Inequalities in Healthcare Utilization Between Refugees and Non-Refugees in Palestine

"عدم المساواة في استخدام الرعاية الصحية بين اللاجئين وغير اللاجئين في فلسطين"

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Palestine, Birzeit

June, 3rd 2024

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"Inequalities in health care utilization between refugees and non- refugees in Palestine"

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This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

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This Thesis is being submitted in partial fulfillment of the requirements for the degree of Master Degree in Economics.

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This Thesis is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

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Dedication

To my parents, who have inspired me to pursue higher education, believed in me, and taught me the importance of having a strong work ethic. I feel really fortunate to have you as my parents and am incredibly appreciative of your unending love, support, and generosity.

My dearest friends, Yousef Daqah and Asala Khalid in particular, you are my second family. It is truly an honor to have you as true friends. I am so appreciative of your friendship, encouragement, and support.

To the brave Palestinian people, with a special reverence for those enduring the hardships in Gaza Strip. Your unflinching fortitude in the face of difficulty is an inspiration and ray of hope. May this thesis contribute in the advancement and empowerment of our community, even in a small measure.

Abstract

Background: This study examines the disparities in healthcare utilization between refugees and non-refugees in the West Bank and Gaza Strip.

Methods: Using data from the Socio-Economic & Food Security Survey of 2021, we investigated the influence of refugee status on healthcare utilization and examined the factors associated with healthcare utilization. This thesis used three different approaches. The first approach, known as binary logistic regression, details the impact of socioeconomic factors on healthcare utilization. The second approach, moderation analysis, examines how refugee behavior affects healthcare utilization. The third approach, the Fairlie decomposition approach, calculates the difference in healthcare utilization between refugees and non-refugees.

Results: According to descriptive statistics, refugees are more likely to receive aid from UNRWA and consume fewer fruits. Additionally, they face higher rates of medication shortages compared to non-refugees. Moreover, when relating healthcare utilization to expenditure, we find that healthcare utilization is higher among non-refugees compared to refugees. However, logistic regression models show that non-refugee status is negatively associated with healthcare utilization after controlling for demographic and socioeconomic factors. According to Fairlie's decomposition analysis, the Israel occupation's barriers and restrictions have had a major impact on

healthcare utilization discrepancies. The findings emphasize the importance of targeted interventions to address the unique healthcare needs of refugees in Palestine and highlight the need of address structural inequalities in healthcare provision.

عدم المساواة في استخدام الرعاية الصحية بين اللاجئين وغير اللاجئين في فلسطين

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المُلخَّص

الخلفية: تدرس هذه الدراسة الاختلافات في استخدام الرعاية الصحية بين اللاجئين وغير اللاجئين في الضفة الغربية وقطاع غزة.

المنهجية: باستخدام بيانات من المسح الاجتماعي والاقتصادي والأمن الغذائي (SEFSEC) لعام 2021، قمنا بدراسة تأثير حالة اللجوء على استخدام الرعاية الصحية وفحص العوامل المرتبطة بها. استخدمت هذه الأطروحة ثلاث طرق مختلفة. الطريقة الأولى هي نماذج الانحدار اللوجستي الثنائي (binary logistic regression)، التي توضح تأثير العوامل الاجتماعية والاقتصادية على استخدام الرعاية الصحية. والطريقة الثانية هي تحليل Moderation model، تفحص تأثير فروق السلوكيات الصحية ما بين اللاجئين وغير اللاجئين على استخدام الرعاية الصحية. الطريقة الثالثة وهي نهج فيرلي (Fairlie decomposition approach) التي تحسب مقدار الفرق في استخدام الرعاية الصحية بين اللاجئين وغير اللاجئين.

النتائج: وفقًا للإحصاءات الوصفية، يتلقى اللاجئون مساعدات من الأونروا ويستهلكون كميات أقل من الفواكه. بالإضافة إلى ذلك، يواجهون معدلات أعلى من نقص الأدوية مقارنة بغير اللاجئين. علاوة على ذلك، عند ربط استخدام الرعاية الصحية بالإنفاق، نجد أن استخدام الرعاية الصحية أعلى بين غير اللاجئين مقارنة باللاجئين. ومع ذلك، تظهر نماذج الانحدار اللوجستي الثنائي (binary logistic regression) أن وضع غير اللاجئ مرتبط سلبًا باستخدام الرعاية الصحية بعد التحكم في العوامل الديموغرافية والاجتماعية والاقتصادية. وفقًا لتحليل نهج فيرلي (Fairlie decomposition approach)، فإن الحواجز والقيود التي يفرضها الاحتلال الإسرائيلي قد أثرت بشكل كبير على تفاوتات استخدام الرعاية الصحية. تؤكد النتائج على أهمية التدخلات المستهدفة لمعالجة الاحتياجات الصحية الفريدة للاجئين في فلسطين وتسليط الضوء على ضرورة معالجة التفاوتات الهيكلية في توفير الرعاية الصحية.

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List of Symbols and Abbreviations

PCBS	Palestinian Central Bureau of Statistics
SEFSEC	Socio-Economic & Food Security Survey
MOH	Palestinian Ministry of Health
UNRWA	United Nations Relief and Works Agency
UNHCR	United Nation High Commissioner for Refugees
WHO	World Health Organization
DESA	United Nations Department of Economic and Social Affairs
NIDI	Netherlands Interdisciplinary Demographic Institute
NAP	National Academies Press
PAHO	Pan American Health Organization
MOFAE	Ministry of Foreign Affairs and Expatriates
MAP	Medical Aid for Palestinians
IMF	International Monetary Fund
ETF	European Training Foundation
CI	Confidence Interval
NIS	New Israeli Shekel

I Introduction

The underlying cause of discrepancies in the utilization of healthcare is enduring social and economic inequities (Abu-Zaineh, et al., 2021). A study done in Palestine found that there are disparities in healthcare utilization that benefit the wealthy. Wealthy people who live in urban areas have access to a wider range of medical services due to the fact that there are more healthcare providers there than in villages and camps. Furthermore, the impoverished have to cover indirect expenses like transportation to see medical professionals (Abu-Zaineh, 2009). Additionally, the negative effects of the Israeli occupation on health and the availability of healthcare, especially in the Gaza Strip, exacerbate these issues (Nasr, et al., 2021). Older adults and their families struggle to get care because of financial, geographical, and political barriers (Jabari, et al., 2023). The use of personal connections or influence in healthcare is more common in the Gaza Strip than it is in the West Bank among refugees living in camps (Takruri, et al., 2023).

The majority of the literature focuses on the differences in healthcare use between immigrants and non-immigrants, particularly in European countries (Devillanova, et al., 2016). The Middle East had few such studies. In Palestine, the literature on healthcare disparities in health care utilization between refugees and non-refugees is scant, despite having access to exceptionally high-quality data (Abu-Zaineh, 2009). Even if 42% of the Palestinian population in the State of Palestine are refugees, 26% of the population in the West Bank are refugees and 64% of the population in the Gaza

Strip are refugees (PCBS, 2019). The literature has a wealth of information on how immigrants and nonimmigrants use healthcare differently in developed countries (Tzogiou, et al., 2021). The reasons for these discrepancies include lack of knowledge, cultural diversity, socioeconomic level (Brzosk, 2018; Georges, et al., 2021), and financial barriers (Bozorgmehr, et al., 2015). Despite the fact that some of these disparities are unexplained due to racial discrimination and differential treatment (Maio, et al., 2009). A study conducted in Austria demonstrates that variations in healthcare utilization diminish when a refugee receives an asylum decision due to the additional rights that accompany an asylum ruling (Schober, et al., 2022). However, a Canadian study shows that longer residence times are associated with worsening health status, particularly for immigrant women (Maio, et al., 2009).

Based on empirical evidence, it is possible to categorize the reasons causing health care inequities into two groups: (i) individual factors, and (ii) institutional factors (Insulza, 2011). This study identifies a set of factors that distinguish the behavior of refugees from non- refugees. These refugee-specific characteristics, such as lifestyle, body mass index, performing health-enhancing physical activity, daily consumption of fruit and vegetables, and smoking of tobacco products (Singh, et al., 2013), contribute to disparities in healthcare utilization, thereby providing a basis for understanding justified inequalities. The second set of factors addresses Palestinian laws and policies, such as health coverage, reasons for asylum, and other pre- and post-asylum factors (Tzogiou, et al., 2021). These institutional factors point to the possibility of

discrimination against refugees (Georges, et al., 2021). Therefore, this research addresses the following questions: How big is the inequality gap in healthcare utilization between refugees and non-refugees? And how have differences in health behaviors affected inequalities in healthcare utilization between refugees and non-refugees? In addition, what impact does UNRWA health coverage have on the disparities in healthcare utilization between refugees and non-refugees?

This study aimed to investigate the differences in healthcare utilization between non-refugees and refugees in Palestine, as well as the impact of health behaviors on the disparities in health care utilization between these groups. To achieve this goal, it is necessary to understand factors that affect healthcare utilization in Palestine, in addition to studying the effect of differences in health behaviors between refugees and non-refugees on health care utilization. This helps explain the factors that contribute to the gap of inequalities in health utilization between refugees and non-refugees in Palestine. Moreover, understanding the structure of health coverage helps in reducing and bridging the gap of inequality.

Prior research has assessed the relative risks of healthcare utilization for specific populations, but it has seldom examined the impact of explanatory factors on healthcare utilization or pinpointed the variables linked to healthcare utilization inequality. Furthermore, the impact of distinct behaviors among refugees and non-refugees on the disparities in healthcare utilization was not addressed in earlier research (Schober, et al., 2022). This work contributes to existing literature in four ways: First, this is the

first study to look at healthcare disparities between refugees and non-refugees in Palestine. Secondly, we pinpoint the primary causes of healthcare inequality. Thirdly, we utilize moderation analysis to elucidate the impact of refugees' behavior on the healthcare utilization.

The social, economic, and behavioral aspects of refugees that could be influencing the disparities in healthcare utilization in Palestine are examined in this study. Due to socio-economic differences, refugees and non-refugees have different behavioral traits, which is reflected in the disparities in healthcare received by the two groups (Singh, et al., 2013). Over time, the lifestyle of non-refugees may affect refugees, potentially reducing disparities in healthcare through integration and social interaction (Deaton, et al., 2015). Lifestyle choices that promote health and lessen the chance of recurrence include engaging in positive behaviors and scheduling routine medical checkups (Rejeski, et al., 2019).

Refugees are more in need of healthcare, especially in the fields of psychosocial and mental health, chronic diseases and childcare, because of their suffering from wars like the Syrian Civil War, destruction and escape (Klein, et al., 2018). Palestinians in the West Bank and Gaza endure several administrative and physical barriers because of the Israeli occupation, which prevents them from receiving quality medical care. Primarily, limitations on the ability to move freely, as evidenced in the Israeli permit system and restrictions on the passage of ambulances through checkpoints (MAP,

2017). Results emerging from this study will help in developing policies to prevent discrimination in healthcare between refugees and non-refugees (Klein, et al., 2018).

The remainder of the thesis is organized as follows. The first chapter examines the situation of refugees in Palestine. The second chapter reviews the theoretical framework and empirical literature analyzing healthcare inequalities theories and health insurance status. The third chapter describes the microdata of the Socio-Economic & Food Security Survey (SEFSEC) used in this paper, along with the methodology and econometric model used to analyze inequalities in healthcare between refugees and non-refugees. The fourth chapter presents the empirical results. The final chapter concludes with some thoughts on policy implications and suggestions for future research.

II The situation of refugees in Palestine

II.A An overview of Palestine's refugee population:

When examining the refugee crisis in Palestine, it is critical to define terminology including "immigrant," "refugee," "unregistered refugee," "migrant," "displaced," and "asylum". Understanding these differences is essential to comprehending the legal and social standing of different groups of individuals impacted by migration and displacement (UNHCR, 2019). Migrants are defined as those who were born abroad, hold a foreign nationality, or at least have one foreign parent (Klein, et al., 2018). The

term "asylum" describes the safety that a nation offers to people who have left their own country because of persecution. A person who seeks to request international protection or is awaiting a decision on their request is considered an asylum-seeker (UNHCR, 2024). Displaced persons are those who have been forced to leave their homes due to conflict, natural disasters, or other emergencies. This category includes both internally displaced persons (IDPs), who remain within their own country, and refugees, who cross international borders (UNHCR, 2019). A refugee is a person who has been forced to leave their country of origin because of threats, intimidation, torture, kidnapping, or persecution on account of their race, religion, nationality, or politics. Usually, the refugee is given legal protection (HIAS, 2020). A Palestinian refugee is defined as a person who changed his natural place of residence (whether within Palestine or to other counties) during the period from June 1, 1946 to May 15, 1948, as a result of the 1948 conflict, and lost his home and means of livelihood. Furthermore, to utilize services in the regions where UNRWA is mandated to operate, Palestinian refugees and their descendants need to register with UNRWA. A refugee registered with UNRWA is called a registered refugee (United Nations, 2024). However, grandchildren of women who are not married to a Palestinian refugee lose their right to register as Palestinian refugees and therefore do not receive UNRWA services (Ali, et al., 2012). This category of Palestinian refugees is covered under provisions in the UNGA Resolution 194 (The Danish Immigration Service , 2020). Unregistered refugees meet the criteria of a refugee but have not been formally recognized or registered by

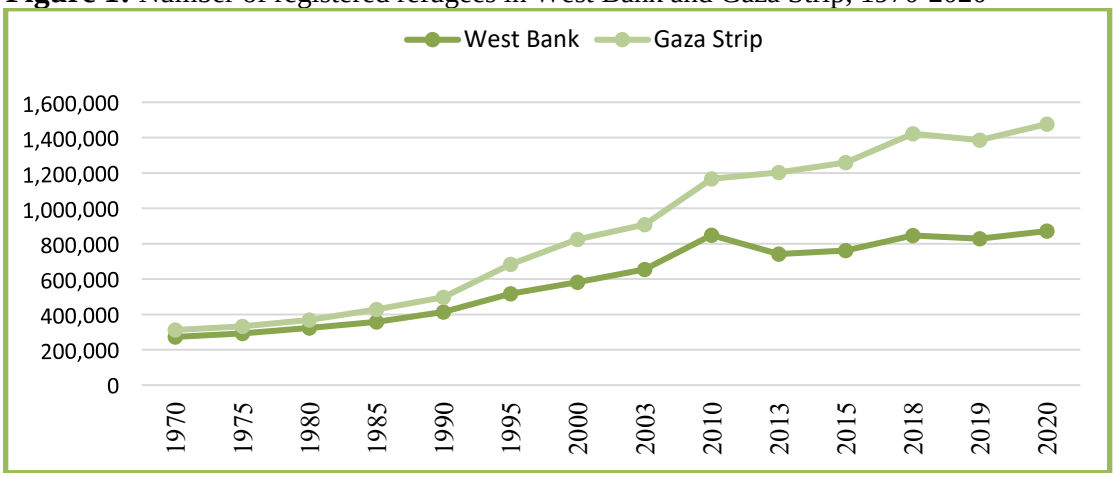
UNRWA. This status often limits their access to legal protection and humanitarian aid (UNRWA, 2024)

Out of the 1.4 million Palestinians who lived in historic Palestine, 957,000 were uprooted from their towns and villages during the 1948 Nakba (Palestinian Central Bureau of Statistics, 2023). According to UNRWA figures, around 6 million Palestinian refugees were registered with UNRWA in Palestine and the diaspora in 2018. 42% of all Palestinian refugees were living in the West Bank and Gaza Strip (17% in the West Bank and 25% in the Gaza Strip). Jordan accounted for roughly 38% of all Palestinian refugees, while Syria and Lebanon accounted for approximately 9% and 11% of all Palestinian refugees registered with UNRWA.

The majority of Palestinian refugees with official status reside in camps. A tract of land given to UNRWA by the host government to accommodate Palestinian refugees and set up amenities to suit their needs is known as a Palestinian refugee camp. On the other hand, UNRWA also manages distribution centers, schools, and health facilities outside of officially designated camps that are home to Palestine refugees. This implies that while the refugees in these camps have the right to "use" the property for habitation, they do not "own" the land on which their shelters were constructed. The socioeconomic conditions of the camps are usually poor, with a high population density, cramped living quarters, and limited access to basic services like roads and sewers (UNRWA, 2023).

II.B The demographics of Palestine's refugee population in 2021

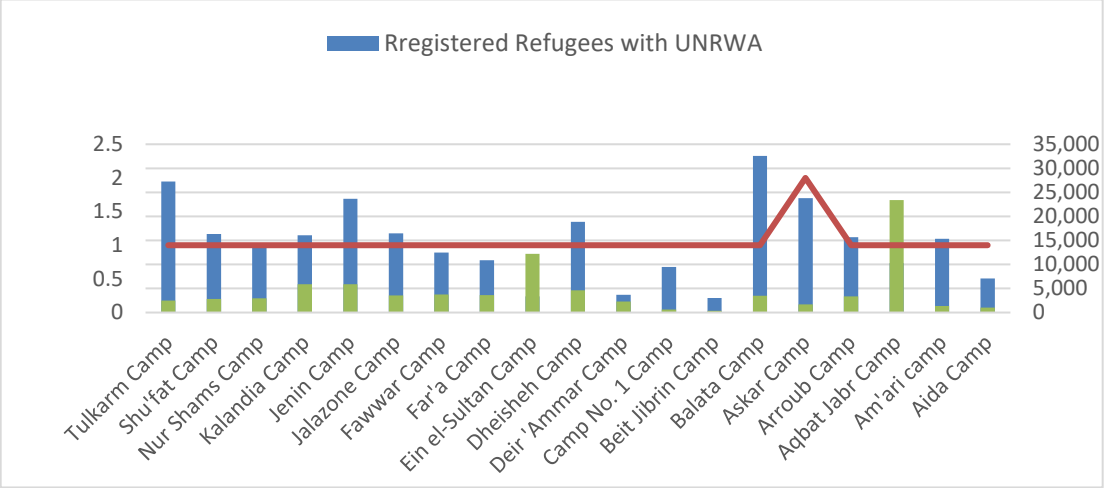
Figure 1: Number of registered refugees in West Bank and Gaza Strip, 1970-2020



Source: UNRWA, 2021.

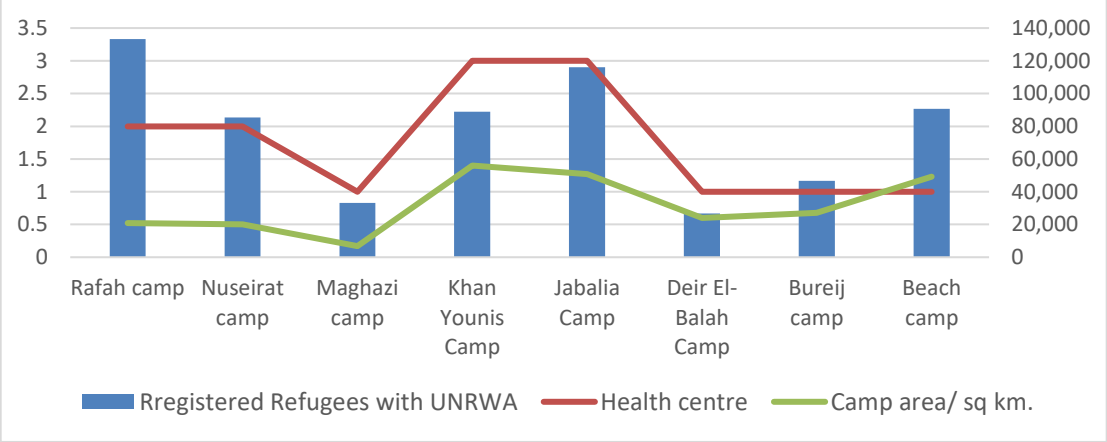
In 2023, there are eight camps for Palestinian refugees in the Gaza Strip, compared to 19 in the West Bank (UNRWA, 2023). Figure 1 illustrates that there are more refugees in the Gaza Strip than in the West Bank, despite the fact that there are fewer camps there. The number of Palestinian refugees in the West Bank and Gaza Strip has been rising annually; in 2020, there were 872,000 in the West Bank and over 1.5 million in the Gaza Strip.

Figure 2: Characteristics of the West Bank's refugee camps, 2022



Source: UNRWA, 2022.

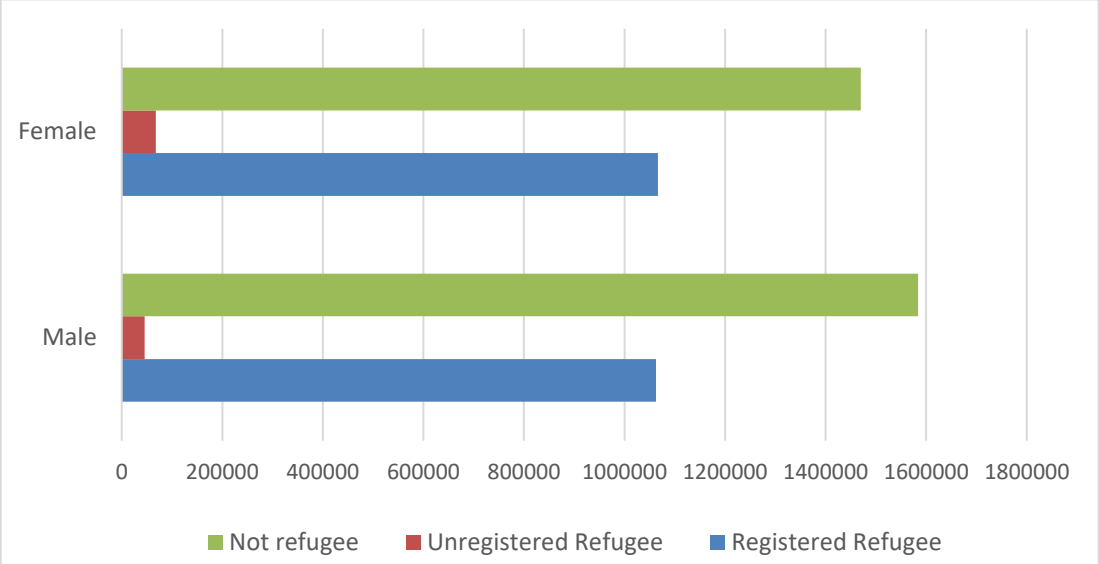
Figure 3: Characteristics of the Gaza Strip's refugee camps, 2022



Source: UNRWA, 2022.

Figure 2 illustrates the significant concentration of refugees in the West Bank and Gaza Strip, especially in the Camp No. 1 and Askar camps. Each of these camps has one health center. While Askar, Nuseirat and Rafah camps each have two health centers, Jabalia and Khan Younis camps have three health centers each.

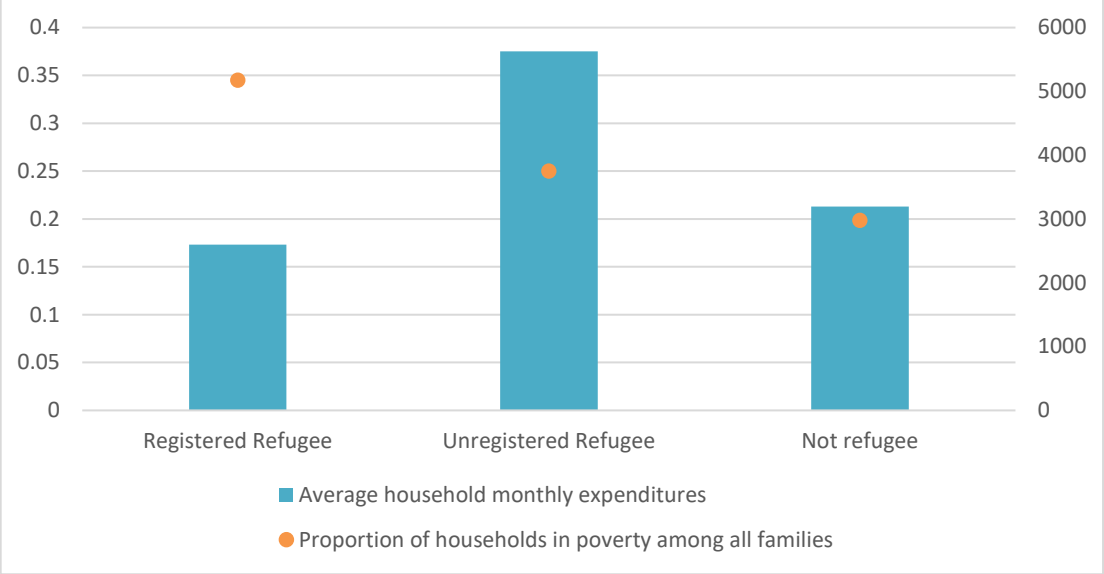
Figure 4: Number of registered refugees in West Bank and Gaza Strip by gender, 2021



Source: Palestinian Central Bureau of Statistics, 2022. Socio-Economic & Food Security Survey (2021). Ramallah - Palestine.

Figure 4 demonstrates that the majority of refugees are registered. In contrast to "Palestine refugees" who are registered with UNRWA, "Palestinian refugees" refers to both unregistered and registered people with UNRWA (Berg, et al., 2022). The proportion of females among both registered and unregistered refugees is greater than that of males, although the proportion of males among non-refugees is higher (Moubayed, 2010). There could be many reasons why there are more female refugees than male refugees. Men have a greater probability of being affected by violence and war than women. Furthermore, the circumstances surrounding fleeing and seeking safety may differ for various genders. The proportions of men and women in refugee populations may vary depending on family responsibilities, concerns about safety, and other considerations.

Figure 5: Household monthly expenditure in NIS and rate of poor families according to refugee status in West Bank and Gaza Strip, 2021

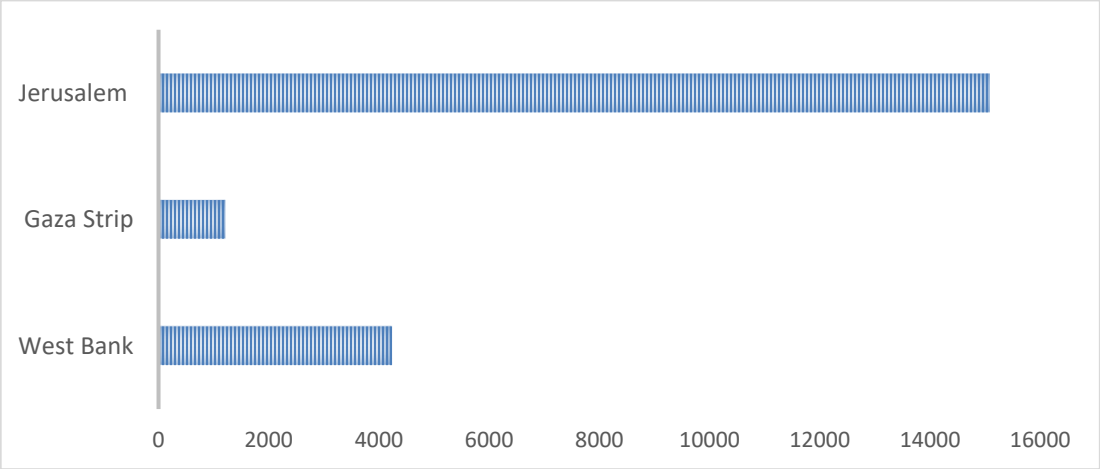


Source: Palestinian Central Bureau of Statistics, 2022. Socio-Economic & Food Security Survey (2021). Ramallah - Palestine.

Figure 5 illustrates that the monthly spending in NIS of registered refugees is lower than that of non-refugees. This difference can be explained by the fact that a large number of refugees depend on assistance and humanitarian aid, which may not be enough to cover all of their basic needs. Their reliance on assistance may limit their ability to spend as much as non-refugees, who have more reliable and varied sources of income (Harvey, et al., 2005). Despite the fact that unregistered refugees spend more on average than non-refugees, this is because there are more unregistered refugees in the Jerusalem region than there are in the West Bank and Gaza Strip. Whereas Jerusalem has a higher expenditure rate than the West Bank and Gaza Strip, as shown in Figure 6. Compared to registered and unregistered refugees, the poverty rate among non-refugees is lower (Netherlands Interdisciplinary Demographic Institute, 2006)

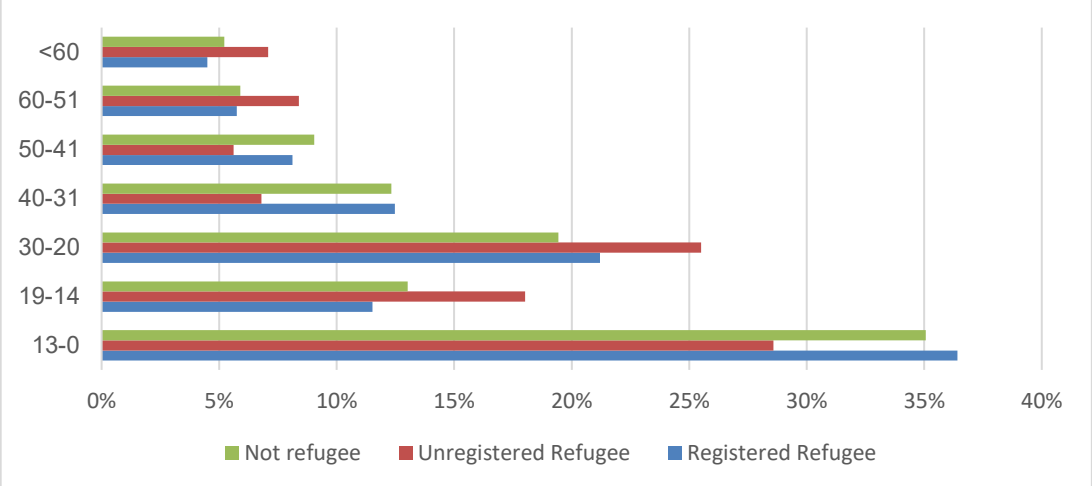
This could be because refugees—especially those who have been displaced and have experienced conflict—may suffer from trauma and mental health issues that make it difficult for them to properly engage in economic activity.

Figure 6: Household monthly expenditure in NIS of unregistered refugee in West Bank, Gaza Strip and Jerusalem, 2021



Source: Palestinian Central Bureau of Statistics, 2022. Socio-Economic & Food Security Survey (2021). Ramallah - Palestine.

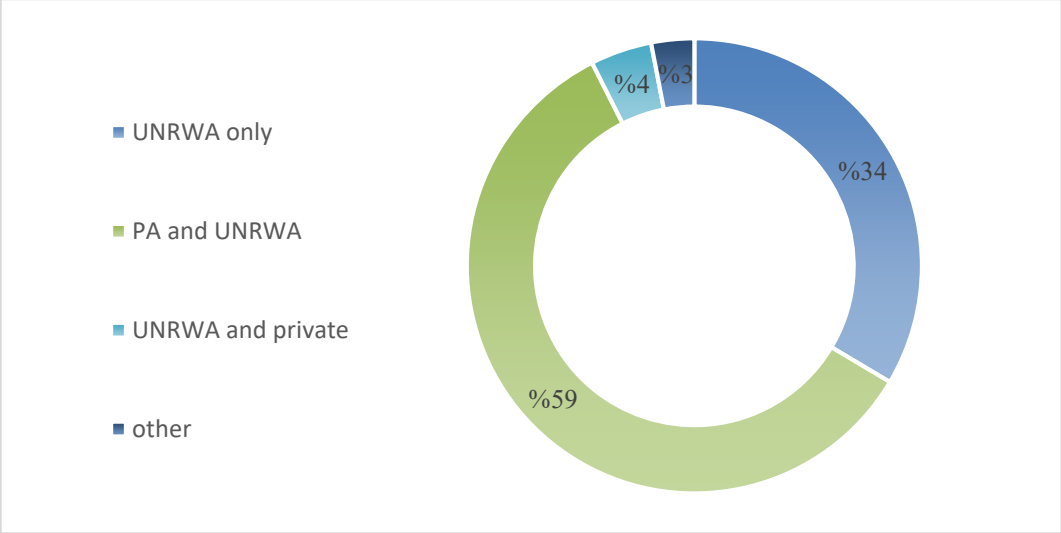
Figure 7: Proportion of refugees and not refugees in West Bank and Gaza Strip by age group, 2021



Source: Palestinian Central Bureau of Statistics, 2022. Socio-Economic & Food Security Survey (2021). Ramallah - Palestine.

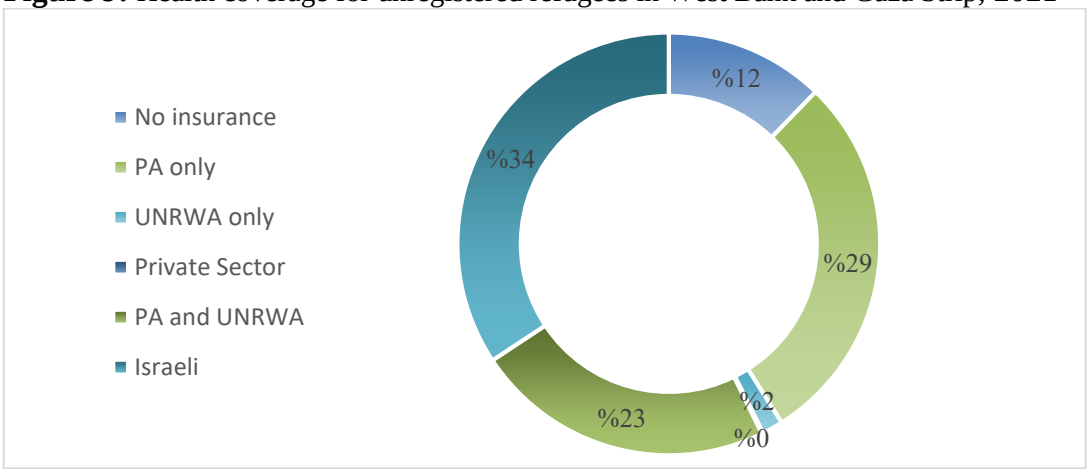
Figure 7 illustrates the age distribution among refugees and non-refugees. It is evident from the figure that the age structure is similar between refugees and non-refugees. The largest demographic falls within the 0-13 age group (36% for registered refugees, 29% for unregistered refugees, and 35% for non-refugees), followed by individuals aged 20-30 and young adults aged 14-19. The population gradually declines with age, with fewer individuals in the 31-40, 41-50, and 51+ age categories. Moreover, in Palestine, the age of 15 and above is considered the working age (Groenewold, et al., 2021).

Figure 8: Health coverage for registered refugees in West Bank and Gaza Strip, 2021



Source: Palestinian Central Bureau of Statistics, 2022. Socio-Economic & Food Security Survey (2021). Ramallah - Palestine.

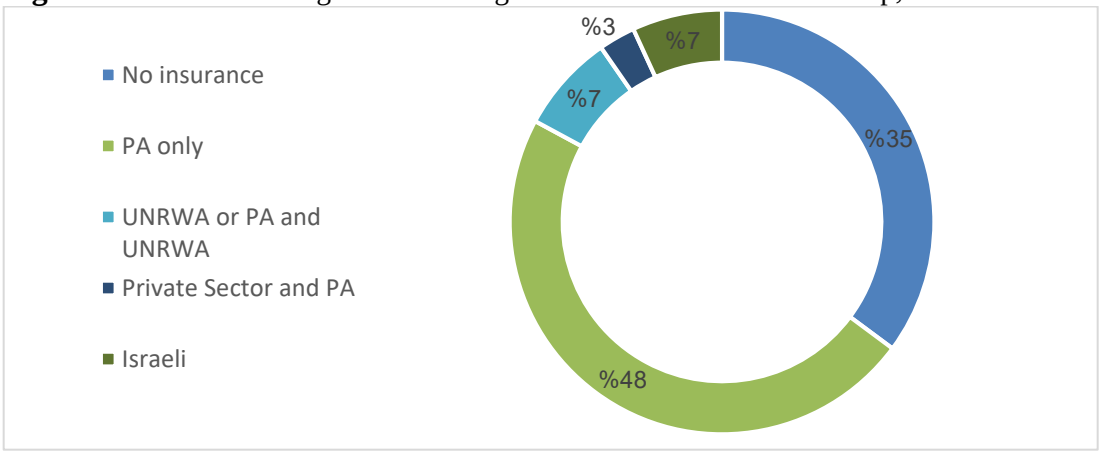
Figure 9: Health coverage for unregistered refugees in West Bank and Gaza Strip, 2021



Source: Palestinian Central Bureau of Statistics, 2022. Socio-Economic & Food Security Survey (2021). Ramallah - Palestine.

UNRWA health coverage providers for 97% of registered refugees, and some of them have private or governmental insurance, as depicted in Figure 8. In contrast, Figure 9 illustrates that 34% of unregistered refugees have Israeli insurance, 25% have UNRWA health coverage and 23% have government insurance.

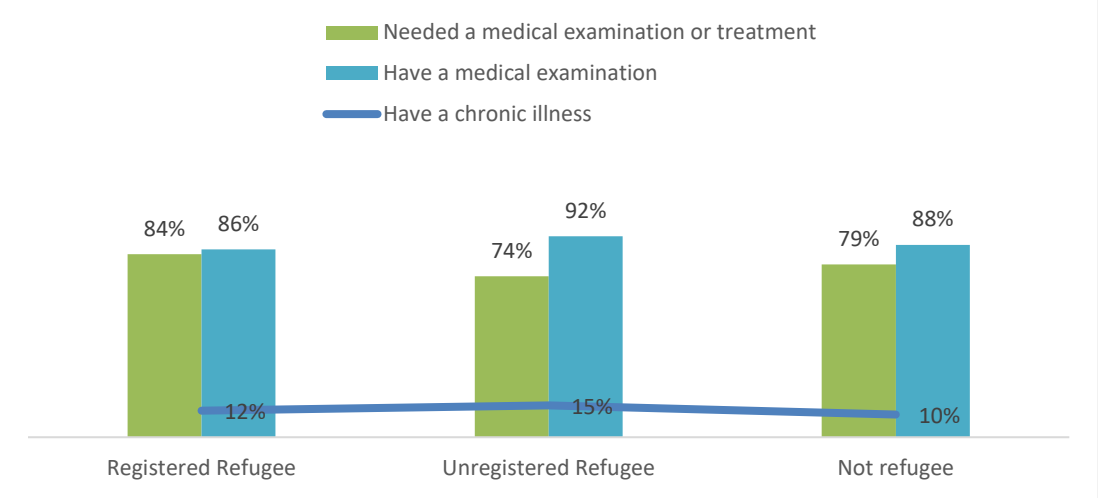
Figure 10: Health coverage for non-refugees in West Bank and Gaza Strip, 2021



Source: Palestinian Central Bureau of Statistics, 2022. Socio-Economic & Food Security Survey (2021). Ramallah - Palestine.

Figure 10 illustrates the distribution of insurance coverage among non-refugees. The majority of non-refugees are covered solely by the Palestinian Authority (PA) insurance system. Additionally, 35% of non-refugees do not have any insurance coverage.

Figure 11: Disparities in health indicators between non-refugees and refugees in West Bank and Gaza Strip, 2021



Source: Palestinian Central Bureau of Statistics, 2022. Socio-Economic & Food Security Survey (2021). Ramallah - Palestine.

Comparing registered and unregistered refugees to non-refugees, Figure 11 demonstrates that refugees have a higher risk of chronic illness, which is understandable. Poor living conditions for refugees such as cramped, unsanitary living situations during displacement, with limited access to hygienic food, clean water, and medical facilities. Unhealthy living circumstances can make people more susceptible to infectious diseases and play a role in the emergence of chronic illnesses (Daynes, 2016). Furthermore, compared to non-refugees, a higher number of registered refugees require medical examinations or treatments, while a lower percentage of unregistered

refugees need such examinations. This difference may be due to access to healthcare services. Registered refugees often have access to specific healthcare treatments offered by UNRWA. Better documentation and visibility may increase their likelihood of seeking and receiving medical care. In contrast, unregistered refugees may face administrative and legal obstacles that prevent them from accessing official medical care, resulting in a lower reported percentage of those seeking medical examinations. When it comes to receiving medical care, non-refugees and unregistered refugees generally receive it more frequently than registered refugees.

III Theoretical Framework

Health inequality refers to fair or just differences in health among individuals or groups. The concept of health inequality itself is not governed by ethical considerations. However, a specific type of health inequality known as a health disparity or health inequity denotes an unfair difference in health, such as differences based on race or religion. Therefore, moral judgments can be made regarding this type of health difference (Arcaya, 2015).

III.A Explaining health inequalities

Health equity is recognized as an essential human right by the World Health Organization (WHO) and is integral to international health policy within health systems (Asada, et al., 2014). This chapter aims to provide an overview of theories related to

health care utilization inequalities between refugees and non-refugees in Palestine. It includes a review of the legal framework governing health care utilization, both in primary and specialized health care settings. Palestine is chosen for this analysis for two main reasons: firstly, due to the unique situation of Palestinian refugees, who constitute 70% of the global refugee population, with one in three refugees worldwide being Palestinian. Many Palestinian refugees have been internally displaced as a result of Israeli occupation measures (Ministry of Foreign Affairs and Expatriates , 2023). Secondly, the availability of the Socio-economic Monitoring of Palestinian Households survey, which can be utilized for refugee analysis, further supports this choice.

Health is more than just the absence of illness or disease; it encompasses the state of complete physical, mental, and social well-being (World Health Organization, 1948). Health inequalities refer to the unfair differences in health outcomes between social groups (McCartney, et al., 2019).

Health inequalities can be explained through four different perspectives (Asthana, et al., 2006; Maloret, 2008) as follows:

- **Artefact explanations**

This interpretation begins with the assertion that class inequality does not exist, suggesting that observed health disparities are artificial rather than real, and denies any causal significance between social class and health (Blane, 1985). This perspective is based on the argument that determining social class is inherently difficult and that there

is no clear link between material resources and physical well-being (Maloret, 2008). Additionally, it acknowledges that social classes with a higher proportion of elderly individuals may experience worse health outcomes compared to those with fewer elderly members (Blane, 1985). As individuals age, the likelihood of mortality and chronic disease increases, leading to relatively higher mortality and morbidity rates within certain social classes (Maloret, 2008). This reinforces significant health disparities between older adults and younger age groups (Bricard, et al., 2020). Furthermore, inequalities in health are also attributed to occupational structures (Maloret, 2008).

Certainly, alternative interpretations have significantly contributed to the ongoing evolution of healthcare inequality by prompting methodological and theoretical advancements. These interpretations have introduced new hypotheses regarding the origins of health disparities and differences in mortality rates due to specific diseases among relatively affluent civil servants. This has spurred interest in exploring the impact of psychological and social factors in generating social gradients in health (Asthana, et al., 2006).

This perspective undervalued the significance of traditional analyses and instead focused on identifying health disparities among previously neglected groups such as the elderly, women, and adolescents who cannot be easily classified solely based on occupational class (Asthana, et al., 2006). Despite the influence of the artificial interpretation, this perspective was among the first to highlight the importance of how social class is defined and acknowledge the existence of a connection between social

class and health outcomes, although it did not delve into the causes of disease (Blane, 1985).

- **Social selection explanation**

Initially, social class refers to the social grouping based on income and wealth (Wrigh, 2003). In developing countries, consumption patterns can serve as indicators of social class (Fares, et al., 2021). The social selection explanation acknowledges a causal effect of social class on health, indicating a reciprocal relationship between health and social status (Blane, 1985). According to this theory, health disparities exist between social classes, with poorer health outcomes concentrated among lower social classes (Maloret, 2008). Individuals with poor health are more likely to experience downward social mobility, as they may be excluded from certain types of jobs or from the labor market altogether. Conversely, those in good health often experience upward social mobility (Asthana, et al., 2006). There is evidence suggesting that health improves with higher social status (World Health Organization, 2021).

According to Blane (1985), education and the level of family support are primary determinants of social mobility, whereas factors such as age and other elements of social structure play a secondary role in determining social mobility (Blane, 1985).

- **Materialist and structuralist explanations**

The social selection hypotheses underscore a reciprocal relationship between social status and health, highlighting how one's position in society influences health outcomes

and vice versa. Materialist explanations attribute health disparities primarily to socioeconomic factors, arguing that differences in access to resources such as income, education, employment, and living conditions drive socioeconomic health disparities. In contrast, structuralist explanations emphasize the role of social structures, policies, and power dynamics in shaping health outcomes, broadening the scope to include larger societal structures and systems. These perspectives also elucidate the link between income, social class, and health. Research indicates that unemployment and lack of education negatively impact social and economic status, consequently affecting health outcomes. As a result, the likelihood of disease and premature death is higher among older immigrants or individuals with lower socioeconomic status compared to natives in the same age group (Brzoska, 2018). This disparity leads to better health outcomes and lower mortality rates among higher-income individuals compared to those with limited income, highlighting inequitable access to healthcare due to financial constraints (Maloret, 2008).

Unhealthy living conditions, such as inadequate housing, disproportionately affect lower and middle-income individuals and contribute to increased mental health issues (Bozorgmehr, et al., 2015), Mental health conditions impact approximately one in four people during their lifetime (World Health Organization, 2021). Overcrowded housing exacerbates disease outbreaks and poses risks of psychological distress, particularly among children (Bozorgmehr, et al., 2015). Poor ventilation and damp homes also contribute to the spread of infectious diseases, thereby increasing mortality rates

(Asthana, et al., 2006). Additionally, job loss and high unemployment can lead to significant psychological stress and adverse psychological impacts on individuals.

Improvements in living conditions, including better housing quality and physical and social isolation in larger homes, have been associated with reduced transmission of infectious diseases and lower mortality rates (Asthana, et al., 2006). Moreover, there is a robust association between poverty and poor mental health outcomes (World Health Organization, 2021). Thus, the social and economic environment significantly influences attitudes, beliefs, and behaviors that contribute to health inequalities (Asthana, et al., 2006). Looking ahead, climate change and extreme weather events in the WHO European region are expected to increase health risks, leading to the spread of infectious diseases and population displacement (World Health Organization, 2021). These factors underscore the interconnectedness of environmental, social, and economic determinants in shaping health outcomes and disparities.

- **Cultural and behavioral explanation**

According to Blane (1985), culture and behavior are often regarded as the primary causal factors influencing health outcomes. This perspective places emphasis on individual choices and activities where individuals have the freedom to make decisions. It underscores the significance of values, beliefs, knowledge, individual behavior, and lifestyles in explaining health inequalities, which arise from personal decisions.

There are three key lifestyle factors that explain inequalities in health: smoking, diet, and healthcare utilization (Maloret, 2008). These behaviors are seen as crucial determinants of health outcomes and disparities. From a political perspective, a libertarian viewpoint is associated with the right to individual freedom. It posits that the adoption of less healthy lifestyles among lower social groups may stem from factors such as ignorance, recklessness, or fatalism (Asthana, et al., 2006). This perspective highlights personal responsibility and individual choices as key factors influencing health disparities.

Smoking is a significant contributor to lung cancer, while alcohol consumption plays a major role in road accidents and social issues related to alcoholism. Psychological factors also influence unhealthy lifestyles, with studies showing that smoking can serve as a coping mechanism for anxiety and stress among women living in disadvantaged circumstances. This highlights a link between material deprivation, mental health, and lifestyle choices.

Furthermore, smoking has negative consumption externalities, meaning it adversely affects the health of individuals around the smoker (Maloret, 2008). This underscores the broader impact of individual behaviors on public health and the importance of addressing these behaviors from both individual and societal perspectives.

In addition to diet, which reflects consumption patterns and food choices influenced by cultural and traditional lifestyles, socially acceptable behavior within communities and

families also plays a significant role. The income level of individuals or families also affects dietary choices, although some studies may downplay its importance in food selection, it remains a factor in certain cases. Individual factors such as irresponsibility, ignorance, or irrationality can also influence dietary decisions that impact health.

Education levels and the quality of educational programs also influence dietary habits, as higher education levels are often associated with better-informed food choices. Lack of physical exercise is a contributing factor to obesity (Maloret, 2008), highlighting the importance of engaging in activities such as fitness clubs, weight loss programs, and consuming low-fat foods to promote healthier behaviors (Pampel, et al., 2010). These efforts contribute to improving overall health outcomes and reducing the prevalence of diet-related health issues.

Health service utilization: Evidence confirms that individuals with lower incomes use health services less and experience higher rates of mortality and morbidity compared to those with higher incomes, who can afford a wider range of health services, particularly in preventive medicine. Additionally, immigration and refugee status significantly impact individuals' health. Newly arrived immigrants to underdeveloped areas typically have better health (Malmusi, 2014) than those who arrive later in Canada (Maio, et al., 2010). Conversely, a different study suggested that immigrants' health is unaffected by the length of time spent in their new country (Georges, et al., 2021). Besides country of origin, other predisposing factors contributing to disparities

in health care utilization include ethnic composition, racial composition, and spatial segregation (Klein, et al., 2018).

Because the extent to which health services are utilized is largely determined by an individual's material circumstances and influences their lifestyle, some evidence favoring cultural or behavioral explanations suggests that health service utilization is influenced by lifestyle factors (Maloret, 2008). These differences stem from varying material conditions among socioeconomic groups rather than from health-related behaviors. Therefore, it is necessary to investigate why unhealthy behaviors persist among disadvantaged groups, as it is one of the individual explanations for health inequalities. One approach is to examine how direct material constraints affect the choices of those experiencing poverty and residing in unhealthy environments (Asthana, et al., 2006). Additionally, factors such as ignorance, inability, or unwillingness to adopt a long-term health perspective play a role (Maloret, 2008).

Simultaneously, evidence confirms the existence of inequalities in the provision of health services. Areas with higher morbidity and mortality rates tend to have fewer hospitals, and the quality of services in these hospitals is generally lower compared to areas where health outcomes are better among different social groups (Maloret, 2008).

Achieving a balance between individual behaviors that contribute to health inequalities and the constraints imposed by external factors requires a harmonious blend of

government intervention and individual freedom. Governments play a crucial role by enacting legislation that supports public health strategies (Maloret, 2008).

Inequalities in healthcare between men and women stem from their differing social roles. Women predominantly work as homemakers, caring for children and managing family responsibilities, which can lead to social isolation and adversely affect their mental and physical health (Maio, et al., 2010). Full-time homemakers often experience poorer health compared to women who work outside the home. Additionally, societal and financial dependence among women contrasts with the greater independence in thought and action typically enjoyed by men, which may make men more likely to seek medical advice than women. Furthermore, there are disparities in mortality rates between immigrants and those who remain in their countries of origin (Maloret, 2008).

Healthcare inequality between immigrants and non-immigrants arises from individual socioeconomic characteristics and language barriers that hinder access to healthcare (Devillanova, et al., 2016; Tzogiou, et al., 2021). Insufficient public spending on education exacerbates income inequality, which in turn contributes to declining health outcomes (Subramanian, et al., 2002). Furthermore, amidst ongoing technological advancements, it is crucial to assess how innovations affect disparities in health (Minten, 2020).

III.B Andersen's behavioral model

The behavioral model of Andersen aims to explore the factors influencing healthcare service utilization and assess the inequalities in access to these services. It examines how the healthcare system and external factors impact access and utilization, providing insights for policies that promote equitable healthcare access (Travers, et al., 2020).

Andersen's Behavioral Model was expanded into the Extended Behavioral Model to address limitations identified in the original. This extended version incorporates an exploration of race and ethnicity and their impact on long-term service utilization. Additionally, two new factors introduced in the extended model, similar to those in the original, are enablers and need factors. These factors encompass attitudes, knowledge, and social norms among older adults, as well as their financial resources and the perceived and objective need for long-term service utilization (Travers, et al., 2020).

III.C Legitimate and illegitimate inequalities in health care

The disparities in healthcare can be attributed to two main reasons. One involves ethically legitimate inequalities in health, stemming from individual responsibility for lifestyle choices like smoking and drinking behaviors. The other reason involves considered illegitimate (unfair) health inequalities resulting from factors beyond individual control, such as socio-economic background, age, and genetics. However, opinions vary on delineating between legitimate and illegitimate causes of health

inequalities (Fleurbaey, et al., 2009; Asada, et al., 2018). Some argue that assessing health inequality through access rather than use is a more suitable criterion, as it emphasizes individual accountability for their choices (Fleurbaey, et al., 2009).

III.D A brief summary of theories about inequality in utilization of health care

Based on the preceding discussion, explanation of health inequalities delve into determinants that aid in understanding, addressing, or reducing disparities in healthcare utilization. These determinants include (Blane, 1985; Maloret, 2008; Travers, et al., 2020):

- Social determinants of health: Inequalities in the distribution of social determinants, such as the impact of social and economic factors on variables like income, education, employment, and access to resources, contribute to disparities in healthcare utilization.
- Behavioral determinants: Predisposing variables (including demographics), enabling factors, and factors related to an individual's health needs all contribute to inequalities in healthcare service utilization.
- Cultural determinants: These factors may hinder certain individuals from accessing healthcare by influencing how they seek medical treatment.
- Geographic determinants: Uneven distribution of healthcare facilities leads to disparities in healthcare access.

- Determinants related to individuals' perceptions of health risks and rewards influence their health-related behaviors, contributing to disparities stemming from diverse perspectives and beliefs about healthcare.
- Racial determinants: Discrimination based on race, for instance, underlies inequities in healthcare utilization.

III.E Legal status and access to healthcare among refugees in Palestine

The principle of equality in access to healthcare is a fundamental value of the Pan American Health Organization and the World Health Organization (PAHOWHO, 1999), affirming that access to the highest attainable health is a fundamental human right. However, from a practical standpoint, studies confirm that minority groups often experience worse health outcomes compared to the majority population, although some studies suggest that certain minority groups may have better health (Jervelund, et al., 2010).

The characteristics are important in explaining differences, at least in part, in healthcare utilization among immigrants and non-immigrants (Tzogiou, et al., 2021) For example, increased costs and poor coordination in referrals from primary care to specialized care, especially for socially deprived population groups (Starfield, 2011). The incidence of illness and mortality is higher among socially deprived population groups compared to socially advantaged groups (Hoebel, et al., 2015). Therefore, placing greater emphasis

on primary care within the healthcare system can improve management of multimorbidity over time. This focus on primary care can benefit socially deprived populations by enhancing their access to healthcare services and reducing disparities in healthcare access (Starfield, 2011).

Since the 1990s, access to healthcare for asylum seekers has been restricted by legal limitations, including exclusions for emergency care, treatment of acute and painful conditions, maternity and childbirth care, vaccinations, and other services. Such restrictions create inequalities in healthcare access between asylum seekers and resident populations (Bozorgmehr, et al., 2015). These healthcare restrictions are part of broader measures aimed at limiting access to essential humanitarian needs such as housing, food, and clothing, in an effort to prevent abuse of the asylum system (Bozorgmehr, et al., 2015). Additionally, instability and uncertainty about the future can lead to psychosocial stress, which may contribute to increased incidence of diseases (Hoebel, et al., 2015).

Restrictions on refugees' access to healthcare vary based on their legal residency status categories (Pross, 1998). Palestinian refugees in the West Bank, Gaza Strip, and East Jerusalem, registered with the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA), have entitlements including housing, healthcare access, employment, education, and other rights (WHO, 2015; BADIL , 2011).

It is important to note that the Israeli occupation has not adhered to international law, which stipulates that Palestinian refugees have the right to their basic human rights, including the right to return to their land and homes, and to receive compensation (Ahmed, 2010).

UNRWA and government agencies provide health services to Palestinian refugees in the Palestinian Territory, who often face significant health challenges. These include chronic lifestyle-related diseases, non-communicable diseases, political instability, ongoing occupation, increased gender-based violence, and humanitarian crises. These conditions contribute to food insecurity, which in turn escalates healthcare costs. Moreover, restrictions on the movement of people and goods due to the blockade have intensified reliance on UNRWA services (WHO, 2019).

Immigrant-oriented policies can contribute to disparities between immigrants and non-immigrants. Policies directed at immigrants often focus on labor market integration, family reunion, place of residence, political participation, nationality, anti-discrimination, and education. These policies can exacerbate inequalities in healthcare access between immigrants and non-immigrants (Malmusi, 2014).

III.F Health insurance in Palestine

Health insurance is regarded as a mechanism to shield the insured from the financial burden of medical treatment by covering all or part of the healthcare expenses (The Palestinian Independent Commission for Citizens' Rights, 2007).

There are three health insurance systems in Palestine: government health insurance, private health insurance (Abu Jasser, et al., 2023; The Palestinian Independent Commission for Citizens' Rights, 2007), and cooperative health insurance, which operates through collaboration among specific social groups to provide healthcare services. This insurance system is not currently regulated by legislation in Palestine. Each of these systems has its own legal framework and characteristics (The Palestinian Independent Commission for Citizens' Rights, 2007). The types of government insurance include: voluntary insurance, compulsory insurance, insurance for workers within the Green Line, group contracts, insurance for municipalities and syndicates, insurance provided by the Commission of Detainees and Ex-Detainees Affairs (CDA), insurance from the Ministry of Social Development, insurance for families of Martyrs, insurance for the unemployed, insurance for students, and insurance for intern doctors (Palestinian Ministry of Health, 2023).

The UNRWA health program offers comprehensive primary healthcare services to Palestinian refugees, including those in the West Bank, Gaza Strip, Jordan, Lebanon, and Syria, through UNRWA primary healthcare centers (UNRWA, 2021). It is

noteworthy that a Palestinian refugee residing in the West Bank may also have access to agency health insurance alongside government health insurance (PCBS, 2008).

III.G Explaining disparities in healthcare between refugees and non-refugees

Few studies have examined healthcare inequalities between refugees and non-refugees; the majority of the literature has instead focused on disparities between immigrants and non-immigrants in longstanding host countries, highlighting the persistent nature of these disparities (Devillanova, et al., 2016). European nations are among the top destinations for immigration (World Health Organization European Region, 2018). Table 1 provides an overview of the literature on this topic.

Table 1: Summary of results of previous studies in countries

Author(s) countries	Data used and sampling	Estimation method	Dependent variable	Results	Reasons for differences in health care utilization
Abu-Zaineh, Mataria, Moatti and Ventelou (2011) Palestine	Household Health Care Expenditure and Utilization survey 2004.	TPM-regression approach. Microsimulation-decomposition technique. Oaxaca of counterfactual decomposition analysis.	Health care utilization.	WB and GS have relatively high rates of primary-level treatment utilization (59.1% in WB and 45.2% in GS). Heterogeneity in health care seeking behaviors among the population's socioeconomic groups causes about 30% of inequality in health utilization.	The socioeconomic disparities are what lead to the inequality in utilization.
Nasr, Mitwalli and Hammoudeh (2021) Palestine	Social and Economic Conditions Survey (SEFSEC), 2018.	Multivariate analysis.	Access to health services and self-reported health.	Poor self-reported health is more common among individuals with less wealth and education. Compared to people living in the West Bank, residents in the Gaza Strip are about twice as likely to report having poor or very poor self-rated health.	In comparison to someone with postsecondary education in the Gaza Strip, who would have about 20% higher probability of having poor self-rated health, a person with postsecondary education in the West Bank would have roughly 8% less likelihood.
Takruri, Nawajah and Jabari (2023 Palestine	Primary data, a cross-sectional quantitative survey and qualitative interviews.	Bivariate and multivariate logistic regressions.	Wasta use.	The equality and quality healthcare services are negatively impacted by waste in the medical field. And wasta usage increases with education and government workers also use it more frequently.	Wasta is determined by political affiliations, social standing, wealth, power, and social connections.

Jabari, Hassan and Nawajah (2023) Palestine	Primary data, a convenience sample of 76 older men and women (over 60) who had received primary care within a year of the survey (n = 76) was collected using a cross-sectional survey.	Descriptive analysis.	Three main factors: health care accessibility, affordability, and basic characteristics of the elderly.	Approximately 75% of elderly have at least one chronic health condition and have little access to medical care. Each of them had completed a minimum of six years of schooling. 70% of elderly reported having trouble accessing and affording health care.	The majority of older people found it difficult to afford additional costs for health care that weren't covered by insurance.
Yuan, Yu, Gao, Du, Lv, Liu and Sun (2023) China	Chinese Longitudinal Health Longevity Survey.	Decomposition of health inequities using the Fairlie model and logistic model analysis.	Self-rated health (SRH).	Unobserved factors contributed to 23.36% of the differences (rural and urban). The disparities in SRH between older Chinese people living in rural and urban areas can be attributed to several factors.	It is suggested that smoking increases the likelihood of poor health in older adults.
Schober, and Zocher (2022) Austria	From the Austrian Social Security Database (ASSD), administrative data.	Comprehensive analysis of the expenditures associated with providing three-dimensional healthcare to refugees.	Health-care expenditures.	The expenses of health care differ between various immigrant groups (economic migrant, refugees) and the native population. Three years following a positive asylum decision, spending on prescription drugs, inpatient care, and outpatient care significantly declined.	Compared to native-born people and economic migrants, refugees have greater health care needs, particularly in the early years after arriving. This is attributable to the plethora of new rights that come with a favorable asylum judgment, as well as the

					possibility that refugees' psychological stress levels will be reduced as a result of receiving asylum.
Fares and Puig-Junoy (2021) Egypt	Primary data from a cross-sectional survey implementing stratified systematic random sampling that investigated how Syrian refugees residing in Egypt used outpatient and inpatient health care services.	Concentration index (CI), benefit incidence analysis (BIA), horizontal inequity (HI), and a probit model's linear approximation.	Utilization of inpatient and outpatient healthcare services.	There is inequality in refugees' utilization of outpatient and inpatient health services.	The duration of asylum in Egypt, the existence of chronic diseases, and big families are all associated with increased inequality.
Maio and Kemp (2008) Canada	Canadian Immigrants' Longitudinal Survey.	Logistic regression analysis.	The overall self-reported state of health. Self-reported mental health.	Prolonged residence in Canada is associated with a significant decline in self-reported mental health and health status, particularly among immigrant women who report experiencing more chronic feelings of loneliness, sadness, and despair.	Discrimination and unfair treatment. Problems with health may be detected and disclosed by women more frequently than by men.
Devillanova nd frattini (2016) Italy	Italian Health Survey.	Fitted logit models for predicting the probability of accessing healthcare. Multivariate regression analysis.	A binary variable with value 1 in the event that the person has accessed the relevant medical	Immigrants and second-generation immigrants (foreigners born in Italy) are less likely to visit specialists and use preventative care, and they are	Italian language obstacles to accessing medical care.

			services and 0 otherwise.	more likely to contact emergency services. The socioeconomic characteristics and lifestyle habits has little impact on the difference between immigrants and non-immigrants for visiting specialist an general.	Residence in Italy, given that the phenomenon of immigration is recent in Italy. Differences in individual's behaviors, culture, attitudes, referral habits according to nationality.
Malmusi (2014) Fourteen European countries	European Union Survey on Income and Living Conditions (2011).	Robust Poisson regression models.	General self-rated health.	The highest health inequalities between immigrants and natives in exclusionist countries Compared with multicultural countries and Assimilationist countries.	The multicultural countries have high integration policy scores and highest education level But. Assimilationist countries and exclusionist differences in socioeconomic position and living conditions.
Klein, Jens and Knesebeck (2018) Germany	A systematic review, PRISMA. The majority of the research used an exploratory and descriptive methodology and were cross-sectional in design.	A table provided a summary of the qualitative analysis of the trend of inequality in the various health care sectors. In the PubMed Database, the initial search produced 822 records. After screening titles and abstracts, 86 papers are still awaiting a full-text review. Of the remaining articles, 34 did not meet the inclusion criteria. The primary reasons for exclusion were the absence of native	5 studies use utilization of outpatient care. 8 studies use Therapists, counselling services and medication.	It was found that those with immigrant status used outpatient care slightly more frequently. Mostly reported lower utilization among immigrant in Therapists, counselling services and medication. Lower rates of preventable diseases among immigrants across all age groups.	Variations in communication, language, and service availability information, as well as variations in cultural and personal expectations, preferences, and health beliefs.

		controls in the sample or ineligible indications of health care utilization. Ultimately, 63 studies were incorporated into the review.	34 studies use Disease prevention.		
Brzoska (2018) Germany	A 10% random sample of routine yearly cross-sectional data from 2006 to 2014, sourced from the German Statutory Pension Insurance Scheme is used in the study.	A multivariable logistic regression.	Use different indicators of treatment effectiveness: rehabilitation, physical impairment after the treatment and presence of mental.	It demonstrates that the health system's current strategies and approaches for providing treatment for immigrants are insufficient for reduce the gap in healthcare that currently exists between immigrants and the native population.	The observed differences are only partially explained by disparities in the socioeconomic and demographic. Reduced effectiveness of treatment.
Georges, BuberEnnse, Rengs, Kohlenberg and Doblhammer (2021) Germany	Refugee Health and Integration Survey of Austria (ReHIS) and the IAB-BAMF-SOEP-Refugee Survey 2016 of Germany. The current study is limited to immigrants aged 18–59 who are nationalities of Syria, Afghanistan, or Iraq and who came	Probity regression models. Propensity score matching.	Self-rated health.	Germany had a lower percentage of immigrant respondents with self-rated health (72%) than Austria (89%). In both countries, men were more likely than women to have self-rated health. Syrians in Austria had larger percentages of respondents who self-rated as healthy than Iraqis and Afghans did.	The sociological features of Austria and Germany, including support systems, integration measures, attitudes toward minorities, instances of discrimination or segregation, and ethnic networks, may be a factor in the differences in the immigrants' health assessments.

	between 2013 and 2016 for comparison considerations.			Have significant differences in young people's self-reported health in Germany. Individuals who self-rated as being in better health were substantially more likely to be men, Syrians, younger, and better educated than other groups.	
Bozorgmehr, Schneider and Joos (2015) Germany	This is the first study of its kind in Germany to examine and measure the differences in healthcare access between the general population and asylum seekers. Over the course of a three-month study period, cross-sectional data on the resident population were obtained from the German Health Interviews conducted in three German counties.	Cross-tabulations. Ordinal Regression	Health status as self-reported and access to healthcare (utilization and unmet medical need).	Health-related hospitalizations and psychotherapy visits are more common among immigrants.	Financial barriers.

Tzogiou, Boes and Brunner (2021) Switzerland	Data from the Second Health Monitoring of the Migrant Population in Switzerland (2010) provided by the Federal Statistical Office were used for the Swiss Health Survey (SHS) 2012.	Non-linear multivariate decomposition Method.	Health care utilization.	The 9.6 percentage point difference might be reduced by 55% if immigrants from different cultural backgrounds had the same characteristics as non-immigrants.	The primary causes of inequality include socioeconomic variables, occupation, income, and an unexplained component.
Subramania, Belli, and Kawachi (2002)	Demographic and Health Survey.	Review of literature.	Health status and poverty.	There is a correlation between improved economic prosperity and decreased health disparities. Equitable distribution of the nation's GDP is essential to maintaining the standard of living for poor people.	Investing in public health and enhancing health—both by raising averages and decreasing inequality—in both developed and developing nations. Equality in the national product's distribution as a result of governmental initiatives.
Jervelund and Krasnik (2010) Five European countries	Publications were identified through a systematic search of EMBASE and PUBMED.	The literature review includes 17 studies.	Self-perceived health.	The countries surveyed exhibit inequalities in self-perceived health, with immigrants and ethnic minorities reporting worse health compared to the majority population. Additionally, men reported worse self-rated health compared to women.	Explained by living and working conditions, or social and class factors. Lacks policies aimed at enhancing social and health conditions.

Pampel, Krueger and Denney (2010)	Participants in the National Health Interview Survey, aged 25 to 64.	Logistic regression.	Health behaviors: Current smoking, lack of exercise, and body mass index.	Malnutrition, a lack of physical activity, and cigarette use are all negatively correlated with socioeconomic status.	Socioeconomic status is a primary determinant of health due to the abundance and diversity of resources available to higher socioeconomic groups.
Asada, Hurley, Grignon, and Kirklanda (2018) Canada	The Canadian Health Measures Survey's second cycle (2009–2010).	To determine the level of health disparity, use the Gini coefficient. Using regression models and decomposing inequality to identify components that are morally acceptable and unacceptable.	The frailty index (FI) and the health utilities index (HUI) were used for assessing fair health.	The fair and unfair health inequalities in the HUI and FI for each of the three age groups are relevant to policy. Additionally, the HUI measures health inequality more comprehensively than the FI.	Early life conditions during childhood affect an individual's long-term health.

IV Methodology

IV.A Research Design

According to legitimate and illegitimate inequalities in health care and previous studies, there are seven types of factors that explain differences in health care utilization between refugees and non- refugees. First, the predisposing factors that include the demographic characteristics of the individual, social structures and health beliefs (Nachinaab, et al., 2021). These factors are expressed through variables such as age, gender, refugee status, education, and governorate. These elements highlight inherent differences and biases that may cause refugees to face discrimination based on their status.

Second, enabler factors (Bassani , et al., 2023) refer to financial resources of individual and household. There are reflected in variables such as expenditure, household type, number of family members and number of rooms. Refugees often have lower financial resources, which can hinder their ability to utilize healthcare.

Third, need factors (Brandão, et al., 2022) pertains to an individual's perceived and evaluated health status that can account for care-seeking and adherence to a medical regimen. As a need factors, we include the variable of the level of general health of the individual, level of satisfaction of life, inability of receiving medical care because of a lack of medicines and the variable of the presence of health difficulties.

Fourth, behavioral factors (Tzogiou, et al., 2021) concern the health behaviors that individuals follow. These factors include the following: Number of fruit and vegetables-eating days in a week and protein consumption. Cultural differences and lifestyle habits between refugees and non-refugees can lead to variations in health behaviors.

Fifth, environmental factors (Samba, et al., 2020) that indicate the health and psychological conditions surrounding the home and the workplace. These factors include the following: Noise surrounding the house, the home's humidity, coldness, and the number of people around the individual who have personal problems such as a female or child in the family was exposed to violence by a family member.

Sixth, the political factors relate to the political challenges facing the West Bank and Gaza Strip region (International Monetary Fund, 2020). These factors include the following variables: Israeli violence due to political beliefs, housing location and difficulty in accessing health facilities due to the Israeli occupation.

Seventh, the Covid-19 factors involve a person's infection with the Coronavirus since the pandemic breakout and can determine whether the Covid-19 pandemic has affected health utilization (Rezaei, et al., 2023). The spread of COVID-19 may be more pronounced among refugees due to their living conditions in crowded places such as camps.

These factors are examined in this study to analyze the differences in healthcare utilization between refugees and non-refugees in Palestine[1].

IV.B Empirical design:

IV.B.A Descriptive analysis

The study begins with an overall description of the variables of interest. It then measures inequality in healthcare utilization related to monthly expenditure using the Erreygers correction inequality index. This index is chosen because it effectively handles the binary nature of healthcare utilization data, addresses the limitations of traditional concentration indices, and provides a clear and robust measure of inequality. This choice ensures that the analysis accurately reflects disparities in healthcare utilization between refugees and non-refugees, supporting informed policy decisions to address these inequalities. The study focuses on refugees to evaluate the degree of inequality in healthcare utilization and its determinants, particularly those related to financial considerations. This measure highlights how resources and healthcare services are distributed among refugees and non-refugees.

[1] *The analysis of this study maintains the confidentiality of the data based on the variables that will be taken*

The Erreygers index is defined as:

$$E = 1 - \frac{A}{\mu(1-\mu)} \quad (1)$$

$$A = \int_0^1 (C(x) - x)\, dx \quad (2)$$

Where E is the Erreygers index. A represents the area between the concentration curve and the line of equality over the range of monthly expenditure. μ is the average of monthly expenditure, C(x) represents the cumulative proportion of healthcare utilization up to expenditure level x, and x varies from 0 to 1, representing the range of cumulative expenditure.

Perfect equality in healthcare utilization relative to monthly expenditures is indicated if the Erreygers index (E) equals zero. A positive E value signifies inequality that favors those with higher expenditures. Conversely, a negative E value indicates that healthcare utilization is disproportionately concentrated among refugees or non-refugees with lower monthly expenditures.

IV.B.B Quantitative analysis

First, binary logistic regression will be employed to describe the relationship between a dichotomous variable (health utilization) and a set of continuous or discrete independent variables. Estimating multiple models allows for a comprehensive

analysis of the factors influencing healthcare utilization among refugees and non-refugees. The different models help to isolate and understand the effects of various sets of independent variables on the dependent variable, healthcare utilization (HU).

$$P(HU = 1/x) = \frac{e^{\beta' \mathrm{x}}}{1 + e^{\beta' \mathrm{x}}} \quad (3)$$

Where the vector β is a vector of coefficients measuring the change in log-odds due to 1 unit increase in predictor variables x. The vector x includes the following variables: demographic variables (age, education, refugee status, sex, and governorate), enablers variables (number of household members, monthly expenditure, number of rooms, and housing type), need variables (life satisfied, health satisfied, difficulty in seeing, chronic disease, and medication lack), behavioral variables (fruit consumption, vegetable consumption, and protein consumption), environment variables (house humidity, noise around house, house coldness, child abuse, and violence women), political variable (Israeli violence), and COVID-19 variable.

The first model aims to capture the overall impact of factors on healthcare utilization, providing an understanding of how they collectively influence it. The second model examines the effect of gender-specific violence by including a variable for violence against women, allowing for an analysis of its specific impact on healthcare utilization. The third model assesses the role of chronic diseases and the COVID-19 pandemic in healthcare utilization. Furthermore, the fourth model incorporates an interaction term between protein consumption and refugee status to explore whether the influence of

protein consumption on healthcare utilization varies between refugees and non-refugees.

Second, we used Fairlie's proposed extension of Oaxaca's and Blinder's decomposition technique to decompose the observed inequalities between refugees and non- refugees into two components (Yuan, et al., 2023). The decomposition of the difference in probability of healthcare utilization between refugees and non-refugees can be expressed as non-linear decomposition method. Fairlie's decomposition, which is particularly suited for analyzing differences in binary outcomes, is applied to the regression model below:

$$\hat{y}_{NR-}\hat{y}_R = \left[\frac{[\sum_{i=1}^{N} \int(X_i^{NR}\beta^{NR})]}{N^{NR}} - \frac{[\sum_{i=1}^{N} \int(X_i^{R}\beta^{NR})]}{N^{R}}\right] + \left[\frac{[\sum_{i=1}^{N} \int(X_i^{R}\beta^{NR})]}{N^{R}} - \frac{[\sum_{i=1}^{N} \int(X_i^{R}\beta^{R})]}{N^{R}}\right] \quad (4)$$

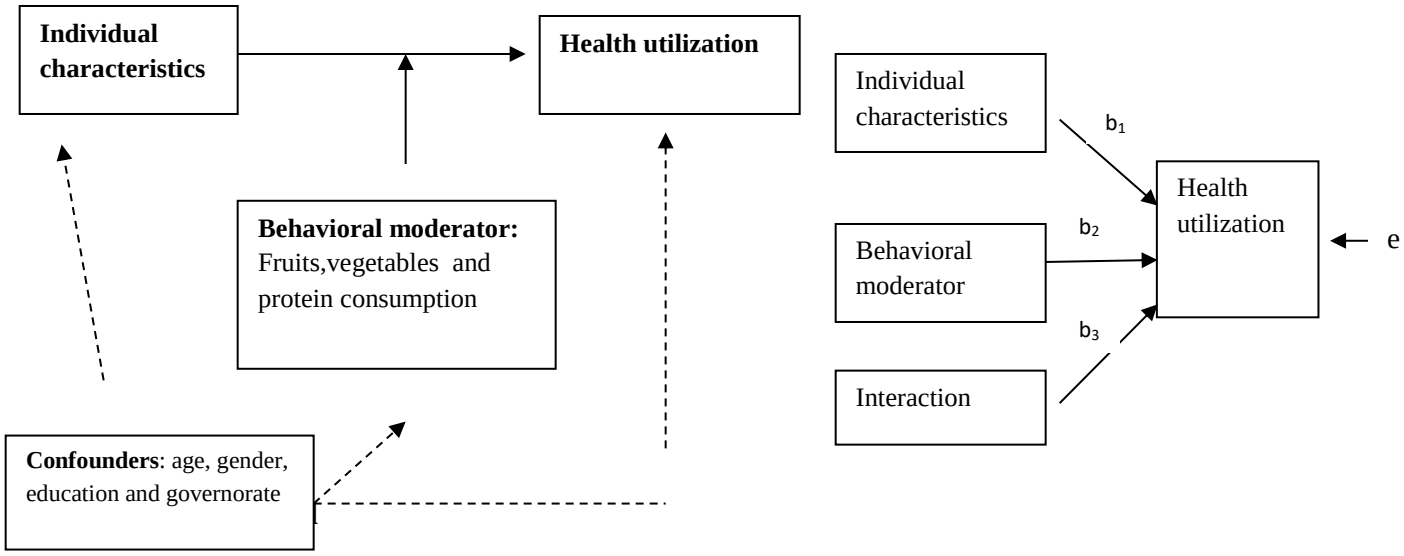
Where $\hat{Y}_{NR}$ and $\hat{Y}_R$ represent the average probabilities of binary outcomes of healthcare utilization status for non-refugees group (reference group) and refugees group (comparison group) respectively. F is the cumulative distribution function of the logistic distribution; X_i^{NR} is distribution of explanatory variable for the i-th individual in the non-refugees group, B^{NR} is the coefficient for that explanatory variable of the non-refugees group, X_i^{R} is distribution of explanatory variable for i-th individual in the refugees group, B^{R} is the coefficient for that explanatory variable of the refugees group.

$\hat{y}_{NR-}\hat{y}_R$ represents the total variation due to group differences, it is decomposed into non-refugees - refugees differences in the distribution of the measurable exposure variables (endowments) represented by the first term. Furthermore, the first term

reflects the portion of the disparity due to group differences in observed characteristics and the fraction attributable to differences in calculated coefficients, and the non-refugees - refugees' differences in the processes (effects/coefficients) determining the level of the difference represented by the second term. The second term represents the portion and captures the non-refugees - refugees' difference in Y level that is due to unmeasurable endowments.

Third, after conducting the gap analysis, the results will be used for moderation analysis to examine the impact of behavioral differences between refugees and non-refugees on healthcare utilization. In this analysis, behavior will be considered a moderating variable, as illustrated in Figure 12.

Figure 12: Graph showing the hypothesized moderator in the association between individual characteristics and health utilization



The provided diagram illustrates the hypothesized moderation model for the relationship between individual characteristics and healthcare utilization, emphasizing the role of a behavioral moderator. In this model, $b1$ represents the coefficient for the effect of individual characteristics on healthcare utilization. $b2$ is the coefficient for the effect of the moderator on healthcare utilization, while $b3$ represents the coefficient for the interaction effect between refugee status and the behavioral moderator on healthcare utilization. The error term e captures the variability in healthcare utilization that is not explained by the independent variables and the interaction term. This diagram highlights the importance of considering both direct and moderating effects to fully understand the determinants of healthcare utilization. Such a comprehensive approach can aid in designing more effective interventions to improve healthcare utilization, particularly among refugees and non-refugees.

IV.C Data source

We use data from the Palestine's Socio-Economic & Food Security Survey (SEFSEC) 2021, a cross-sectional and comprehensive health survey was conducted by the Palestinian Central Bureau of Statistics (PCBS, 2021)

Ten waves of the SEFSEC survey were conducted. The first survey took place in 2009, followed by subsequent waves in 2010, 2011, 2012, 2013, 2014, 2016, 2018, 2020, and 2021.

The PCBS collects information on various aspects, including health status, health behavior, healthcare provision, health determinants, socio-demographics, assistance and coping strategies, expenditure, consumption, poverty, and freedom of mobility. The SEFSEC survey also encompasses the design of essential surveying instruments and techniques for collecting, processing, and analyzing data.

The target population includes all Palestinian individuals and residents regularly residing in Palestine during the survey period, with a focus on those aged 18 and older, who complete the questionnaire designed for this demographic. The SEFSEC survey utilized a three-stage stratified cluster systematic random sampling method for selecting enumeration areas. In the first stage, households were selected; in the second stage, members aged at least 18 years were chosen using Kish (multivariate) tables; and in the third stage, the sample was finalized. In 2021, the survey sample comprised 7,057 households.

V Results

V.A Descriptive statistics

Table 2 shows the survey means and standard deviations for the variables included in the analysis, stratified by refugee status and broken down into categories for refugees (registered and unregistered) and non-refugees. The majority of our sample (56%) is non-refugee, and 58.3% resides in an urban location. The respondents' apparent average level of education is good, with 84.8% of refugees having completed primary and secondary education, compared to 85.6% of non-refugees.

As of the time of the survey, the general distribution of marital status shows that around 53.5% of the respondents in our sample were married. Approximately 55.3% of refugees received aid (i.e., UNRWA aid) compared to 22.9% of non-refugees. Consequently, fruit consumption among refugees (28.5%) is lower compared to non-refugees (43.8%). Additionally, the percentage of refugees who report having noise in their homes is higher (43.3%) compared to non-refugees (35%). Moreover, there is a greater shortage of medicine among refugees (19.1%) than among non-refugees (15%).

V.B Disparities in healthcare utilization

The estimated inequality in health utilization and each covariate linked to expenditures as determined by the Erreygers index are presented in Table 3. The population's Erreygers index (CI) for health utilization (CI = 0.125, $p<0.01$) shows that there is

moderate and concentrated inequality in health utilization relative to expenditures among households with more resources.

The findings imply that both the non-refugees (0.145) and refugee status (0.086) coefficients exhibit positive values and are statistically significant. This suggests that healthcare consumption is more concentrated among higher expenditures levels among both refugees and non-refugees. The coefficient for non-refugees (0.145) is larger than the coefficient for refugees (0.086), indicating a higher concentration of healthcare utilization among non-refugees than among refugees.

The gender coefficients (female: 0.133, male: 0.115) show that healthcare utilization is disproportionately concentrated in females relative to males. These coefficients are positive and statistically significant.

The results of the coefficients at various educational levels are inconsistent. For example, positive and statistically significant coefficients for primary and secondary education (0.135) and bachelor's degree (0.083) show a significant concentration of health care utilization among those with these educational levels. Higher education does, however, have a negative coefficient (-0.135), albeit one that is not statistically significant, pointing to the possibility of a negative relationship between healthcare utilization and education level.

The impact of different types of insurance on the utilization of healthcare services varies. For example, the positive and statistically significance for PA only insurance

(0.140), PA insurance and health coverage by UNRWA (0.085), and no insurance (0.118) all contribute to higher healthcare utilization. Those with PA only insurance are likely to use health services more frequently than those without insurance. Conversely, the health coverage provided by UNRWA exclusively (0.058) and Israel (0.063) exhibit positive coefficients, albeit lacking statistical significance.

Significant geographical differences in health utilization are found in the analysis, most notably in the Gaza Strip (0.086); no significant differences are found for the West Bank and Jerusalem 1. On the other hand, residency in urban areas (CI = 0.152, $p<0.01$), camp areas (0.108, $p<0.01$) show significant differences, while no significant difference was found for rural areas.

Table 2: Summary statistics of socio-economic and health variables by refugee status

Variables	**Overall**		**Refugee**		**Non -refugee**	
	Mean	SD	Mean	SD	Mean	SD
Age 20–24	0.178	0.382	0.173	0.378	0.181	0.385
Age 25–29	0.147	0.354	0.149	0.356	0.146	0.353
Age 30–34	0.122	0.328	0.126	0.332	0.119	0.324
Age 35–39	0.095	0.293	0.095	0.293	0.094	0.292
Age 40–44	0.087	0.282	0.088	0.283	0.087	0.282
Age 45–49	0.079	0.270	0.076	0.265	0.081	0.273
Marital status – married	0.535	0.499	0.526	0.499	0.543	0.498
Employed	0.238	0.426	0.213	0.409	0.258	0.438
No education	0.030	0.171	0.029	0.168	0.031	0.173
Primary and Secondary education	0.852	0.355	0.848	0.359	0.856	0.351

BA	0.111	0.315	0.117	0.322	0.107	0.309
Aids received	0.365	0.482	0.553	0.497	0.229	0.420
Health utilization	0.871	0.335	0.860	0.347	0.879	0.326
Chronic disease	0.131	0.338	0.140	0.347	0.123	0.329
Fruits consumption	0.375	1.164	0.285	1.045	0.438	1.236
Noisea round house	0.384	0.487	0.433	0.496	0.350	0.477
Medication lack	0.167	0.373	0.191	0.393	0.150	0.357
West Bank	0.511	0.500	0.325	0.468	0.655	0.475
Gaza Strip	0.470	0.499	0.658	0.474	0.330	0.470
Jerusalem 1[2]	0.019	0.137	0.017	0.130	0.015	0.122
Locality- Urban	0.583	0.493	0.571	0.495	0.591	0.492
Locality- rural	0.306	0.461	0.183	0.387	0.402	0.490
Locality-camp	0.111	0.314	0.246	0.431	0.007	0.085
Observations	32,276		14,235		18,041	

Note: All *estimates are unweighted and reflects sample data from households that were gathered during the Socio-Economic & Food Security Survey (2021). Because of rounding, other statistics may not add up to one.*

[2] Jerusalem Governorate, excluding the part forcibly annexed by the Israeli occupation following its occupation of the West Bank in 1967.

Table 3: Erreygers corrected concentration indices for health utilization related to expenditure and its determinants.

Variable	Erreygers index (Std.Error)	P-value
Health expenditures	0.125***(0.0111)	0.000
Refugee status (refugee)	0.086***(0.0175)	0.000
Non-refugees	0.145***(0.0142)	0.000
Gender (female)	0.133***(0.0153)	0.000
Male	0.115***(0.0161)	0.000
Education level (no education)	0.106*(0.0621)	0.0897
Primary and Secondary education	0.135***(0.0126)	0.000
BA	0.083***(0.0254)	0.0011
Higher education	-0.135(0.0914)	0.1454
Health insurance (no insurance)	0.118***(0.0248)	0.000
PA only insurance	0.140***(0.0187)	0.000
health coverage UNRWA	0.058*(0.0302)	0.0568
PA and health coverage UNRWA	0.085***(0.0212)	0.0001
Israeli insurance	0.063(0.0398)	0.1205
Region (West Bank)	0.006(0.0124)	0.6162
Gaza Strip	0.086***(0.0190)	0.000
Jerusalem 1	-0.010(0.0300)	0.7202
Locality- Urban	0.152***(0.0153)	0 .000
Rural	0.010(0.0167)	0.5579
Camp	0.108***(0.0372)	0.0037

*Notes: *statistical significance at the 10% level, **statistical significance at the 5% level and ***Statistical significance at the 1% level*.

V.C Outputs of the logistic regression

Table 4 presents the estimated models of logistic regression that investigate the relationship between different independent variables and health utilization. Moderation analysis is included in model 4 and model 5. We begin our analysis with the first model to assess the basic relationship between every factor and health utilization. The child violence variable was replaced with the violence women's variable in the second model as one of the environment factors because it is not statistically significant. In addition to a medicine lack variable, the Covid-19 variable was introduced to the third model in order to capture the effect of Covid-19 on health utilization. The fourth model examines how protein consumption and being a refugee interact to affect health utilization. Additionally, the fifth model investigates how protein consumption and locality type (whether the individual is in a camp, rural, or urban area) interact to affect health utilization. Based on the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC), the first model has better model fit as evidenced by its lowest AIC and BIC values.

In comparison to being a refugee, the coefficient of -0.347 indicates that being a non-refugee is linked to a lower likelihood of health utilization in the first model. In addition, there is a slight increase in the log odds of health utilization for each NIS monthly expenditure increase and higher levels of life satisfaction and health satisfaction are associated with increased health utilization. A negative relationship exists between the presence of health challenges, including difficulty seeing, and the

use of health care, as indicated by the difficulty-seeing coefficient of -0.705. Furthermore, variables related to household characteristics (increased number of family members, house humidity and noise around house), and political factors (Israeli violence) show significant negative associations with health utilization. The log odds of consumption of more vegetables is associated with a 0.0898 coefficient increase in health utilization as shown in the first model.

The overall model in the second model remained mostly unchanged when the violence against women variable was substituted for the child violence variable. Model 3 introduces the Covid-19 and medicine shortage variables, showing that a lack of medication is strongly negatively associated with health utilization, with a coefficient of -1.2680. Protein consumption is positively associated with health utilization, indicated by a coefficient of 0.1921, and the coefficient of fruits and vegetables is 0.1035.

As demonstrated in the fourth model, the positive coefficient for the interaction term "Refugee status and consumption of protein" suggests that among non-refugees, higher protein consumption is linked to increased health utilization. Moreover, Governorate location plays an important role in determining health utilization among the population. Additionally, the lack of medication is negatively associated with the health utilization.

Model 5 suggests that the interaction effect between the urban or rural setting and protein consumption does not significantly explain variations in health utilization.

However, it enhances our understanding of the factors influencing health utilization among the studied population. This model highlights the crucial roles of household dynamics, personal satisfaction levels, dietary habits, and environmental conditions in shaping healthcare utilization patterns. Additionally, political factors and refugee status continue to be significant determinants in this context.

Table4: Logistic analysis of health utilization[3]

Independent variables	**Model (1)**	**Model (2)**	**Model (3)**	**Model (4)******	**Model (5)******
Grouping variable					
Refugee status (ref = refugee)					
Non-refugees	-0.3472**	-0.2463*	-0.1753	-0.3936*	-0.1400
	(0.1090)	(0.1027)	(0.1035)	(0.1642)	(0.1050)
Predisposing factors					
Gender (ref = female)					
Male	0.1048	0.0713	0..0022		
	(0.1023)	(0.0969)	(0.0980)		
Enablers factors					
Number of household members	-0.0523*	-0.0480*	-0.0371		
	(0.0258)	(0.0235)	(0.0215)		
Monthly expenditure	0.0000**	0.00009**	0.00004	0.00007*	0.00007*
	(0.00003)	(0.00003)	(0.00003)	(0.00003)	(0.00003)
Number of rooms	0.0569	0.0449			
	(0.0535)	(0.0502)			

[3] *The effect of multiple health coverage on health care utilization is not statistically significant.*

Housing type (ref = Villa)					
House			0.9809		
			(0.8267)		
Apartment			0.9322		
			(0.8262)		
Independent room			2.6241		
			(1.3637)		
Tent, Marginal, caravan and			1.6234		
barracks			(1.0518)		
Need factors					
Life satisfied	0.0788**	0.0774***	0.05628*	0.0571**	0.0555**
	(0.0227)	(0.0214)	(0.0221)	(0.0209)	(0.0211)
Health satisfied	0.0772**	0.0714**	0..0632**	0.0501*	0.0462*
	(0.0242)	(0.0228)	(0.0235)	(0.0222)	(0.0225)
Chronic disease (ref = No)					
Yes			0.0073		
			(0.1299)		
Difficulty seeing (ref = No)					
Yes	-0.7054*	-0.7465*		-0.4192	-0.4272
	(0.3380)	(0.2944)		(0.2738)	(0.2825)
Medication lack (ref = No)					
Yes			-1.2680***	-1.2167***	-1.2483***
			(0.1044)	(0.0975)	(0.0985)
Behavioral factors					
Fruits consumption	0.1272	0.1442			
	(0.0808)	(0.0806)			
Vegetables consumption	0.0898*	0.0895*		0.0762*	0.0787*
	(0.0394)	(0.0375)		(0.0355)	(0.0361)

Protein consumption			0.1921*	0.1769	0.2175
			(0.0827)	(0.0942)	(0.1546)
Fruits and vegetables consumption			0 .1035		
			(0.0612)		
Interaction term					
Refugee status#protein consumptions					
Non-refugee				0.2851*	
				(0.1220)	
Locality#protein consumptions					
Urban and rural					0.14067
					(0.1655)
Environment factors					
House humidity (ref = No)					
Yes	-0.3966**	-0.4321***	-0.2639	-0.2808*	-0.2533*
	(0.1322)	(0.1239)	(0.1501)	(0.1164)	(0.1173)
House coldness (ref = No)			-0.1373		
			(0.1430)		
Yes					
Noise around house (ref = No)					
Yes	-0.3077**	-0.3332*	-0.2810 **	-0.3565***	-0.3173**
	(0.1032)	(0.0974)	(0.0974)	(0.0930)	(0.0943)
Child abuse (ref = No)					
Yes	-0.0505				
	(0.1240)				

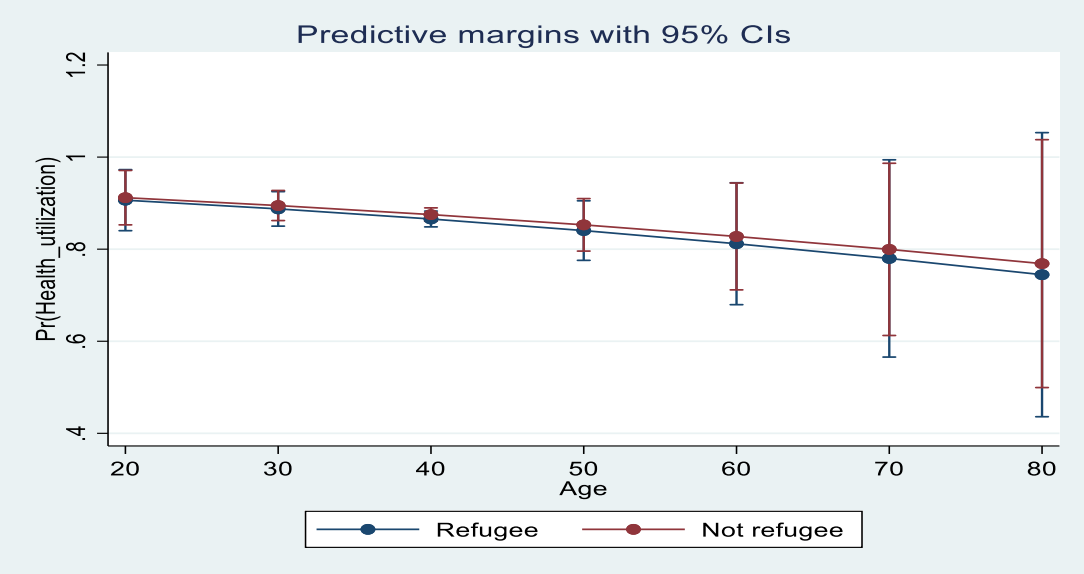
Violence women (ref = No)					
Yes		-0.2157			
		(0.1876)			
Political factors					
Israeli violence (ref = No)					
Yes	-1.0127**	-1.0724***		-0.6263	-0.6118
	(0.3734)	(0.3599)		(0.3391)	(0.3377)
COVID factors					
COVID (ref = No)					
Yes			-0.1052		
			(00982)		
Cons	2.1754**	1.9965**	0.7776	1.9157***	1.2483**
	(0.6345)	(0.5849)	(0.9716)	(0.4525)	(0.0985)
Observations	3,940	4,344	4,548	4,727	4,637
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000
R	0.1217	0.1203	0.1640	0.1189	0.1203
AIC	2707.371	3001.157	2974.354	3230.136	3168.082
BIC	2908.297	3205.206	3205.562	3327.052	3271.151

*Notes: This table shows the estimation results of logistic regression for health utilization. Coefficients of control variables are not shown in the first and second models are age, age squared, schooling, and governor; in the third model, age, schooling, schooling squared, and governor; and in the fourth model, the control variables are age and age squared. Standard errors in parentheses; * p < 0.05, ** p < 0.01, and *** p < 0.001. **** Model 4 and model 5 are moderation analysis.*

Figure 13 illustrates the differences in the predicted probability of health utilization at different life stages between refugees and non-refugees. In addition, the

predicted probability of health utilization is marginally lower for refugees than for non-refugees for every age level.

Figure 13: The predicted probabilities of health utilization for different age groups among both refugees and non-refugees



Source: Researcher's calculations

V.D Fairlie's decomposition results

This study investigated the differences in health utilization between refugees and non-refugees. Table 5 shows an estimated health disparity of 0.01218 between the two groups. Of this disparity, 75.27% can be attributed to the factors identified in the analysis. Conversely, 24.73% of the differences are due to variations in refugee status. Political issues, particularly barriers and restrictions imposed by the Israeli occupation,

play a significant role in the disparity in healthcare use between refugees and non-refugees. Additionally, refugees utilize health services at a significantly higher rate compared to non-refugees, partly due to the considerable positive coefficients associated with need factors. Behavioral factors also contribute to the disparity in health utilization between the two groups.

Table 5: Fairlie's decomposition of inequalities in health utilization between refugees and non-refugees

Decomposition term	**Health Utilization**		
Difference	0.01218		
Explained (%)	0.00916 (75.21%)		
Explained			
Contribution to difference	Coefficient	95% CIs	
Predisposing factors	-0.02671	-0.06370	0.01027
Enablers factors	0.00067	-0.00206	0.00339
Need factors	0.00960***	0.00536	0.01383
Behavioral factors	0.00459*	0.00038	0.00880
Environment factors	0.00217	-0.00168	0.00603
Political factors	0.01892**	0.00622	0.03162

*Notes: This table shows the estimation results of Fairlie's decomposition for health utilization. Standard errors in parentheses; * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$*

VII Discussion

This study investigates disparities in healthcare utilization between refugees and non-refugees in Palestine, emphasizing the influence of various factors on these disparities. Our findings reveal several key insights into the complex interplay of predisposing, enabling, need-based, behavioral, environmental, and political factors affecting healthcare utilization.

In contrast to non-refugees, the majority of prior research on refugee health has consistently indicated that refugees use health services at a lower rate. However, some studies have found that refugees use health services at a higher rate than non-refugees, with no evidence of underutilization (Kiss, et al., 2011). Our research supports these study's findings, showing that non-refugees utilize health services less frequently than refugees. This is likely due the support provided by UNRWA, which ofngfers hospitals and health coverage for refugees in the West Bank and Gaza Strip. Despite long-term changes and austerity measures due to financial crises, UNRWA reported an 8% funding gap in its program budget by the end of 2021 (Berg, et al., 2022). Nonetheless, UNRWA allocated 15–25% of its budget to health programs during this period, which play a crucial role in supporting refugee health.

Furthermore, research has explored into how financial circumstances affect people's ability to use healthcare (Lu, et al., 2022). Our results are align with earlier research, showing that higher expenditure are positively related to increased healthcare

utilization. Studies have also examined the impact of subjective well-being variables, such as diet and smoking, on health behavior. Similar relationships between reduced cigarette smoking, increased consumption of fruits and vegetables, and increased healthcare utilization have been reported (Kahende, et al., 2009; PEM , et al., 2015). Thus, our findings are consistent with previous research.

Additionally, health challenges that adversely impact health utilization, such as a chronic illness or difficulties in moving, hearing, seeing, or communicating, have been studied in relation to the determinants of need factors (National Academies Press, 2018). Our findings, along with related studies, provide insights into how need factors affect health utilization. Emphasizing the impact of environmental and political factors on health utilization is also crucial, especially in Palestine, where the Israeli occupation significantly influences healthcare utilization.

Moreover, Fairlie's analysis identified key factors contributing to the disparity in healthcare utilization between refugees and non-refugees, including the location of housing units within the buffer zone and the separation barrier resulting from the Israeli occupation.

This study advances the literature by addressing gaps in understanding healthcare disparities between refugees and non-refugees in Palestine. It highlights the significance of political, behavioral, and institutional determinants in shaping patterns of healthcare utilization.

Notably, this thesis has several limitations. First, since the data is cross-sectional, it provides only a snapshot of healthcare consumption at a specific point in time, lacking the ability to track changes in healthcare utilization over time or capture temporal patterns. Second, health utilization was classified based on whether individuals received medical attention or treatment when needed and whether there were instances where they did not receive such care. This approach did not account for the severity of their suffering due to unmet healthcare needs. Third, the thesis may not have considered all potential confounding variables affecting healthcare utilization among refugees and non-refugees, such as cultural differences or access to healthcare services. These factors could impact the validity of the results. Despite these limitations, the thesis provides valuable insights into the differences in healthcare utilization between refugees and non-refugees in Palestine.

VIII Conclusions and recommendations

Overall, the study provided valuable insights into the factors influencing health utilization disparities between refugees and non-refugees in Palestine. It reveals a significant disparity in healthcare utilization between the two groups, with refugees typically using healthcare services more frequently than non-refugees. The analysis demonstrates a statistically significant difference in healthcare utilization, indicating

that refugees have a higher concentration of healthcare usage compared to non-refugees.

The proposed contributions are therefore noteworthy because they offer evidence-based perspectives on the variables influencing the differences in healthcare utilization between refugees and non-refugees. The study provides useful information for policymakers and healthcare practitioners to develop targeted interventions aimed at reducing disparities and promoting equitable utilization of healthcare services by highlighting the significance of financial, behavioral, health-related, and environmental factors. This thesis has underscored the significant disparities in healthcare utilization between Palestinian refugees and non-refugees as a focal point of investigation. It has been established that a higher percentage of refugees suffer from chronic illnesses compared to their non-refugee counterparts. Addressing these disparities necessitates a multifaceted approach that considers factors such as housing characteristics and geographical location within Palestine.

Governments should give priority to programs that guarantee sufficient healthcare provision for non-refugee populations, given the discrepancy in healthcare utilization where non-refugees display lower rates compared to refugees. Preserving and improving healthcare services suited to non-refugees. In addition to, governments should make sure that healthcare for refugees is supported going forward, especially through UNRWA and other initiatives that have been crucial in delivering medical aid.

Healthcare utilization and financial assistance for underserved non-refugee groups: Given the financial obstacles that prevent non-refugees from utilizing healthcare, authorities ought to put in place focused financial support programs to increase access to care. In order to promote equal access to healthcare services, underserved non-refugee can have their financial burdens reduced by direct financial help, insurance coverage extensions, or subsidies.

Promotion of healthy behaviors: Promoting healthy habits, such as consuming vegetables, fruits, and protein, can positively impact the frequency with which people use healthcare services. Healthy diet practices should be the main focus of public health campaigns since they can improve population health and boost the use of healthcare services.

Addressing environmental and political determinants: Housing conditions and acts of aggression by Israelis are two examples of environmental and political factors that significantly impact healthcare utilization. It is crucial to focus on improving the housing infrastructure, particularly in camps for refugees, and reducing the negative effects of instability on access to healthcare. In order to address these factors, comprehensive policies that prioritize each individual's health and wellbeing first, regardless of their sociopolitical background, are essential.

Looking forward, future research endeavors should conduct longitudinal research to monitor changes over time in the healthcare utilization patterns among non-refugees

and refugees. Researcher identification of trends, predictors, and obstacles to healthcare consumption across various demographic groups can be facilitated by long-term data gathering, which can offer insights into the dynamic nature of healthcare utilization.

Additionally, evaluating policy interventions, including refugee health policies, humanitarian relief initiatives, and healthcare reforms. Thorough policy assessments can offer evidence-based suggestions for resolving gaps in access to care and improving healthcare delivery.

Finally, intervention studies are warranted to evaluate the effectiveness of targeted programs designed to enhance healthcare access for non-refugee populations. Examples of such interventions include healthcare outreach programs, community-based health initiatives, and legislative changes aimed at removing systemic obstacles to healthcare access.

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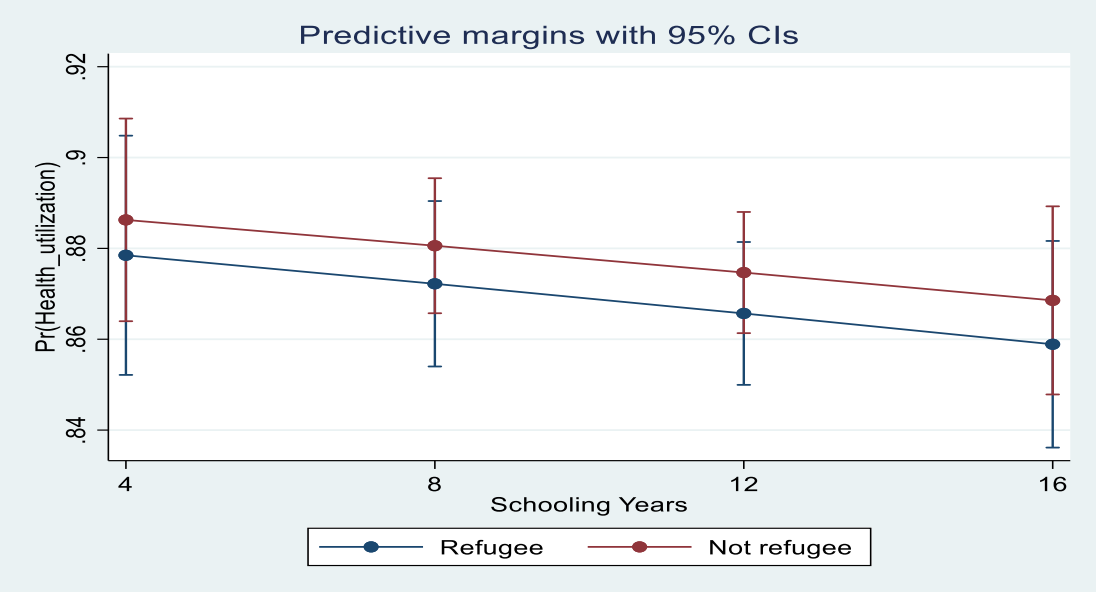
X Appendices

X.A Appendix: Figures

Figure 14: The predicted probabilities of health utilization for different education groups among both refugees and non-refugee



Source: Researcher's calculations

X.B Appendix: Tables

Table 6: Definition and measurement of variables

Type	Name	Assignment
Dependent variable	Health Utilization	Health Utilization if no=0, Health Utilization if yes=1
Grouping variable	Refugee status	Refugee=0, Non-refugees-1 if logistic regression, Refugee=1, Non-refugees-0 if Fairlie's decomposition regression
Predisposing factors	Age	Years
	Gender	Female=0, Male=1
	Education	Years of education (0-25 year)
	Marital status	Single=0, Married=1, Other=2
	locality type	Urban=0, Rural=1 and Camp=2
	Governors	Jenin=0, Tubas & Northern Valleys=1, Tulkarm=2, Nablus=3, Qalqiliya=4, Salfit=5, Ramallah & Al-Bireh=6, Jericho & Al Aghwar=7, Jerusalem=8, Jerusalem_2=9, Bethlehem=10, Hebron=11, North gaza=12, Gaza=13 and Deir al Balah=14
	Insurance type	Don't have insurance=0, Have PA only insurance=1, Have UNRWA only insurance=2, Have PA and UNRWA insurance=3, Have PA and Have private insurance=4, Have UNRWA and private insurance=5, Have Israeli insurance=6

Enablers factors	Number of household members	Scale
	Monthly expenditure	Monthly expenditure in NIS
	Number of rooms	Scale
	Housing type	Villa=0, House=1, Apartment=2, Independent room=3 and Tent, Marginal, caravan and barracks=4
Need factors	Life satisfied	Ordinal (1; Not satisfied -10; Very satisfied)
	Health satisfied	Ordinal (1; Not satisfied -10; Very satisfied)
	Chronic disease	Don't have chronic disease=0, Have chronic disease= 1
	Difficulty seeing	Don't have Difficulty seeing=0, Have Difficulty seeing=1
	Medication lack	Ability of receiving medical care because of a lack of medicines =0, Inability of receiving medical care because of a lack of medicines=1
Behavioral factors	Fruits consumption	Number of fruit-eating days in a week
	Vegetables consumption	Number of vegetables-eating days in a week
	Protein consumption	Average of days of fish, eggs, meat and liver-eating in a week
	Fruits and vegetables consumption	Average of days of all kinds of fruits and vegetables-eating in a week

Environment factors	House humidity	There is no house humidity=0, There is house humidity=1
	House coldness	There is no house coldness=0, there is house coldness=1
	House ventilation	There is no house ventilation=0, there is house ventilation =1
	House temperatures	There is no house temperatures=0, there is house temperatures=1
	House falling-off	There is no house falling-off=0, there is house falling-off=1
	Noise around house	There is no noise around house=0, there is noise around house=1
	Child abuse	There is no an abused child=0, There is an abused child=1
	Violence women	There is no an abused woman=0, There is an abused woman=1
Political factors	Israeli violence	There is no an Israeli violence=0, There is an Israeli violence=1
	Location	Location Less than 1000 m in Gaza strip=0, Location 1000 m and more in Gaza strip=1, Location inside separation barrier West Bank=2, Location outside separation barrier West Bank=3
COVID factors	COVID	Don't have Corona virus=0, Have Corona virus=1

Source: Compiled by the researcher