated in community activities recorded higher levels of SOC. These findings indicate that, despite participating in online survey on SOC, participation in communal activities was positively correlated with SOC. On the converse, it can be alluded that abstaining from communal activities could be negatively correlated with SOC. This assertion underscores the importance of cautiously applying the Sense of Community theory to help Tigrayan refugees navigate Post-traumatic Growth (PTG) obstacles and overcome trauma while in their host countries and at homeland. Such alienation is captured in Le, Polonsky, and Arambewela (2015) assertion that refugees are prone to social exclusion, discrimination, marginalization, and prejudice while away from home or in host countries. It is, therefore, unfortunate that refugees can find themselves condemned to a life of adversity. This assertion is emphasized in the focus group discussions (FGDs), when the participants remarked that 'cruelties like the burning of Tigrayans alive left indelible marks in our lives.' This implies that the participants, while far away from Tigray, were still hanging onto the painful memories even long after the end of the war. Despite the participants sharing the view that justice was essential for their healing and growth through trauma, there was presence of deeply embedded trauma, suggesting that they required additional time to process traumatic experiences as they grew through the trauma.

The study established that biographical factors (gender, age, level of education, number of languages, religious affiliation, and trauma therapy) had statistically significant effects on the prevalence of the Sense of

Community (SOC). These results collaborate with a study of South African students by Makalela (2018) that found that the philosophy of Ubuntu or collectiveness increased the prevalence of SOC among students, thus fostering post-traumatic growth (PTG). The moderate descriptive scores on SOC, of this current study, indicate that there was need to strengthen connectedness amongst the refugees within Kenya and across the borders. These results, therefore, collaborate with the observation that challenges, in host countries, coerce refugees to form alliances to foster a sense of attachment to their homeland as well as preserve their homeland heritage (McClinchey, 2021; Jackson, 2020). This observation resonates with the SOC theory that holds that a strong SOC leads to positive outcomes such as increased social support, shared emotional connection, shared suffering, and shared optimism (Macmillan & Chavis, 1986). This observations is supported by neutral scores regarding the variable prevalence of SOC.

The moderate results on the Sense of Community (SOC) point at the need to strengthen the SOC among the Tigrayan refugees in Nairobi, Kenya. This assertion is supported by the results of Tukey's Honestly Significant Difference (HSD) post-hoc analysis, which showed that the combination of two biographical characteristics, i.e. 'younger groups' and 'many languages spoken', yielded statistically significant differences. However, those who never had these qualities made no considerable difference in the prevalence of SOC. This suggested that young refugees who spoke multiple languages were most likely to manifest a higher prevalence of SOC than the rest. These biographical characteristics were, therefore, important in understanding the prevalence of the SOC among Tigrayan refugees in Nairobi, Kenya.

The findings on the 'Barriers to Post-traumatic Growth' or BPTG showed neutral scores across all the factors explaining this variable. These moderate levels of the BPTG implied that it was possible to manage the barriers, thus triggering growth following traumatic events. The study found that there was a statistically significant difference for the BPTG across all the studied demographics. These results are consistent with the observation that challenges in host countries coerce refugees to form alliances to foster a sense of attachment to their homeland as well as preserve their homeland heritage (McClinchey, 2021). Similarly, the findings collaborate with the observation by Gendre et al. (2025) that struggling against the barriers to PTG could trigger Post-traumatic Growth or PTG.

The Tukey's Honestly Significant Difference (HSD) post-hoc analysis, nevertheless, established that neither permutation based on age combinations nor the number of languages spoken by refugees yielded statistically significant differences in relation to the barriers to PTG (BPTG). These results contradict the study of refugees and government officials in seven countries in Southern Africa by Yusuf and Umejesi (2024), which established that the elderly faced more challenges in accessing refugee documents, accessing education, and so forth. The demographics of age and language permutations, in this current study, did not yield statistically significant differences in BPTG. This suggests that 'one's age' and the 'number of languages spoken' were not important in the understanding of BPTG among Tigrayan refugees in Nairobi, Kenya. These results contradict the assertion that older people develop more resilience because of experiencing various traumatic incidents. These findings, therefore, point to the complexity of the BPTG, hence the need to undertake further studies to fill the gap.

The study revealed that the domain 'Relating to others' (RTO) of PTG indicate that a majority of respondents had experienced a moderate degree of changes in developing new interests ($M = 3.29$; $SD = 1.418$) which marked a new path in their lives ($M = 3.45$; $SD = 1.406$). These results are consistent with the study by Jordan et al. (2022), who noted that those who experienced positive changes manifested improved relationships with others, engaged with and gave back to others. On the domain of 'New Possibilities' (NP), the findings of a moderate degree of change in changing things that needed changing ($M = 3.28$; $SD = 1.425$) thus creating new opportunities for refugees ($M = 3.04$; $SD = 1.458$) are consistent with the observation that those who experienced positive changes manifested an improved sense of self and engaged with existing or new activities (Jordan et al., 2022). These results are somehow inconsistent with the response, to a moderate degree, that despite appreciation of changing what needed changing to create new opportunities, the respondents expressed slight desperation by indicating, only to a small degree ($M = 2.96$; $SD = 1.479$), that they could do better things in life. These neutral results indicate that the respondents acknowledged the daunting task of growing through traumatic experiences that rendered them refugees.

On the domain 'Personal Strength' (PS), there was a general expression of greater PS in all four items: greater feeling of self-reliance; better handling of difficulties; better acceptance of how things work out; and discovery that one is better than one thought. These results resonate with Tedeschi and Moore's (2021) observation that individuals should strive to form new identities that survive the trauma or develop the wisdom to function better in life. It is therefore critical that individuals learn to appreciate the paradox that out of loss (traumatic and post-traumatic conditions), individuals can gain wisdom to positively live with the uncertainty and complexity of life. Nonetheless, the PTG Theory is relevant to this study since it succinctly captures the reality that people exposed to traumatic events can positively live with the aftermath of adverse traumatic experiences.

On the Spiritual Change (SC) domain, the respondents reported a moderate score that they had a better understanding of spiritual matters ($M = 2.89$; $SD = 1.135$) while a slightly higher number ($M = 3.25$; $SD = 1.283$) agreed they had a stronger religious faith. These results indicate that the respondents felt that religiosity and spirituality had contributed to a small or moderate degree of change in their lives. These results are consistent with the findings by Garrido-Hernansaiz, Rodríguez-Rey, Collazo-Castiñeira and Collado (2022) that the SC domain mean scores tend to be much lower than in other domains. This assertion was confirmed in this current study, since the respondents indicated that they had experienced a better understanding of spiritual matters only to a small degree. At the same time, the results were slightly inconsistent with the findings by Garrido-Hernansaiz et al. (2022), as the respondents indicated that they had experienced a stronger religious faith to a moderate degree. These results are intriguing as they, at the same time, support and contradict the widespread view that African communities are notoriously religious and spiritual. This is an indication that religiosity and spirituality in the African context, or the Ubuntu way of life, are non-linear complex phenomena.

On the 'Appreciation of Life' (AOL) domain, a majority of respondents experienced a better appreciation of each day, a change of priorities about what is important in life, and a greater appreciation for the value of life to a great degree. The AOL domain recorded the highest mean scores compared to all the other PTG domains of this study. These results are consistent with the observation that despite refugees experiencing many hurdles they develop the ability to survive and thrive in new environments thus propelling themselves to Post-traumatic Growth (Fernandez & Athukorala, 2023). These findings suggest a potential positive growth and resilience among Tigrayan refugees. Nevertheless, the increase in AOL scores may also be attributed to coping mechanisms or transient responses to trauma, rather than an indication of genuine long-term growth. This reality is captured by Gendre et al. (2025) view that the Janus-Face model incorporates two forms of perceived PTG, constructive and illusory. It is, therefore, advisable that self-reported improvements in AOL, per se, may not necessarily reflect objective changes in well-being, as individuals may inadvertently overestimate their post-trauma growth to maintain optimism in the face of challenging circumstances.

The study revealed that there was a statistically significant F-statistic for Post-Traumatic Growth (PTG) across all the studied demographics. These results resonate with findings that education level (Bakar & Durmaz, 2022), age (Kadri et al., 2022; Tedeschi & Moore, 2016), gender (Friedman et al., 2014; Johnsen & Afgun, 2023), and trauma-related therapy (Asatsa, 2018) made a significant difference in PTG scores. However, the findings are contrary to results of a longitudinal study in Dublin, Ireland by Igoe et al (2023), which established that there was no significant PTG scores between genders, groups or even levels of education. These inconsistencies regarding demographics on PTG scores highlight the complexity and multifactorial nature of PTG. Following Tukey's Honestly Significant Difference (HSD) post-hoc analysis, the younger age group combinations (18 -21 years & 22-25 years) were found to have statistically significant differences ($p = 0.037$) in PTG levels. This suggests that age was important in the understanding of PTG among Tigrayan refugees in Nairobi. This assertion is confirmed in a study that reported a moderate to high degree of PTG, with the strongest endorsement being among the younger people (Pop et al., 2025). Again, the results of this current study point to the importance of appreciating the paradox that out of loss (traumatic and post-traumatic conditions), Tigrayan refugees can gain wisdom to positively live with the uncertainty and complexity of life.

Karl Pearson's Correlation Coefficients (r) revealed a statistically significant positive relationship between explanatory variables [SOC ($r = .471$), BPTG ($r = .522$)], and the dependent variable PTG, because there was statistically significant correlation coefficient ($r = 0.000$; $P < .05$). These results indicated that the positive and

statistically significant increase in SOC and BPTG subsequently effected positive and statistically significant increase in PTG. This suggested that the increase in the prevalence of SOC translated to an increase in the levels of PTG. These findings resonate with the observation that challenges in host countries coerce refugees to form alliances to foster a sense of attachment to their homeland as well as preserve their homeland heritage (McClinchey, 2021; Jackson, 2020). The strong positive correlation coefficient of SOC indicates that enhancing any of these domains could significantly and positively strengthen the overall SOC among the Tigrayan refugees. The positive association between SOC and PTG highlights the significance of the Tigray community in enhancing PTG.

Paradoxically, the study established that there was a statistically significant correlation between barriers to Post-traumatic Growth (BPTG) and PTG. These results indicated the presence of BPTG following traumatic experience among the Tigrayan refugees in Nairobi, Kenya. Perhaps by the time of undertaking this study, the refugees were still regurgitating through traumatic experiences in the aftermath of the war between the Tigray People's Liberation Front (TPLF) and the Federal Republic of Ethiopia. It is a truism that the refugees had to struggle against all odds to achieve growth through various traumatic experiences. This assertion is supported by Gendre et al (2025), who observed that growth occurs when subjective distress is neither too low nor too intense or rather, where it is possible to manage intrusive ruminations and rebuild core beliefs. Interestingly, a positive correlation with BPTG suggests that navigating through barriers to PTG is an integral growth process leading to greater PTG. This observation is supported by the assertion that struggling against BPTG enables engagement with the trauma, thus triggering growth (Gendre et al., 2025).

The coefficient of determination (R^2) of the optimal model explained 33% of variation in PTG compared to the initial model which explained only 22.2% variation in PTG in the initial model. This change is supported by the assertion that although refugees may face many hurdles in life, many of them manage to develop the ability to survive and thrive in new environments (Fernandez & Athukorala, 2023). It seems that the barriers to PTG are an essential ingredient for PTG among the Tigrayan refugees in Nairobi, Kenya. This could be the reason why the overall study found a positive significant association between SOC and PTG among Tigrayan refugees in Nairobi, Kenya ($R^2 = 0.330$; $F = 52.012$; $p = <.001$). The regression model showed that for every unit change in PTG to be effected, there ought to be a 0.498 unit change in SOC and 0.958 unit change in BPTG while holding other factors, unaddressed by this study, constant ($\beta_0 = 12.766$). The null hypothesis was rejected, and it was concluded that there is an association between SOC and PTG, at a 95% level of significance. It is, therefore, concluded that there is a relationship between the prevalence of the SOC and the level of PTG among the Tigrayan refugees in Nairobi, Kenya. Nevertheless, extrapolation of these findings to other refugee populations or contexts should be approached with caution, as the specific circumstances of Tigrayan refugees in Nairobi may not represent the broader refugee experiences.

CONCLUSIONS

This study established that there was a predominance of neutral or moderate responses on the prevalence of the Sense of Community (SOC) among the Tigrayan refugees in Nairobi, Kenya. These results suggested that even amidst trauma, many individuals maintained a moderate SOC. These findings reinforce the notion that fostering positive social connections is essential for growth in the aftermath of traumatic crises. These results reflect those of previous studies, as they emphasize the value of integrating community initiatives geared towards the unique experiences of refugees. This current study also identified significant differences in SOC across different age groups and the number of languages spoken by refugees. This suggested that the younger one was and the more languages one could speak, the more likely one was to have a stronger SOC. These results indicated that it is paramount to take into consideration the age and language diversity factor when assessing SOC within a community. It is worth noting that younger refugees with linguistic multiplicity may cultivate a stronger SOC to cope with trauma, thus forging new identities and finding solidarity beyond traditional structures like religion. This assertion is also captured in discourse analysis that revealed that shared experiences of adversity could foster unity rooted in cultural identity and mutual support rather than in previously held obsolete beliefs. Thus, refugees with language diversity had a shared sense of interconnectedness and collective survival, enabling them to navigate hardship through mutual support across the globe.

The findings on the 'Barriers to Post-traumatic Growth' or BPTG, again, yielded neutral results across all the items measuring the variable. Such self-reporting of moderate scores on BPTG implied that it is possible to manage the barriers, thus triggering growth following traumatic experiences. The study also established that there was a statistically significant difference in BPTG across all the studied demographics. Tukey's HSD post-hoc analysis, nevertheless, established that neither the differences in refugees' age nor the number of languages spoken significantly affected differences in BPTG. These results suggested that the barriers to PTG go beyond demographics of age and language. The conclusion aligns with existing literature, highlighting the significance of one's situation in achieving growth after a traumatic experience. Overall, this study reinforces the importance of understanding the complexity of PTG obstacles with a view to helping refugees to grow or navigate the barriers and surpass the state prior to a traumatic experience. For example, it is worth noting that discourse analysis revealed a significant shift in perceptions about Ethiopian patriotism and a decline in religious beliefs, which largely influence one's spirituality. These sentiments suggest that Ethiopian patriotism has shifted, and religious beliefs affecting spirituality have declined among Tigrayan refugees in Nairobi, Kenya.

The results on Post-traumatic Growth (PTG) revealed that there were also moderate or neutral scores across all the factors of PTG. There was a statistically significant F-statistic for PTG across all the studied demographic factors. These results resonate as well as contradict studies that found no statistically significant difference between these demographic factors and PTG scores. These inconsistencies highlight the complexity and multifactorial nature of PTG. This study identified statistically significant differences ($p = 0.037$) in PTG across the younger group combinations (18 -21 years & 22-25 years). Suggesting that the younger one was, the more likely one was to grow through traumatic experiences or PTG. Similarly, Pop et al. (2025) shared similar results since the younger people were reported to have a moderate to a high degree of PTG. However, the absence of statistically significant differences related to the number of languages spoken by refugees indicated that linguistic diversity did not appear to affect PTG levels. Discourse analysis revealed that younger refugees often interpreted their suffering as a catalyst for Post-traumatic Growth (PTG). These sentiments indicated that adversity not only shaped their survival strategies but also deepened their ability to endure PTG obstacles. It is therefore advisable to consider age when investigating PTG in various populations.

The study established a positive and statistically significant relationship between the prevalence of Sense of Community or SOC ($r = .471$), Barriers to Post-traumatic Growth or BPTG ($r = .522$) and Post-traumatic Growth (PTG) among refugees. Thus, as the SOC and BPTG positively increases, so does PTG. These correlation results suggested that struggling with BPTG fosters enduring PTG. As a result of the war in Tigray, which began in November 2020 (Fraioili, 2021), the application of PTG theory in this study helped in understanding that even in the aftermath of life-threatening adversities, people can achieve personal growth, new possibilities, better relationships, greater appreciation, and existential growth, as espoused by Tedeschi et al. (2017).

Finally, the study established that the Barriers to Post-traumatic Growth (BPTG) moderation enhanced the model performance, by increasing the explained variation in Post-traumatic Growth or PTG from 22.2% to 33%. There was a positive and significant association between the Sense of Community (SOC) and PTG among Tigrayan refugees ($R^2 = 0.330$, $F = 52.012$, $p < .001$). The regression analysis indicated that a .498 unit change in SOC and a .958 unit change in BPTG, holding other factors, outside the scope of this study, constant ($\beta_0 = 12.766$), led to a unit change in PTG. It is worth noting that the struggle against BPTG enables engagement with the trauma, thus triggering growth. The null hypothesis was rejected, indicating that there was a significant association between SOC and PTG at a 95% confidence level. This study established that as the prevalence of SOC increased, so did the level of PTG among the refugees. Thus, BPTG moderates the SOC to create conducive conditions that foster enduring PTG. These results suggest the importance of appreciating the paradox that out of loss, refugees can gain wisdom to positively live with the uncertainty of poly-crisis.

RECOMMENDATIONS

Based on the conclusions of the study, understanding the inherent dynamism of the Tigrayan refugee community in Nairobi, Kenya, is essential in understanding the evolving Sense of Community (SOC) among

the growing numbers of refugees in the world. The knowledge could help in understanding why younger groups and those who can speak more than one language are more likely to have a stronger SOC.

The self-reported moderate Barriers to Post-Traumatic Growth or BPTG scores suggest that struggling against trauma-related barriers could trigger growth through traumatic experiences. Despite the statistically significant differences in BPTG across all the studied demographics, neither differences in refugees' age nor the number of languages spoken significantly affected differences in BPTG scores. This suggests that BPTG goes beyond the demographics of this study. There is, therefore, a need to understand the multifaceted nature of BPTG with a view to helping refugees to grow or navigate the barriers and surpass the state prior to traumatic experiences.

The study highlights some inconsistencies in the complexity and multifactorial nature of Post-traumatic Growth or PTG. For example, the results of this study implied that the younger refugees are more likely to grow through traumatic experiences or PTG. However, the absence of statistically significant differences related to the number of languages spoken by refugees indicated that linguistic diversity does not appear to affect PTG levels. Therefore, considering the holistic view of PTG in various populations in the contemporary world could shed new light on the phenomenon of PTG.

The study established that there was a positive relationship between the prevalence of the Sense of Community (SOC), Barriers to Post-traumatic Growth (BPTG) and Post-traumatic Growth (PTG). It is worth noting that the struggle against the BPTG enables engagement with the trauma, thus triggering PTG. Thus, BPTG moderates the SOC to create conducive conditions that foster enduring PTG. Upon rejecting the null hypothesis, it was concluded that there was a positive and significant association between the SOC and PTG among Tigrayan refugees in Nairobi, Kenya, at a 95% confidence level. It is therefore suggested that enhancing the prevalence of SOC among the refugees by applying the principle of humanness or *Sebawinet* in Ethiopia, espoused in the Ubuntu theory, could promote PTG levels among Tigrayan refugees in Nairobi, Kenya.

Suggestions for Further Studies

The study established a moderate 'Sense of Community' or SOC among the Tigrayan refugees in Nairobi, Kenya. These results are similar to SOC scores recorded by research studies in most of the literature reviewed in this study. Conducting future research exploring the significance of moderate SOC in fostering 'Post-traumatic Growth' or PTG among refugees could identify the underlying factors contributing to the established differences between biographical characteristics and the prevalence of SOC among refugees.

The study found that there were moderate scores regarding the Barriers to Post-traumatic Growth (BPTG), which triggered growth among the refugees following a traumatic experience. This could explain why the refugees reported neither too low nor too high PTG, not forgetting that such self-reporting could be illusory or biased. Nevertheless, conducting further studies on barriers to PTG may aid in understanding the multifaceted nature of the BPTG and how struggling against the obstacles moderates the Sense of Community (SOC), thus fostering PTG.

Qualitative analysis revealed a significant shift in perceptions about Ethiopian patriotism and a decline in religious beliefs, which largely influence one's spirituality. A potential gap for further study could focus on the factors influencing the decline in religious beliefs among refugees and how these changes relate to the evolving perceptions of nationalism and patriotism among Tigrayan refugees. Conducting further studies exploring the interconnectedness of spirituality and patriotism could provide valuable insights into the changing 'Sense of Community' among Tigrayan refugees.

This study acknowledges the sampling bias since the perspectives of those excluded, for example, the camp-based refugees or those who declined to participate, may have differed from those who were included. This study, however, offered an urban context to understand the Sense of Community SOC and Post-traumatic Growth (PTG) of refugees. This is unlike a traditional camp-based setting where refugees face different challenges. Future studies could employ stratified sampling to improve the representativeness of the sample.

A convergent-parallel design was also used in the study to triangulate qualitative and quantitative data. This, however, limited the ability to infer causal relationships between the Sense of Community (SOC) and Post-traumatic Growth (PTG). Future studies could employ longitudinal designs with variations in experimental dimensions to comprehend the nature, variations, and developmental contexts of PTG experiences.

ACKNOWLEDGEMENT

I want to thank the International Cooperation Caritas Austria, Diocese of Feldkirch and Missio, Diocese of Bozen-Brixen, for financially supporting my studies at the Catholic University of Eastern Africa (CUEA). Special thanks to HE Bishop Abraham Desta for accompanying and encouraging me in my academic journey. I also thank my supervisors, lecturers, family, friends, and relatives for their inspiration during my studies.

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