UCLouvain

Faculté de santé publique

Mental health of refugees and asylum seekers in times of the Covid-19 pandemic

Scoping review

Mémoire réalisé par
Tatiana Vermisheva

Promoteur(s)
Pr. Pablo Nicaise

Année académique 2022-2023
Master en sciences de la santé publique, finalité spécialisée

UCLouvain

Faculté de santé publique

Mental health of refugees and asylum seekers in times of the Covid-19 pandemic

Scoping review

Mémoire réalisé par
Tatiana Vermisheva

Promoteur(s)
Pr. Pablo Nicaise

Année académique 2022-2023
Master en sciences de la santé publique, finalité spécialisée

I would like to express my deepest gratitude to everyone who helped me in one way or another in realisation of my thesis.

I'm extremely grateful to my promoter Professor Pablo Nicaise who provided me with encouragement and patience through the duration of my project, who extended a great amount of assistance, who provided me help and support throughout the entire period of my work on the thesis.

I would like to extend my gratitude to Professor William D'Hoore and Professor Sandy Tubeuf who helped me a lot to decide on the topic of my thesis, giving me the necessary support and direction.

As a foreign student I would like to extend my sincere thanks to the administration of the Catholic University of Leuven for giving me the chance to study at the Faculty of Public Health.

I would also like to extend my gratitude to all the professors of the Faculty of Public Health who gave me the possibility to acquire the necessary knowledge, who was always patient and polite in explaining lectures and practical exercises.

Many thanks to my family and my friends who encouraged and supported me both in the process of my study and in the process of my work on the thesis.

Special thanks to my parents, and especially to my mother, who invested in me a lot of knowledge, warmth, and love, thus providing a strong base for my further development as a person.

Le plagiat

Je déclare sur l'honneur que ce mémoire a été écrit de ma plume, sans avoir sollicité d'aide extérieure illicite, qu'il n'est pas la reprise d'un travail présenté dans une autre institution pour évaluation, et qu'il n'a jamais été publié, en tout ou en partie.

Toutes les informations (idées, phrases, graphes, cartes, tableaux, …) empruntées ou faisant référence à des sources primaires ou secondaires sont référencées adéquatement selon la méthode universitaire en vigueur. Je déclare avoir pris connaissance et adhérer au Code de déontologie pour les étudiants en matière d'emprunts, de citations et d'exploitation de sources diverses et savoir que le plagiat constitue une faute grave sanctionnée par l'Université catholique de Louvain.

Abbreviations:

AHCM	Accountable Health Communities Model
APA	American Psychological Association
ASIA	Asian Service in Action
FDMN	Forcibly Displaced Myanmar Nationals
FQHC	Federally Qualified Health Centres
HRSA	Health Resource and Service Administration
HTQ	Harvard Trauma Questionnaire
IDp	Internally Displaced person
ISIS	Islamic State of Iraq and Syria
MHFA	Mental Health First Aid
NMRCL - 121	New Mexico Refugee Symptom Checklist - 121
PCC	Population, Concepts and Context
PHQ-2	Patient Health Questionnaire – 2
PHQ- 9	Patient Health Questionnaire – 9
PRISMA-ScR	Preferred Reporting Items for Systematic Review and Analyses extension for scoping review
PTSD	Post-Traumatic Stress Disorder
RHS - 15	Refugee Health Screener - 15
RTC	Randomised Control Trial
SARS-CoV-2	Severe Acute Respiratory Syndrome Coronavirus 2
SDIMH	Social Determinants Impacting Mental Health
SES	Socio Economic Status
UK	United Kingdom
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations International Children's Emergency Fund
USA	United States of America
VDS	Vietnamese Depression Scale
WHO	World Health Organisation

Pictures, figures, and tables:

Table of content:

1. Introduction

1.1. People on move all over the world. Migration and forced displacement

Based on WHO data provided in 2021 more than 1 billion people are on the move across the world, about 1 in 7 of the world population. Of this total, 281 million people are international migrants and 84 million are forcibly displaced (48 million are internally displaced, 26,6 million are refugees, 4,4 million are asylum seekers) (1).

People migrate for many reasons, ranging from security, demography and human rights to poverty and climate change (2). Migration is a complex phenomenon, where 'macro', 'meso' and 'micro' factors act together. Among the 'macro'-factors', the political, demographic, socio-economic and environmental situations are major contributors to migration. Among the 'meso-factors, communication technology, land grabbing and diasporic links play an important role. 'Micro-factors, such as education, religion, marital status, and personal attitude to migration also have a key role in making the final decision to migrate as an individual choice (3).

The term 'migrants' refer to individuals who have changed their place of residence either by crossing an international border (international migration) or by moving within their country of origin to another region, district, or municipality (internal migration). People are normally considered 'migrants' if they remain outside their place of residence for a period of at least three months (4). Displacement is a particular form of migration, in which individuals are forced to move against their will. Where people are forced to move within their country of origin, this is referred to as internal displacement (4), or internally displaced person (IDp). In other cases, people are forced to leave their homes or places of habitual residence and move to other countries as a result of or in order to avoid the effects of events or situations such as armed conflict, generalized violence, human rights abuses, natural or man-made disasters, and/or development projects (5).

1.2. Refugees' vs asylum seekers

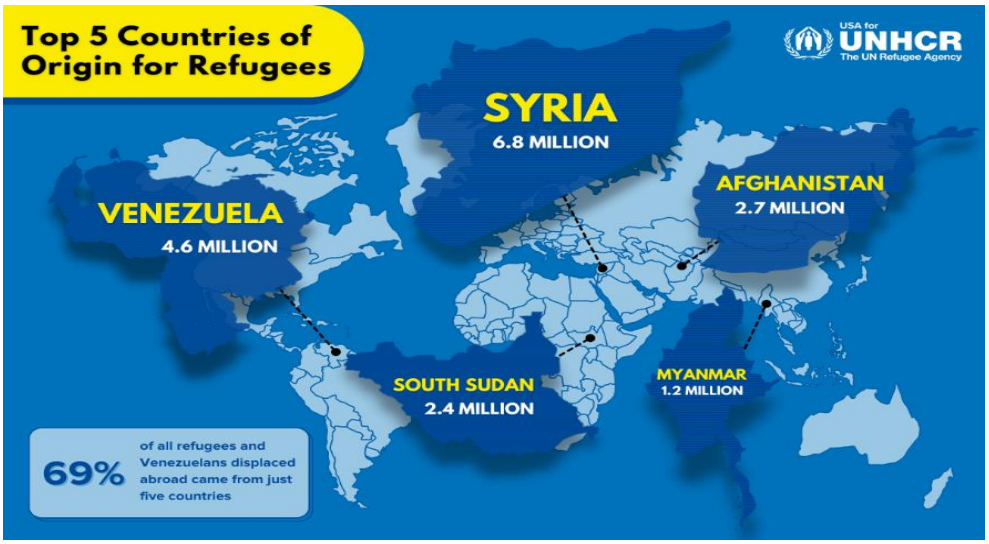
Since the population in our area of interest is refugees and asylum seekers, we consider it necessary to introduce a more precise definition for representatives of this group.

There is a great deal of confusion about the difference between an asylum seeker and a refugee and often the terms are used interchangeably or incorrectly. An asylum seeker is someone who is seeking international protection but whose claim for refugee status has not yet been determined. In contrast, a refugee is someone who has been recognised under the *1951 Convention relating to the status of refugees to be a refugee*. The Convention defines a 'refugee' as a person who' owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.'(6). The definition of 'refugee' does not cover other individuals or groups of people who are forced to leave their country for other reasons as the UNHCR explains: migrants, especially economic migrants, choose to move in order to improve the future prospects of themselves and their families. Refugees have to move if they are to save their lives or perceive their freedom. They have no protection from their own state – indeed it is often their own government that is threatening to persecute them. If other countries do not let them in, and do not help them once they are in, then they may be condemning them to death – or to an intolerable life in the shadows, without sustenance and without rights (6).

The number of people displaced from their home continued due to war, armed conflict, political violence, and related threats are growing. If current trends continue, one in 100 persons will be a refugee in near future according to the statement of American Psychiatric Association (7).

1.3. Countries with the highest number of refugees and countries hosting the highest number of refugees.

In concordance with a report by the UNHCR in 2021, countries with the highest number of refugees fleeing were: 1. Syrian Arab Republic, 2. Venezuela, 3. Afghanistan, 4. South Sudan and 5. Myanmar, (1) what can be seen in the picture below, (**Pic1**.) represented 'Five Takeaways from the 2021 UNHCR Global Trends Report (8), while countries hosting the highest number of refugees were: 1. Turkey, 2. Colombia, 3. Uganda, 4. Pakistan, 5. Germany. The United States of America has been the main country of destination for migrants since 1970, and Germany is the second top destination (1).



Pic.1 Top 5 Countries of Origin for Refugees – UNHCR, 2021

Approximately 1 in 10 of the current 26 million people who are refugees reside in high-income countries (9). An estimated 83 percent of refugees are hosted by low- and middle-income countries (10).

Even though their circumstances will differ, all refugees and asylum seekers left their country of origin because of a well-founded fear of persecution, conflict, violence, or other dangerous circumstances they experienced during and after migration (11).

1.4. Different stages of migration and their impact on mental health. Some examples of research carried out on this topic.

Different stages of migration process represented by WHO include pre-migration, migration travel and transit, post-migration, integration and settlement or resettlement/repatriation (12). Resettlement, according to the International Organisation for Migrants (IOM), is the 'transfer of refugees from the country in which they have sought protection to another State that has agreed to admit them – as refugees – with permanent residence status (13).

Migrants and refugees often face various problems, risks, and stressors on each stage of the migration process. For example, pre-migration period is often associated with exposure to armed conflict, violence, emotional trauma to the individual or family, the witnessing of murder, and social upheaval, decision and preparation to move, migration travel and transit is the physical relocation of individuals from one place to another, involves an uncertain journey from host country and may involve arduous travel, refugee camp and/or detention centre, but also exposure to challenging and life threating condition and lack of access to services to

cover basic needs. The post-migration period is often characterized with poor living conditions, separation from family members, possible uncertainty regarding work permits and legal status and in some cases immigration detention. Finally, integration and settlement are associated with assimilation difficulties, challenges to cultural, religious, and gender identities, challenges with obtaining entitlements, changing policies in host countries, racism, exclusion, social isolation, and possible deportation (12,14).

Migration has contributed to the richness in diversity of cultures, ethnicities, and races in developed countries, but individuals who migrate experience multiply stress that can impact their mental well-being, including the loss of cultural norms, religious customs, and social support systems, adjustment to a new culture and changes in identity and concept of self (15) and therefore, in the process of migratory stages, the presence of various stress factors predisposes individuals to mental health issues and can increase the risk of developing mental health conditions.

The initial stage of migration may have comparatively lower rates of mental illness and health problems than the later stages, due to the younger age at the initial stage of migration and the problems with acculturation and the potential discrepancy between attainment of goals and actual achievement in the latter stages. It is worth nothing that the stages are often not discrete and merge into one another (15).

Postmigration is defined as the 'absorption of the immigrant within the social and cultural framework of the new society'. Social and cultural rules and new roles may be learnt at this stage (15). Especially, after their arrival in host countries, refugees and asylum seekers encounter risk factors for mental disorders, termed "post-migration stressors" (16). Major post-migration risk factors, or stressors strongly associated with mental health outcomes include uncertainty about the asylum application, residency status and length of asylum procedure/duration of stay, reduced social integration, weak social network, and trust in others, as well as unemployment, insufficient or no knowledge of the host-country language, racism, and discrimination (14,16,17).

The situation of refugees and other marginalized population including the displaced and asylum seekers depends mainly on their legal situation in host-countries. Small fraction of refugees was lucky enough to get permanent residence or citizenship whereas some refugees face disastrous conditions in reception camps or identification centres on country borders, and many of them reside and work without legal documentation (18).

A cross-sectional study (Kiselev, 2020) conducted at the University of Zurich and aimed to identify problems faced by Syrian refugees and asylum seekers in Switzerland, show that besides physical health problems, Syrians experienced two types of problems: practical and psychological (emotional) problems. These two types of problems are closely interrelated. The most common practical problems with integration, cultural differences, language problems, problems related to education, problems related to employment and housing problems. Symptoms of mental health disorders and feeling of uncertainty, frustration and injustice were the most common psychological problems (16). Refugees have mainly to face their adaptation in a host country, with bureaucracy, different culture, poverty, and racism. Moreover, refugees who setting in crowded shelters without clean water and inaccessibility to health care services become more vulnerable to different infections (19).

Investigation of 'pre-displacement and post-displacement factors associated with mental health of refugees and internally displaced persons' supports the role of enduring contextual factors before and after displacement as moderators of mental health among the world's refugees. Particular attention is paid to the fact that psychological aftereffects of displacement by war cannot be understood simply as the product of an acute and discrete stressor, but depend crucially on the economic, social, and cultural conditions from which refugees are displaced and in which refugees are placed (18).

According to recent research (Pinzon-Espinosa, 2021) investigating the mental health of refugees, asylum seekers and migrants, adult refugees and other displaced people show a high burden of mental disorders, including post-traumatic stress disorder (PTSD), depression, idioms of distress, and prolonged grief disorder, which highly related to the load of traumatic circumstances, surrounding refugees, associated with human right abuses, lack of human needs, and separation from others. Furthermore, children's refugees have also been found to show a higher prevalence of psychotic and anxiety disorders' (20). The same study reveal that many refugees are severely traumatized, and not all seek help. Moreover, when refugees do seek mental health attention, most present with either severe or highly severe symptoms, which further complicates timely identification and treatment of conditions (20). Displaced people may have additional diagnoses, such as alcohol and substance use disorders, or intellectual disabilities, which further increase their care needs. They often have poor physical health with complex pre-existing illnesses, including physical injuries, exposure to communicable diseases, and undiagnosed or poorly treated medical disorders (21).

Mental health promotion, prevention, and treatment for mental health problems such as depression, anxiety, and post-traumatic stress disorder may work differently in these groups of people than for the general population (6).

A systematic review and meta-analysis (Blackmore, 2020) studying 'The prevalence of mental illness in refugees and asylum seekers' (22) provided results undertaken across 15 countries for 5143 adults' refugees and asylum seekers, from four geographic regions: The Middles East, Europe, Asia, and Africa and show the prevalence of PTSD, depression, anxiety disorders and psychosis among participants. It was also noted that the increased prevalence of PTSD and depression appears to persist for many years after displacement. The results of this review highlight the need for ongoing, long term mental health care beyond the initial period of resettlement.

In this context it is important to note, that research on refugee mental health is fraught with practical obstacles. Population is often physically, linguistically, and culturally inaccessible to research, and humanitarian aid usually has higher priority than scientific investigation. Studies are often exploratory and methodologically compromised, and the specificity of local circumstances makes it difficult to draw generalised conclusion (18). Less is known about the relationship between post-migration factors and mental health problems. Certain psychosocial variables that are specific to the post-migration context (e.g., legal status) have been shown to compound the psychological effects of premigration trauma. For example, uncertain immigration status has been found to be as strong as predictor of PTSD as pre-migration rape. Therefore, resettlement into a 'safe' country is not necessarily conducive to improved psychological well-being (17).

1.5. The Covid-19 pandemic and its impact on people mental health around the world.

Hence, the already fragile situation of refugees becomes worrying and challenged in the face of the new coronavirus (Covid-19) pandemic that occurred in Wuhan, China, in December of 2019 (19) and on March 11, 2020, WHO declared the outbreak of the novel coronavirus SARS-CoV-2, the causative agent of Covid-19, a global pandemic (23). Even though Covid-19 is the third main coronavirus outbreak over past 20 years that has had substantial socioeconomic impact, it is the first in the 21st century to affect countries across all continents except Antarctica.

The pandemic, its consequences, as well as the consequences of the mitigation and suppression policies that were implemented to contain the pandemic, such as lockdown and social distancing, have led to several mental health issues (24).

The Covid-19 pandemic has changed our lives dramatically regardless of skin colour, ethnicity, and wealth, negatively affected people's mental health across the globe and created new barriers for people already suffering from mental illness. According to a recent meta-analysis conducted on the impact of mitigation strategies on common mental health disorders, mental health should not be viewed as a delayed consequence of the Covid-19 pandemic, but as a concurrent epidemic (25).

Nevertheless, the pandemic and social consequences have not affected everyone equally, and some vulnerable groups have been at greater risk of adverse outcomes (26). Migrants and refugees have been identified as a vulnerable population during the Covid-19 pandemic, due to precarious working, living, economic and living conditions they face (20) and due to their uncertain legal status, pre-existing physical and mental health vulnerabilities, and their inability to return to home countries because to fear of persecution. They often exposed to virus, but less protected, while at the same time being at higher risk of suffering from poor living and working conditions, limited access to healthcare, and discrimination by the host society, all of which is challenging to their mental health (27).

Covid-19 does not leave behind the refugees. In stark contrast, they are severely affected. It is important to acknowledge that there is no public health without refugee health (28).

However, little has been researched during the pandemic on the devastating effects on mental health that the increased stress of the pandemic and confinement, as well as the adverse social determinants may have on these vulnerable population (20). Being aware of how past trauma and social adversity impacts mental health during the pandemic may improve health responses for this population (9).

In this context the aim of our scoping review is to identify and summarise the main problems concerning to mental health of refugees, asylum seekers as involuntary migrants, and the more vulnerable population in times of the Covid-19 pandemic and possibly identify knowledge gaps that would need to be addressed.

2. Methods

A scoping review methodology was chosen. This type of review provides a preliminary assessment of the potential size and scope of available research literature. It aims to identify nature and extent of research evidence and to explore more general research question as opposed to a systematic review (29). Indeed, our research of mental health of refugees and asylum seekers in times of the Covid-19 pandemic includes a very wide range of different studies and heterogeneous outcomes. The framework created by Arksey and O'Malley (30), namely **identifying the research question, identifying relevant studies**, **study selection, charting the data, collating, summarising, and reporting the results** and subsequently refined by Levac et al (31) and the guidelines of the PRISMA-ScR (Preferred Reporting Items for Systematic review and Meta-Analyses extension for scoping review (32) checklist were followed.

2.1. Identifying the research question

The inclusion criteria were organised following the PCC mnemonic (Population, Concepts, and Context). The population of interest included refugees and asylum seekers. Due to a fact that the literature search for this type of population was limited, we expanded the research by using in the research query also "migrants" and "forcibly displaced people" and "internally displaced population ". For not to operate with different terms in our scoping review and to make it easier to read we will use mostly the term "refugees" in our subsequent presentation. Therefore, we defined our main research question as follows: What is known in the existing literature about mental health of the mentioned above population in times of the Covid-19 pandemic relatively to concepts and context.

The sub-questions related to this research question are presented as follows:

1. Identification the major mental health problems of refugees and asylum seekers in times of the Covid-19 pandemic.
2. Population characteristics (age and gender), geographic characteristics that are likely to be associated with higher mental ill-being.
3. The possible coping strategies used by refugees and asylum seekers in times of the Covid-19 pandemic.

4. An overview of community interventions proposed or implemented in order to promote mental of refugees and asylum seekers health in times of the Covid-19 pandemic
5. To report and formulate recommendations for promotion of mental health of refugees and asylum seekers in times of the Covid-19 pandemic.

The hypotheses of the research are as follows:

- The fact of forced displacement affects the deterioration of mental health of refugees and asylum seekers in times of the Covid-19 pandemic, compared to the general population.
- Age and gender affect mental health of refugees and asylum seekers in times of the Covid-19 pandemic.
- Pre-migration and post-migration situation aggravated by the Covid-19 pandemic affect mental health of refugees and asylum seekers.

2.2. Identifying relevant studies

Electronic database: PubMed, ScienceDirect, Scopus, Embase and PsycInfo, were searched for relevant articles published mainly in the period from 2019 to 2022. Given the fact that our goal is to study mental health of refugees during the Covid-19 pandemic, and also that the epidemic was officially declared in March 2020 (23), in our search we interested in the period that determines the onset of pandemic, but also early pre-pandemic period and post-pandemic period to be able to compare mental health outcomes prior and after the pandemic. The following search equations were used: "mental health" AND 'refugees' AND 'Covid-19 pandemic'; 'mental health' AND 'asylum seekers' AND 'Covid-19 pandemic'; 'mental health' AND 'refugees' AND 'health promotion' AND 'Covid-19 pandemic'; 'mental health' AND 'forcibly displaced people' OR 'internally displaced people' AND 'Covid-19 pandemic' AND 'community interventions. The studies were not assessed for bias, as the risk of bias assessment was reported as non-applicable to scoping review in the 2018 PRISMA-ScR guidelines (25). The search was limited to articles written in English.

2.3. Data selection

Given that we 'sought breadth rather than depth 'as Arksey and O'Malley suggest (30) for data selection process, we performed several stages for articles selection. The first stage of the

selection was based on the title of our scoping review, which clearly identify inclusion criteria in accordance with PPC mnemonic. Second, after title screening, we analysed the remaining articles, recorded the presence of duplicated and distributed the available data using Zotero program. We carefully reviewed screened articles and paid close attention not only to the title and abstracts, but also to the conclusion of the articles that would give us answers to our sub-questions, as well as the ability to confirm or contradict our hypotheses. Third, after identifying eligible articles, we read the full content of the articles, carefully reviewed them depending on the requirement of included criteria and finally we selected articles which we considered more suitable for inclusion in our scoping review. 22 articles were included. **Fig 1** presents the different stages of data selection.

2.4. Charting the data

Guided by Arksey and O'Malley scoping methodology (30), 'charting describes a technique for synthesizing and interpreting qualitative data by sifting, charting, and sorting material according to key issues and themes 'The 'descriptive-analytical' method within the narrative tradition, which involves applying a common analytical framework to all the primary research reports and collecting standard information on each study, stands more chance of being useful (30). Descriptive Analysis is the type of analysis of data that helps describe, show, or summarize data points in a constructive way such that patterns might emerge that fulfil every condition of the data (31). The content of the charting tool includes: (1) author(s) and year of publication, (2) country of affiliation of study, (3) aim of study, (4) study design, (5) data collection period, (6) sample size, (7) mean age, standard deviation, and gender, (8) population/ethnicity, (9) mental health disorders, (10) Covid-19 pandemic related stressors and other stressors, (11) main findings of study.

The results of our study are collected and presented in tabular form, accompanied by a narrative conclusion based on key findings on the objectives and questions of our study.

2.5. Collating, summarising, and reporting the results

This item of methodological framework proposed by Arksey, and O'Malley indicates that 'the emphasis is not placed on the 'weight of evidence' nor on evaluating the quality of evidence,

but an analytic or thematic framework to guide the narrative account on existing literature' (30).

The database search identified 1033 potential studies. After removal of duplicated 339 titles and abstracts were screened. Of these, 68 full text articles were accessed for eligibility. A total 46 articles were excluded after performing the full text review, leaving 22 articles included in scoping review. Reasons for exclusion of 46 articles are shown in the Fig.1 PRISMA flow diagram.

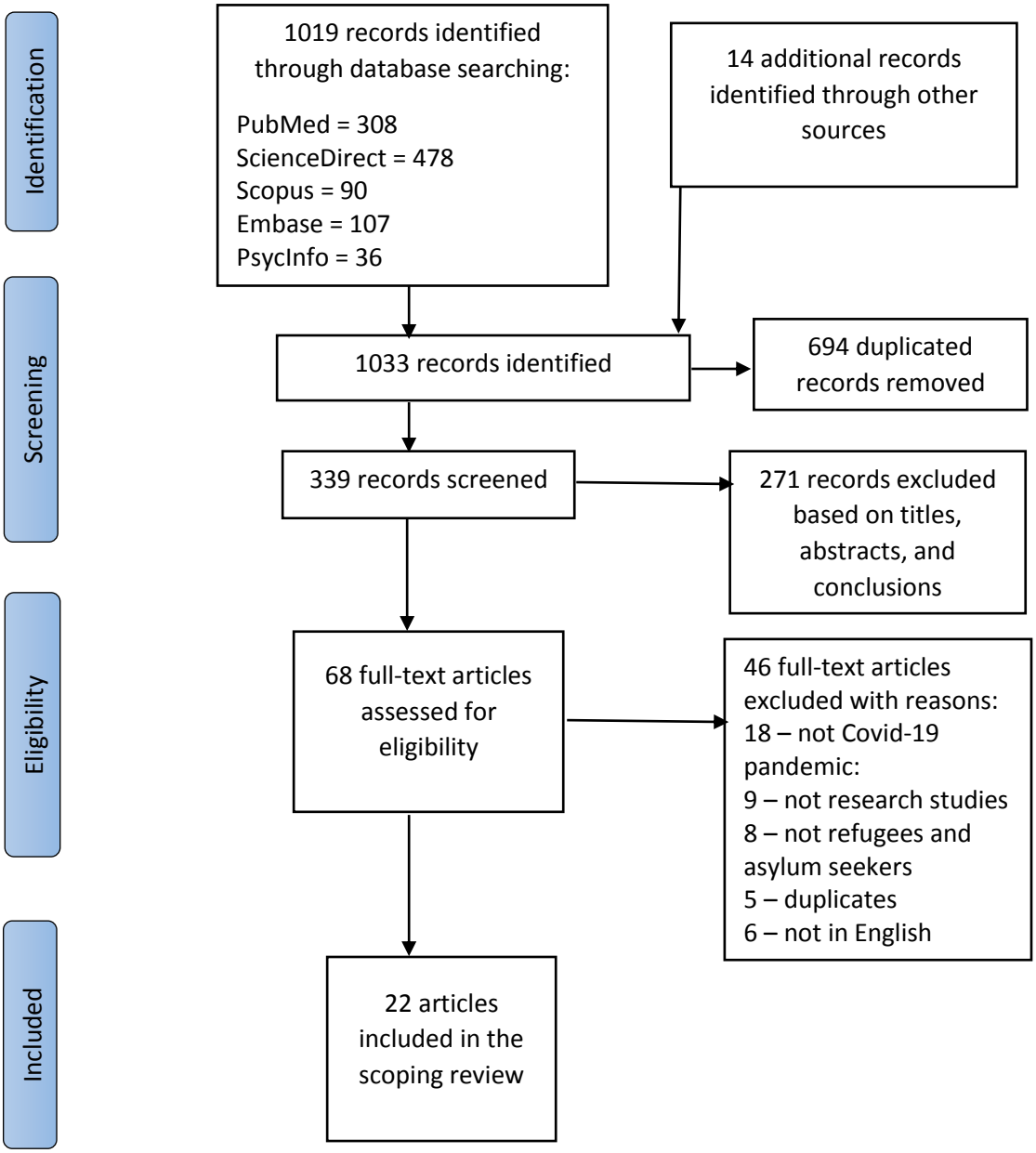


Figure 1: Preferred Reporting Items for Systematic reviews and Meta-Analyses flowchart – (PRISMA) Flow Diagram for the scoping review process

2.5.1. Study population

The population in studies was defined as: refugees (14 studies), refugees and migrants (2 studies), refugees and asylum seekers (1 study), immigrants and individuals in socio-economic difficulties (1 study), forcibly displaced population (1 study), population exposed to mass conflict and displacement, as refugees and other conflict-affected persons (1 study), non-Indigenous racially minoritized people (1 study), and asylum seekers (1 study). The population in our study included both men and women, age of population was not specified.

2.5.2. The settings

We analysed the settings related to our selected articles which represented in Table1 and Table 2. Most studies, (45%) are international research involving professionals from different countries. It should be noted here that most of countries in international research represented high-income countries. The analyse of the level of income of countries indicated that 8 articles (45%) dealt with research conducted in high-income countries, one with research conducted in high-middle income country (5%) Turkey, and only one article was related to a case in a low-income country (5%) Iraq. **Table 1**. Geographic focus of selected studies is presented in **Table 2**

Table 1. Countries where studies were performed in accordance with the number of articles.

Country of affiliation of research	Number of articles	%
Australia	3	13 %
International research	10	45 %
Iraq	1	5 %
Italy	2	9 %
Turkey	1	5 %
UK	1	5 %
USA	4	18 %
Total	22	100 %

Table 2. Geographic focus of selected studies

Region of affiliation of research	Setting	Number of articles
Asia	Bangladesh, China	1
Australia	Australia	3
Europe and UK	Spain, Italy, UK	5
Middle East	Iraq, Turkey	2
Northern America	USA, Canada	4
Global (Australia, Europe Middle East, North America, Africa, UK)	Australia, Bangladesh, Belgium, Canada, Denmark, Egypt, France, Greece, Italy, Jordan, Kuwait, Lebanon, The Netherlands, Portugal, Spain, State of Palestine, Sweden, Turkey, UK, USA.	7

2.5.3. Year of publication of the selected articles

Given the fact that our goal is to study mental health of refugees and asylum seekers during the Covid-19 pandemic and considering that the epidemic was officially declared by WHO (23) in March 2020, we were interested in the process of our research for pre- and post-pandemic periods to be able to compare mental health outcomes prior and after the onset of pandemic. For this purpose, we reviewed 2 articles related to the mental health of refugees regardless of pandemics, 7 articles on the mental health of refugees compared to the pre- and post-pandemic period, 10 articles addressing this issue in the post-pandemic period and 3 articles that did not specify the period and simply designated it as 'in time of the Covid-19 pandemic'.

2.5.4. Characteristics of included studies

Fourteen quantitative studies with a range of study design were found: 8 cross-sectional studies, 1 single blind RCT, 2 longitudinal studies, 2 descriptive studies with quantitative research methods, 1 mixed method design. Eight other studies were identified as: 2 qualitative systematic review of the literature, 2 systematic review and meta-analysis, 2 narrative review and 2 systematic reviews. Three articles from all included were peer-reviewed (22,40,45).

Table 3 displays the main characteristics of included studies, indicating the author and year of publication, country of affiliation of study, aim/purpose of study and study design.

Table 3 Characteristics of included studies

Author/Year	Country of affiliation of study	Aim/purpose	Study design mentioned by author
Kizilhan and Noll-Hussong, 2020 (33)	Iraq	To examine for the very first time the development of mental health of a cohort of Yazidis in a refugee camp in Iraq using selective psychometric measures before and shortly after the Covid-19 pandemic.	Cross-sectional cohort study
Solà-Sales et al, 2021 (34)	Spain Italy	To examine the mental health and attitudes towards Covid-19 in migrants and refugees compared to general Spanish population.	Cross-sectional study
Akhtar et al, 2021 (35)	Australia Nederland Jordan	To examine the psychological effects of the pandemic on refugee mental health and also to determine the relationship between pre-existing mental health issues and subsequent concerns about the pandemic.	Single-blind Randomized Control Trial
Liddel et al, 2021 (36)	Australia	To evaluate the prevalence of Covid-19 related stressors and their relationship to key mental health and functioning outcomes in resettled refugee sample.	Cross sectional longitudinal study
Sharif-Esfahani et al, 2022 (37)	Canada Lebanon	To assess the relationship between fear of Covid-19 and depression, anxiety, stress, and PTSD among refugee parents residing in the Great Toronto area.	Cross-sectional study
Palit et al, 2022 (38)	China Bangladesh	To examine the impact of the Covid-19 pandemic on the mental health of Rohingya refugees living in Bangladesh.	Longitudinal study
Kurt et al, 2021 (28)	Turkey, USA	To investigate the role of resource loss and perceived discrimination during Covid-19 pandemic on the mental health of Syrian refugees in Turkey.	Online Cross-sectional study
Aragona et al, 2020 (39)	Italy	To estimate the impact of the Covid-19 related lockdown on service utilisation and follow-up adherence in an Italian mental health outpatient service for migrants and individuals in socio-economic difficulties	Retrospective cross-sectional study
Jones et al, 2021 (40)	International research	To investigate the impact of the Covid-19 pandemic on displaced population, how those impacts differ by gender and life stages, the extent to which the pandemic has compounded pre-existing social inequalities among adolescents in Jordan and the role	Longitudinal quantitative study and in-depth qualitative interviews *Peer-reviewed*

		support structures play in promoting resilience	
Alpay et al, 2021 (41)	USA, Egypt, Turkey, Kuwait	The current research aims to study the impact of Covid-19 on Syrian refugees in Turkey's mental health regardless of gender	Cross-sectional study
Spiritus-Beerden et al, 2021 (42)	International European Research	To uncover the impact of the Covid-19 pandemic on the mental health of refugees and migrants worldwide, disentangling the possible role of social and daily stressors	Descriptive analysis and structural equation modelling
Cesson and Moscardino, 2022 (43)	Italy	To explore the impact of the first wave of Covid-19 and the national lockdown imposed by the Italian Government in spring 2020 on the mental health and future orientation of youth adult asylum seekers residing in second-line reception facilities in north-eastern Italy.	A mixed-methods design
Budak & Bostan, 2020 (44)	Turkey	To discover the effects of Covid-19 pandemic on the Syrian refugees and reveal the perception of the refugees related to the pandemic and investigate if these perception level differ according to various socio-demographic characteristics.	Descriptive study with quantitative research methods
Mistry et al, 2021 (45)	Bangladesh, Australia, USA	To assess the fear of Covid-19 and its associates among older Rohingya (Forcibly Displaced Myanmar Nationals or FDMNs) in Bangladesh	Cross-sectional study *Peer-reviewed*
McGuire et al, 2021 (46)	USA	To identify core social determinants specific to mental health in the age of Covid-19 and illustrate specific social determinants impacting mental health (SDIMH) of resettled Bhutanese refugee population during the pandemic.	Qualitative systematic review of the literature
Yozwlak et al, 2021 (47)	USA	To propose a call to action toward mental health improvement and fair treatment for refugee population in three core areas: communication and education, social stigma and discrimination, and accessibility and availability of resources	Qualitative systematic review of the literature
Steel et al, 2009 (48)	Australia	To assess the influence of methodological factors and substantive population risk factors in accounting for variation in rates of PTSD and depression across surveys and to evaluate the importance of substantive factors on the prevalence of reported PTSD and depression.	A systematic review and meta-analysis
Lupieri, 2021 (49)	UK	Better understand needs and challenges that refuges face during the Covid-19 pandemic and contributes to filling gaps in examining	Narrative review

		strategies and effectiveness of government policies in meeting the healthcare needs of refugees during the pandemic, and by providing recommendations for policy and research.	
Yashadhana et al, 2021 (50)	Australia	To identify and describe pandemic-related experience or perceptions of discrimination among non-Indigenous, racially minoritized groups in high-income contexts, including whether this impacts health outcomes or access to health services.	Systematic review
Blackmore et al, 2020 (22)	Australia UK	To establish the current overall prevalence of mental illnesses in refugee and asylum seeker population by summarising the current body of evidence and overcoming some methodological limitations of individual studies.	Systematic review and meta-analysis *Peer-reviewed*
Villalonga-Olives et al, 2022 (51)	USA	This systematic review aimed to find patterns in the literature on how social-capital-based interventions can improve the mental health of refugees.	Systematic review
Kiteki et al, 2022 (52)	USA	To explore the impact of lockdown on refugees' mental health, to understand factors that increased refugees' susceptibility to mental health issues, strategies, and/or interventions during pandemic times and beyond and address the challenges in meeting refugees' mental health needs.	Narrative review

2.5.5. Data and evaluation of included studies

Table 4 gives a deeper insight, including data and evaluation of included studies. When compiling the Table 4, we drew our attention to the following characteristics: author and year of publication, data collection period, sample size, mean age, standard deviation, gender, mental health disorders, Covid-19 pandemic related stressors and other stressors, and main findings.

The interpretation involved studying underlying themes that provided an understanding of the mental health of refugees and asylum seekers in times of the Covid-19 pandemic: (a) impact of the Covid-19 pandemic on mental health of refugees and asylum seekers and major mental health problems, (b) fear, worry and anxiety, (c) geographical characteristics, (d) socio-demographic characteristics and their relationship to the impact of the Covid-19 pandemic, (e) discrimination, (f) suicide and other mental disorders, (g) Covid-19 related stressors and the

consequences of their impact, (h) resilience, (i) coping strategies, (j) recommendations for mental health promotion, (k) proposed and implemented community based intervention for mental health promotion.

Table 4 Data and evaluation of included studies

Author/ year	Data collection period	Sample size	Mean age M, standard deviation SD, gender	Population/ Enrolment method	Mental health disorders	The Covid-19 pandemic related stressors/ and other stressors	Main findings
Kizilhan & Noll-Hussong, 2020	Octobre,2019 and April 2020	N= 68	M= 45,72 (18- 58 years), SD= 3,52, 38 females	Syrian and Kurdish refugees residing in Iraq, Yazidis cohort. Interview through questionnaires.	PTSD (59,7%) female, Anxiety (63,2%) female	Isolation - Reexperiencing the event (57,9%), avoidance of reminder of the event and numbness of feeling (63,2%), hyperarousal (57,9%): females.	PTSD and other mental disorders in refugees, especially women, increased in comparison before crisis. Lockdown and isolation probably reactivated traumatic experience.
Solà-Sales et al, 2021	Between January and May 2021	N= 245	M=34,95 SD=11,75 Sample : Migrants= 41,6% (45,1% male, 53,9%female), non-Spanish migrants= 44,1%, Spanish migrants-	Migrant group (refugees, non-Spanish migrants, and Spanish migrants) and non-migrants. Interview through questionnaires.	The level of resilience (16,38%), fear of Covid-19(4,81%) depression (4,55%), anxiety (4,30% and stress (7,48) were higher than among non-migrants, respectively,15,17%, 5,09% 2,73%, 2,31% and 5,28%	Economic, legislative, social and psychological impact of the Covid-19 pandemic.	Migrant indicated worse mental health than non-migrants, and within the migrant group refugees presented worse scores. No difference in attitudes towards Covid-19, a moderating effect for the relationship between resilience and mental health, but not between resilience and fear of Covid-19.

			27,5%, refugees-28,4%, non-migrants-58,4% (34,3% female,65, 7% male)				
Akhtar et al, 2021	September 2019 and January 2020, November 2019 and March 2020, January and June 2020	N= 624	N= 446 (71,5%) females, M= 40,1 SD= 7,1	Syrian refugees residing in Jordan. Interview through questionnaires.	High levels of anxiety during the pandemic (21,41%) if compare with anxiety before the pandemic (21,08%)	The Covid-19 related **worries** - Overcrowding, economic difficulties (82,4%), shortage of essential supplies (71,3%), infecting others (59,7%) and themselves (51,9%)	Pre-existing levels of PTSD and depression symptoms do not necessary lead to worsened mental health during pandemic. Instead, many refugees are at risk of excessive worry and anxiety, and those more at risk may be those refugees with less severe psychological distress prior to the pandemic.
Liddel et al, 2021	June 2020	N= 656	N=323 (49,2%) female, M=42,85 SD=12,22	Refugees and asylum seekers background, majority originated from Iraq and Syria, but also from Iran, Sri-Lanka, Afghanistan and others, interviews	PTSD (32,9%), health anxiety (23,3%), depression (17,3%) and disability symptoms (10,07%)	Worries of being infected (66,5%) or infect others (47,7%), fear for family (72,1%), Covid-19, restrictions as a reminder of	Resettles refugees report significant Covid-19 stressors, including being reminded of past traumatic events, which had strong association with increased PTSD, depression, health anxiety and disability symptoms. Anxiety is an important disorder that

				through questionnaires – online survey and pen and paper version returned by post, literacy in Arabic, Farsi, Tamil or English		difficult past events (41,1%)	should be considered in refugee population in future research.
Sharif-Esfahani et al, 2022	Between the summers of 2019 and 2021	N=274	59,1% female, M=37.37, SD= 7,13	Syrian refugees arrived in Canada after 2015, and residing in the Great Toronto area The questionnaire survey over the phone	Depression (12,2%) Anxiety (26,8%) Stress 9,7%) PTSD (24,1%)	Fear of Covid-19, language knowledge, sense of belonging to Canada, negative associations between SES (socio-economic status) and anxiety and depression levels.	Government initiative should consider tackling fear concerning pandemic, to help enhance their mental well-being (programs that teach new immigrants' languages and bolder their sense of belonging to their new country of living), which enhance their SES, and was found significantly positively associated with symptoms of anxiety and depression.
Palit et al, 2022	5 July 2019 (pre-pandemic survey) and 10 November 2020 (post-pandemic survey)	N=342	N=209 female, 61,1% M= 32,25, SD= 14,01	Rohingya refugees living in Bangladesh Face-to-face questionnaire interviews.	Stress increase from the pre-pandemic to pandemic period by RHC-15 scale (Refugee Health Screener-15): 22,96 vs 46,72= part1 and 4,43 vs 6,91=part 2. The mean Covid-19	Economic, legislative, social and psychological impact of the Covid-19 pandemic.	Rohingya refugees experienced a significant deterioration of mental health during the Covid-19 pandemic. The pandemic itself might have been a crucial contributor to this negative trend with increased distress among

					QoL was 4,47 (out of 5) = indicates on negative impact of the pandemic on lives of refugees. Females associated with higher perceived distress.		participants with one or more chronic diseases. Women were affected more than men.
Kurt et al, 2021	Between September-October 2029	N=345	N=165 female, M=33,40, SD= 9,11	Syrian refugees living in Turkey Participants were recruited through social media advertisements on Facebook, via questionnaires interviews	Depression (52,9%) Anxiety (42,9%)	Resource loss, perceived discrimination, social support, language, perception of "togetherness"	Social support is an important protective factor for mental health of refugees amidst the pandemic. Other findings highlight the importance of considering the precarious conditions of refugees in all Covid-19 responses and communications.
Aragona et al, 2021	February and March in the years 2017- 2020	N=286 February and N=269 March	Mainly men= 75,17%, M=37,37, SD= ± 13,43	Refugees, asylum seekers and migrants. The study included all patients who received at least one psychiatric interview in the years 2017-2020 Geopolitical area of provenance: Western/Central Africa, South/Central	2007 year: PTSD (24,44%), psychosis 15,56%), Depression (11,11%), anxiety (8,89%), adjustment disorder (6,67%), somatisation (6,67%), personality disorder (4,44%), bipolar disorder (2,22%), alcoholism (0%) and respectively for 2020 year: 29,90%,	Lockdown consequences, difficult living conditions, previous experience of severe traumas and mental distress, difficulty in access to treatment, other barriers to the access to mental health services,	The lockdown-related reduction in numbers of patients accessing the mental health service makes it difficult to help vulnerable populations. Moreover, increases the risk of treatment discontinuation and possible relapse. Proactive alternative strategies need to be developed to reach these vulnerable populations.

				Asia, East Africa, Europe, Italy, South/Central America, East Asia, Middle East, North Africa. Psychiatric interviews (retrospective data collection)	9,28%, 20,62%, 2,06%, 7,22%, 5,15%, 5,15%, 3,09%, 6,19%	insufficient information.	
Jones et al, 2021	Quantitative study: Between October 2018 and January 2021 Qualitative study: September/ October 2018 and 2019 April and July 2020	Quantitative study: N1= 3,311 (1st panel sample) N2= 2,574(2nd panel sample) Qualitative study : N=104 girls N=74 boys	10-14= young cohort 15-21= older cohort Boys and girls	Jordanian, Syrian, and Palestinian adolescents living in camps in Jordan Phone interview questionnaire: Covid-R1 survey and Covid-R2 survey (quantitative study) Phone interview questioning (qualitative study)	Moderate-severe depressive (19,3%), more anxious depressive (83,1%), moderate severe anxiety (12,4%). Girls are more susceptible than boys and especially married girls, as well as adolescents from the poorest households and those who are out of school.	Household-level economic shocks, school closed, disruption of basic services (disruption of social context)	Pre-existing social inequalities among refugee adolescents affected by forced displacement have been compounded during the Covid-19 pandemic, with related disruptions to services and social network. This problem solving requires intervention that target the urgent needs of the most vulnerable adolescents.

Alpay et al, 2021	Between August and September 2020	N=417	59,5% females, age ranged between 18-80 years, M=30,76, SD= 10,62,	Syrian refugee status in two Turkish cities, questionnaire bilingual survey Turkish/Arabic, direct contact to participants or through a family visit.	Covid-19 traumatic stress 38,96%, Covid-19 fears 14,05%, Covid-19 economic trauma 11,88%, Covid-19 social trauma 13,04%, PTSD 27,54%, depression 8,59%, anxiety 7,68%	Discrimination, previous oppression, social structural violence of poverty, and torture.	The sample participants were highly traumatized with high cumulative trauma occurrence and frequency and a high percentage of individuals with a history of torture and hospitalisation due to Covid-19 infection. Being discriminated, being tortured, and extremely poor are strongest risk factors for hospitalisation due to Covid-19 infection.
Spiritus-Beerden et al, 2021	From April 2020 until November 2020	N=20742	N= 8696 females, 41,9%, all participants were older than 16 years old	Refugees and migrants from all over the world Self-reporting global Apart Together Survey. An iterative back-translation was carried out in 37 languages via four different parts of the Apart Together survey, socio-demographic characteristics, mental health, daily stressors	Temporary documents: depressed 61,9, anxiety 59,2%, loneliness 56,1, irritable 46,8%, compare to undocumented: worry 61,1%, anger 49,5%, reminders 47,7%, physical stress reaction 45,6%, irritable 46,4%, hopelessness 52,0%, sleep problem 48,4%, drugs and alcohol 34,3%.	Discrimination, age, gender, daily stressor (housing), residence status.	In the context of pandemic, refugees and migrants report an elevated deterioration of their mental health during the Covid-19 pandemic. In addition, refugees and migrants with a more insecure housing situation, residence status, older respondents, and females are particularly susceptible to experiencing mental health distress.

				and social well-being.			
Cesson and Moscardino, 2022	Between June and August 2029	N=42	M= 27,4, SD= 6,46, age range 18- 48 The sample was composed of male participants	Refugees and asylum seekers from West African countries. Individual face-to-face interviews between 45-60 min and comprised both qualitative (i.e., Open-ended questions) and qualitative questions.	Psychological distress: moderate or severe 14,3% (pre-lockdown) and 47,7% (during lockdown), physical distress: medium 7,2%(pre-lockdown) and 19% (during lockdown), very high: 2,4% (pre-lockdown) and 7,2% (during lockdown). Qualitative survey: loneliness, helplessness, worry, mood deterioration, sadness, angriness fear.	Lockdown because of Covid-19 pandemic and socio-political factors in post-migration period	Psychological and physical distress significantly increased and positive future orientation significantly decreased during the lockdown due to continued existential uncertainty. Thus, individual, and contextual assets should be strengthened to promote psychological adjustment and coping resources in the context of pandemic.
Budak & Bostan, 2020	Between 12-16 April 2020	N= 414	N= 206 females (49,8%) Age ≥18 years, mostly range (18-29 years old) 72,2%	Syrian refugees, who live in Kilis province in Turkey. Online questionnaire through individual communication channels and	Gender variables: anxiety: 3,36% female, 3,25% male, sensitivity: 2,07% female, 2,22 %male, fighting: 3,83% female, 3,79% male. The refugee status variable: anxiety; refugee 3,32%,	Covid-19 pandemic context	It has been seen that there is a group who are not aware of the seriousness of the pandemic, who do not have enough information about the pandemic and cannot reach personal protective equipment (such as masks, gloves).

				social media networks.	irregular immigrant 2,81%, sensitivity: 2,13% refugee, irregular immigrant 2,56%, fighting: refugee 3,81%, irregular immigrant 3,49%		
Mistry et al, 2021	October 2020	N= 416	60% were males, age categorised as 60-69, 70- 79, and ≥ 80 years. 60- 69 years 74%	Forcibly Displaced Myanmar Nationals or FDMNs living in camps of Cox's Bazar, Bangladesh. Semi-structured questionnaire (translated from English) in Bengali language through face-to-face interview.	Fear remains one of the key causes. of stress, anxiety, and mental problems. (WHO, 2020a). Low % of faced difficulty: 93,3%, low% of difficulty receiving routine medical care during Covid-19: 93,2%, low %of perceiving that older adult at higher risk of Covid-19: 88,7%.	Poor health literacy about pandemic, low Covid-19 cases in camp, low exposure to media in camps can explain low level of fear for Covid-19, but difficulties in obtaining food during pandemic, language barriers, Radio-television as a source of Covid-19 related information could be a reason for being afraid of Covid-19 infection.	The study highlighted that currently little fear of Covid-19 among older Rohingya FDMNs. This is probably due to lack of awareness of the severity of the disease in. Dissemination of public health information relevant to Covid-19 and provision of mental health services should be intensified particularly focusing on the individual who were concerned, overwhelmed or fearful of Covid-19.

McGuire et al, 2021, USA	In the age of Covid-19 pandemic			Nepali speaking Bhutanese refuges in the USA and resettled refugee population	Depression and anxiety at 21%, rate of suicide nearly three times as high as the rest of the population.	Persecution and displacement from Bhutan and additionally Covid-19 risk factors, stigma, linguistic barrier	The Covid-19 pandemic has posed significant barriers to provide social support. It is essential to adopt a public health justice framework that examines the social determinants impacting mental health (SDIMH) of refugees as a vulnerable population and the clinical legal, and ethical needs of personalized mental healthcare.
Yozwlak et al, USA, 2021	In the age of Covid-19 pandemic			Nepali speaking Bhutanese refuges in the USA and resettled refugee population	Depression and anxiety at 21%, rate of suicide nearly three times as high as the rest of the population	Persecution and displacement from Bhutan and additionally Covid-19 risk factors, stigma, linguistic barrier	The barriers and the aligned goals toward social justice include (1) communication and education (goal: awareness); (2) social stigma and discrimination (goal: respect and cultural humility); and (3) access and availability of resources (goal: fulfilling needs).
Steel et al, 2009, Australia	Between 1980 and May 2009	The 161 articles yielded diagnostic information for 181	Males and females Adult population, 18 Year and over	Population was identified as being from conflict-affected countries. From 40 source countries	PTSD and depression showed large inter survey variability (0%-99% and 3%-85,5% respectively).	Methodological factors (response rate, sample size and design, diagnostic method) and substantive population risk factors, such as	Torture emerged as the strongest substantive factor associated with PTSD and cumulative exposure to PTEs was the strongest substantive factor associated with PTSD.

		surveys that include N= 81866 persons				exposure to torture and other post-traumatic events (Pte) after adjusting to methodological factors account for higher rates of reported prevalence of PTSD and depression.	
Lupieri, 2021, UK	Articles published between March 2020 and January 2021	N= 28 relevant publications	Age and gender are not specified	Refugees, asylum seekers, migrants, and marginalized population These publications present a varied geographic emphasis, including Africa, Asia, Europe, Latin America, Northern America, Middle East.	Higher rates of PTSD, anxiety and depression as compared to the general population	Previous negative experience, past trauma, Covid-19 related stressors.	Global healthcare responses to the Covid-19 pandemic largely fail to address the specific needs of refugees. Such gaps include responding to the needs of refugees in camps and detention centres, providing adequate public health information, providing access to healthcare and mental health services, and including refugees in decision making process.
Yashadhana et al, 2021	Articles published between January 2002 and	N= 16 relevant publications	Very limited information on the gender	Participants from all studies were broadly identified as Asian, African, and Hispanic.	Emotional stress, anxiety, depressive symptoms. Experience of worry about discrimination	Phobo-genic basis to pandemic-related racism: xeno-phobia, sino-phobia,	Racialized discrimination and violence are a serious threat to health and wellbeing of racially minoritized people,

	October 2020		aspects of pandemic-related aspect on pandemic-related racism were reported in the included articles.	Studies were largely conducted in the United States (USA), in the United Kingdon5UK), in Japan, Hong-Kong and Poland. One study used data from a Facebook group comprising Asian participants from various countries.	were found to be associated with psychological distress and poorer subjective well-being.	negro-phobia, maska-phobia.	particularly due to its increase during pandemic periods. Racism must be recognised as a public health issue, and efforts to address its increased impact in pandemic contexts should be made, including ensuring that adequate representation of racially minoritized groups is present in policy, planning, and implementation.
Blackmore et al, 2020	Articles published between 1 January 2003 to 4 February 2020	N= 26 relevant publications providing data for 5,143 adults	Adult refugees and/or asylum seekers residing outside their country of origin	Refugees and asylum seekers. Studies were undertaken in 15 countries Participants were from four geographic regions: The Middle East-43%, Europe-29%, Asia-20% and Africa-5%, with two studies reporting refugee samples coming from 18 different countries-3%.	PTSD 31% General population PTSD 3,9%, Depression 31,5% General population Depression 12% Anxiety disorders 11%, psychosis 1,5%, general population anxiety and psychosis 16% and 3% respectively. The subgroup analysis indicated higher PTSD prevalence for women	Pre-migrations and post-migration stressors: social and cultural isolation, reconfigured family relationship, difficulties adjusting to life in foreign country, limited opportunities to contribute economically and socially to new communities,	The prevalence of PTSD and depression persist for many years post displacements, suggesting ongoing suffering from mental illnesses in the postmigration environment. This environment can include complexities of social and cultural isolation, reconfigured family relationships, difficulties adjusting to life in a foreign country, and often limited opportunities to contribute economically and socially to their new communities.

						poor social support, and acculturation difficulties.	
Villalonga-Olives et al, 2022	Data collection period is not specified	N= 7 relevant publications	Not all manuscripts gave details about sex and age of participants. It was quite balanced samples, excepting with most females and whose entire sample considered females. 3/7 manuscripts reported average age ranged from 30,5 to 36,9 years old.	Refugees from Bhutan, Nigeria, and Kurdish regions. Syria and other non-specified locations in the Caribbean, Africa, and the Middle East. Most of studies were in some of the top refugee-resetting countries (Canada, United States, United Kingdom, and Australia).	The retrieved articles employed different strategies: some used a more general definition of mental health, while others specified conditions and disorders focused on psychological issues. Feeling of being marginalized and excluded, stress, feeling of isolation, the sense of loneliness, feeling helplessness and depressed.	Pre-migration and post- migration stressors.	The reinforcement of social capital, especially bridging and linking types, serves as a crucial resource. Community and multilevel social capital interventions are key to curbing mental health symptoms among refugees.

Kiteki et al, 2022	Publications from April 2020 through May 2021	N= 16 relevant publications	Not specified	Refugee population	Stress, anxiety, depression.	Covid-19 pandemic lockdowns	To ameliorate refugees' immediate and long-term mental health issues, a collaborative approach among various systems could provide avenues for culturally relevant and sensitive preventative and intervention measures to support recovery and renewal in a post-pandemic world.

3. **Synthesis of results**.

3.1. Impact of the Covid-19 pandemic on mental health of refugees and asylum seekers and major mental health problems.

All the included studies we reviewed show significant deterioration in mental health of refugees, asylum seekers and internally displaced persons as involuntary migrants in times of the Covid-19 pandemic, compared to the period prior to pandemic (22),(28), (33-38),(39-50) (51-52).

Major mental health problems were noted as post-traumatic stress disorder (PTSD): comprising reexperiencing of traumatic events, avoidance and numbness of feelings, hyper arousal, and repercussion of preceding symptoms on activity of daily living (41), anxiety, stress, depression, and complicated grief, compared to the general population (22),(33-34) (46- 47), (49-50), (51-52).

3.2. Particular attention on fear, worry and anxiety.

Findings from study indicate that all mental health outcomes were positively associated with fear of Covid-19, such that refugees and asylum seekers with higher fear of Covid-19 experienced higher levels of stress, anxiety, depression, and post-traumatic stress disorders (36-37) (40,43,45,49).

A single blind randomized control trial (Akhtar, 2021) indicated that the most common Covid-19 related worries were financial implications (82%), shortage of essential supplies (72,9%), infecting others (60,8%), health of family members outside the camp (55,3%), being infected themselves (52,8%), being restricted to one's caravan (47,2%), being quarantined (39,7%), the stigma of being infected (39,2%), government management of the pandemic (36,2%), and capacity of the local health system (32,7%) (35). The same study reveal that Covid-19 worries were associated with high levels of anxiety during the pandemic.

The results of studies suggest that anxiety is an important disorder that should be considered in refugee population in future research (35-36). A sense of fear caused by the unknown continued existential uncertainty (43) about the future due to the pandemic as well as insufficient host-country language knowledge (37) is closely related to worry, anxiety and

depression with psychological and physical distress significantly increased and positive future orientation significantly decreased during the lockdown (43).

The findings revealed that refugees and asylum seekers who had relatively lesser communications with others during the pandemic than before was less fearful than those who had no effect with communication. Receiving Covid-19 related information from their family/friends/neighbours made them more fearful than those who were not getting information from them. In line with this, it can be stated that receiving Covid-19 information from popular media sources, i.e., Radio/Television negatively affect the personality and provokes a feeling of fear (45).

3.3. Geographical characteristics.

Most of the studies we reviewed concerned Syrian refugees living in Iraq (33), Jordan (35) (41), Australia (36), Canada (37) and Turkey (28 ,41 ,44). After Syria's conflict started in 2011, many Syrian citizens have fled to neighbouring countries due to violence and difficult living conditions. Further studies concerned forcibly displaced Myanmar nationals, FDMN living in Bangladesh (38, 45), Nepalis speaking Bhutanese refugees living in USA (46-47), and refugees from different geographic emphasis: Africa, Asia, Europe (36, 44), Latin America, Middle East (22), (39-40), (49-50), and population from conflict affected countries – 40 sources (48), without specifying countries of refugees and asylum seekers provenance.

3.4. Socio-demographic characteristics and their relationship to the impact of the Covid-19 pandemic.

Gender: The probability of PTSD and other mental disorders in refugees, especially females increased in comparison with the already difficult situation before the crisis (33) and perceived with higher level of distress than males (33, 38, 42, 45). In the context pre-pandemic, women were chronically anxious, stressed, and scared, often manifested in somatic ways, such as regular nightmares, challenges completing daily activities, hair loss, and loss of hope. The pandemic measures worsened their vulnerability and existing burdens that negatively affected their emotional, psychological, and social well-being. Refugee women noted increased levels of family conflicts, both due to and resulting in increased levels of stress. The problems seem to have dramatically increased during the pandemic (52).

Comorbidities: Studies show the increased distress among participants with one or more chronic diseases (38, 44) such as diabetes mellitus, ischemic heart disease, hypertension, bronchial asthma, chronic obstructive pulmonary disease (38). For those with pre-pandemic chronic conditions, the lockdown was stressful and anxiety-provoking as some refugees could not receive treatment leading to worry and depression (52).

Age: we noted higher emotional distress among participants who were adult > 30 years compared to young adults (≤ 30). The study found that young people had higher coping strategies and problem-solving strategies and were free from illness (38). However, it should be noted that while young people reported having adopted a range of coping strategies, only a small minority expressed high resilience (40). Younger people report a less negative effect of Covid-19 on their anxiety, depression, and hyper-arousal (42). Individuals aged 60 and over, people with severe chronic diseases are weaker against Covid-19 virus, compared to other population groups (44, 45). Children below 18 years of age, considered one of the at-risk refugee groups due to Covid-19 disruption of day-to day lives – changes in schedule, loss of structure, transitioning to remote education, boredom, and isolation from peers limits the ability to grow linguistically, which leaves young refugees with language barriers that impede their ability to integrate into host communities, a possible cause for psychological stress (52).

Marital status: additionally, married participants had to bear the responsibility of themselves and their family members, exposing them to higher stress (38). According to study authors the reason for this maybe that single individuals' field of responsibility cover only themselves, they do not have family responsibility, and therefore are not very sensitive, when compared to married people

(44, 45).

Education: study reveal that the state of refugees being affected by the pandemic appears differentiate in all factors according to their educational level. While anxiety levels of those with high school, university and graduate degrees decreased compared to others, it was found, that in the level of sensitivity, high school graduates were more sensitive than university graduates. In the factor of protection from and combating pandemic, it can be stated that the evaluation of those who have secondary school, university, and postgraduate degrees are more positive. The fact that, as the education levels of refugees increase, they become more aware of pandemics, but this increase in awareness causes an impassiveness based on slackness in the sensitivity and combat process of refugees, can be shown as the reason for this

differentiation that emerged according to the education levels (44). Nonetheless, lower education level and employment were found to be risk factors to mental health problems (28) (46).

Employment: although employability of refugees in resettlement countries is generally a challenge, the lockdown led to considerable levels of economic hardship through loss of employment, difficulty accessing financial relief, and a decreased ability to financially support family members who still lived overseas. Loss of employment and income amounted to difficulties paying rent, as well as refugee parents' expression of helplessness, which led to an increase in mental health problems (52). Refugee and migrant population are specifically susceptible to unemployment, which can have a devastating effect on their mental health and contribute to feeling of hopelessness and suicide (46). Employment also considered as risk factor to mental health problems (28,46).

Living conditions: the worldwide spread of Covid-19 is especially causing a humanitarian catastrophe in refugee camps in crisis regions. For example, currently over 350000 survivors of Islamic State of Iraq and Syria (ISIS) terrorism in the Kurdistan regions of Iraq live in more than 20 camps. These communities, which had already been traumatized, are now confronted with further adversities that exacerbate the ongoing psychological suffering and lead to increased suicide rates; however, medical, and psychological care is limited, and the work of humanitarian actors is restricted (33). Besides the difficulty of living in refugee camps located in crisis regions several other environmental, socioeconomic, and political factors have contributed to this increased distress. The worsening security situation in the camps, fires, storms, decreased service provision are some of the important factors contributing increased stress among Rohingya refugees living in Bangladesh. Moreover, the recent military coup in Myanmar has increased the uncertainty of their return to their home country, adding to the existing anxiety and stress. Hence, the Covid-19 pandemic could be considered only one element of the multifactored stressors that Rohingya refugees in Bangladesh are currently experiencing (45, 47).

Refugees who live in camps has higher sensitivity against the pandemic than those who live elsewhere. The reason for this may be that, compared to other places, the camp environment does not meet the life standards physically, mentally, and socially, and therefore the refugees who live there, are more sensitive to the pandemic in order to protect themselves from it (44).

Overcrowding in the camps made social distancing difficult, a situation that can lead to fear and anxiety among refugees (52).

Living conditions is one of the important factors contributing to increased stress among refugees (38, 39). Those, living in asylum centres and on the street or in insecure accommodation reported the worst effect of Covid-19 on their mental health (42, 46).

Residence status: refugees who have a citizenship or refugee status and feel themselves secure with sense of belonging to their country of residence and show more effort to combat the health issues than the refugees who cannot feel this sense of belonging (44). Future related fears concerning visa insecurity and settlement in host country were significant predictors of health anxiety and disability (36). Refugees that have no documents or temporary documents reported comparatively worse mental health outcomes because of the Covid-19 pandemic. In addition, refugees and migrants with a more insecure housing situation and residence status are particularly susceptible to experiencing mental health distress (42).

3.5. Discrimination.

In the context of the pandemic, refugees and migrants who suffer from increased discrimination and elevated stress regarding to material and medical daily needs report an elevated deterioration of their mental health during the Covid-19 pandemic (42). Being discriminated, being tortured and extremely poor are strongest risk factor for hospitalisation due to Covid-19 infection (41). Perceived discrimination during the pandemic significantly predicted a higher level of depressive and anxiety symptoms (28). Both viral and psychosocial stressors of discrimination can trigger changes in biological processes that affect immunity and inflammation and vulnerability to infection. Migrants, refugees, and asylum seekers have high levels of PTSD, depression, and anxiety, especially among those hospitalized due to Covid-19 and those with a history of discrimination and torture (41). An outbreak of disease, such as Covid-19, generates fear and anxiety, leading to stigma towards particularly affected groups, such as people of Asian descent and outburst of racism, xenophobia and stigmatisation have widely been reported. Increased discrimination as a result of the Covid-19 pandemic may further contribute to the already deleterious risk of refugees and migrants experiencing mental health difficulties (42).

Racialized discrimination and violence are a serious threat to health and wellbeing of racially minoritized people, particularly due to its increase during pandemic periods. Racism must be recognised as a public health issue, and efforts to address its increased impact in pandemic context should be made, including that adequate representation of racially minoritized groups is present in policy, planning, and implementation (50).

3.6. Suicide and other mental health disorders.

Suicide rates were nearly three times as high as the rest of population (46-47) and stress increase from pre-pandemic to pandemic period (38). Should also be noted the increase in cases of adjustment disorders, personal disorders, bipolar disorders, alcoholism, psychosis, disability symptoms (36), emotional distress (38) and somatisation (39) of stress.

3.7. Covid-19 related stressors and the consequences of their impact.

In addition to the difficulties faced in the pre-and post-migration period, the Covid-19 pandemic itself had a negative impact on the mental health with reactivation of traumatic experience (33-34) (36, 39, 41, 49, 52) with the feeling of helplessness, and loss of control like that during captivity or flight (33). For instance, the quietness and emptiness on the streets were potential triggers of negative memories in refugees, such as hiding from rival groups or government authorities (52). Reports from data collected in Australia, Egypt, Sweden, and other countries by Red Cross/Red Crescent suggest that being reminded of past trauma is a critical factor determining refugee community response to the pandemic (36).

Considering the main economic, legislative, social and psychological impact of the Covid-19 pandemic (34, 38, 43) we would like to emphasize more specific stressors such as lockdown consequences with social and cultural isolation (22, 33, 52), and reactivation of traumatic experience, difficult living conditions, difficulty in access to treatment and other barriers to the access to mental health services (33, 39), disruption of basic services (social context), school closed (22, 40), linguistic barriers, stigma (45-46), overcrowding, shortage of supplies (35, 45), fear of infecting others and themselves (35, 45), fear for family (36) resource loss, perceived discrimination (28, 42), daily stressors and uncertainty with residence status (42), pandemic related racism (50) and acculturation difficulties (22). The Covid-19 traumatic stress and pandemics 'impact on mental health have never been study before in history (41).

3.8. Resilience.

Fundamentally, resilience refers to positive adaptation, or the ability to maintain or regain mental health, despite experiencing adversity. The central question is how some people withstand adversity without developing negative physical or mental outcomes (53). On a microenvironmental level, social support, including relationship with family and peers, is correlated with resilience. Social support can come from positive peers, supportive teachers, and other adults as well as immediate family. On a macrosystemic level, community factors, such as good schools, community services, sports and artistic opportunities, cultural factors, spirituality and religion, and lack of exposure to violence, contribute to resilience. Despite these findings, good social policy has been underused to enhance resilience in population (53).

With all the difficulties that refugees, asylum seekers and internally displaced persons face, especially during the Covid-19 pandemic, some authors have found that this population group with high level of resilience reported lower perceived stress (34, 43). Resilience has been considered as a protective factor in many fields, such as mental health (34) and entails an individual's ability to negotiate health-enhancing resources toward well-being through the family, community, and culture in a culturally significant manner. Research have emphasized the need to acknowledge refugees' resilience amid migration challenges (52). If resilience can be modified through life experience, this gives rise to action by health professionals and implement intervention programs based on resilience training (34). In this way the concept of resilience might be of interest. Resilient individuals have been described through four pillars: social competence, problem solving, autonomy and positive expectation for the future and the literature is robust on the protective effect of resilience on mental health (34). This also revealed important sources of resilience, including social support, sense of purpose, and focus on future goals, which are key assets that may protect potentially vulnerable individuals from adverse outcomes (43). Social support might act as a buffer against mental health problems in response to resource loss during the pandemic (28). Studies have found that social support from within a refugee's own community is related to lower PTSD symptoms, and higher levels of structural social capital (i.e., membership groups) appears to be (36) an important protective factor against psychological distress (28), against the adverse effect of insecure visa status on depression and suicidality in refugee communities (36) and social support from family, friends, organisations, and the local community was conducted to well-being (28). Interpersonal support has been identified as a core component of resilience among individuals

from many African countries, with engagement in the local society reflecting the emphasis on community and togetherness in the crisis context. Regarding future orientation, refugees' qualitative responses emphasized positive belief about future developments of pandemic-related situation. Specially, optimism, acceptance of uncertainty, and a sense of purpose linked to the realisation of concrete plan were frequently mentioned (43). Resilience and social support were a protective factor to psychological distress related to the Covid-19 (50).

3.9. Coping strategies.

Qualitative data underscores the creative strategies that many young people have employed to withstand the effects of the pandemic, including reading, diary-writing, games with siblings and supporting parents with household chores. Several adolescents' girls also highlighted those creative approaches to expressing their emotions and frustrations, such as drawing and diary-writing, were key to a positive coping approach. Most young people are coping by seeking comfort and guidance from religion (40). Furthermore, a renewed trust on one's own personal strength and deeper appreciation of life and interpersonal emerged. Some asylum seekers explained the pandemic in terms of a natural event caused by God's will and often used religious coping mechanisms (e.g., prayer) (40, 43). Many refugees relied mostly on friends and housemates, and said they were often in contact with their families, while others found comfort in their religion faith: 'My *flatmates and I, we played cards together and reminded each other to wash hands when we came back home from work*,' 'We *started praying with my religious community since we couldn't meet in person. Praying and believing, that's what got me through this situation.*' Moreover, they reported feelings of trust and hopefulness (also in relation to future perspectives) inspired by their faith and perceived the presence of God in their everyday life (40, 43, 50). 'I *escaped from my country and crossed the sea on a boat: I am not afraid of anything* 'and '*Whatever will be, we will accept it. This period taught me how important my family is, they supported me all the time, I would be nothing without them.*' (43). Such mechanism is commonly observed among African refugees and represent an effective strategy to cope with past traumas as well as with post-migration difficulties (40, 43). Another coping response with important health implication is tobacco and substance use. Family support and community network are supportive of their coping and resilience during pandemic. Looking at peer relationship presented in the longitudinal quantitative data and in-depth qualitative interviews (Jones,2021), showed that

57,3% of adolescents reported having a friend they could trust. Online peer network emerged as an important part of life for adolescents during the pandemic, especially in host communities, where the internet is more widely accessible (40).

The majority of refugees in a mixed-method study (Cesson, 2022) concerning to the 'impact of Covid-19 and lockdown on mental health among young adult's asylum seekers in Italy' pointed out that study participants spent little time searching for pandemic-related information, which might have resulted in a partial understanding of the complexity of the current public health emergency. However, this tendency could also have served as a protective factor, since frequent exposure to news concerning Covid-19 is associated with higher levels of distress (43).

Camaraderie and community support were explored as strategies for coping with pandemic-related racism (50). Specific strategies including choosing to be silent about racism by "quietly enduring the pain" of "walking away", or in other case, choosing not to speak to avoid their accent making them a danger. Problem solving among racially minoritized peoples emerged as a key coping strategy in several studies. In response to heightened prejudice, refugees employed various solutions including learning self-defence, supporting local Asian business, working with local providers to correct misinformation that support discrimination (50).

3.10. Recommendations for mental health promotion.

According to the qualitative review of the literature (McGuire, 2021), (46) whose purpose was to explore SDIMH of resettled Bhutanese refuges population in the age of Covid-19 pandemic, the pandemic has posed significant barriers to provide care and social support; increased issues of isolation and addictive behaviours, heightened anxiety, fear, and experience of discrimination, among other barriers, have impaired progress toward social justice.

The same study emphasized that justice in public health includes two aspects: health empowerment for the population and fair treatment of the disadvantaged. Refugees in time of the Covid-19 are a disadvantaged population requiring fair treatment and not simply in a form of opportunities to acquire healthcare services. Fair treatment requires a coordinated effort on the part of federal, state, and local governments, healthcare professionals, and community

leaders. These entities must identify and address social determinants impacting mental health SDIMH, and the causes of ill health during a pandemic, while strategically delivering the resources necessary to achieve fairness for disadvantaged groups (46).

The findings of the same study reveal that a focal has unique experience due to their culture, resettlement, experienced the Covid-19 testing, and prevention, but also remarkably similar experiences to other resettled populations and cultures. The negative effects of SDIMH have been aggravated during the Covid-19 pandemic and includes a variety of challenges. **Fig 2** (46) represents the main determinants impacting mental health: economic stability, legal system, health care system, community and social context, nutrition and exercises, education and neighbourhoods and physical environment.

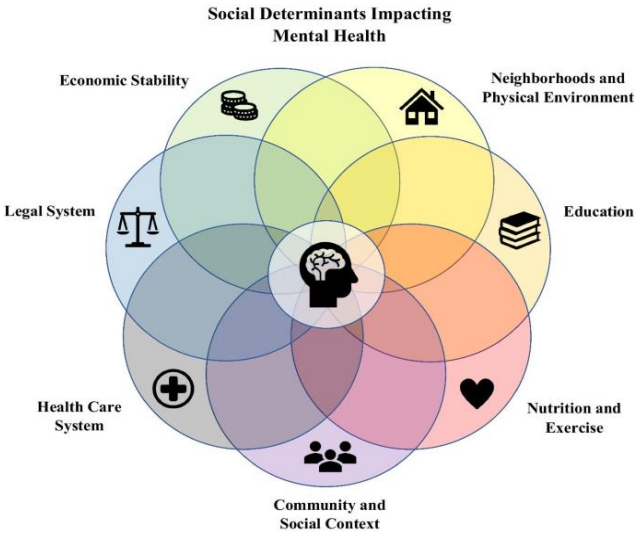


Fig.2 Social determinants impacting mental health (46)

The social determinants can overlap with common features as depicted in Fig.2.

The qualitative systemic review of the literature (Yozwlak, 2021)**,** aimed to propose a call to actions toward mental health empowerment and fair treatment for refugee population during the pandemic, presented in **Fig.3** (47) the social determinants impacting refugee mental health during Covid-19, including unemployment and financial barriers, living conditions, and caring for family, communication and education technology, hunger and addiction, discrimination and support system, health coverage, legal resources and refugee status. Impact of the Covid-19 pandemic on resettled refugees' mental health requires coordination or "harmonized engagement « among healthcare professionals and organisations, public health and community agencies, community leaders and advocates, and the refugee community. Such coordination allows for the harmonization of federal, state, and local policies and laws

and the strategic delivery of resources and support to address clear barriers as understood through SDIMH (47).

These barriers as identified through a close examination of the SDIMH by (Yozwlak, 2021) and the aligned goals toward social justice include:

- Communication and education (goal: awareness)
- Social stigma and discrimination (goal: respect and cultural humility)
- Availability of resources (goal: fulfilling need) (47)

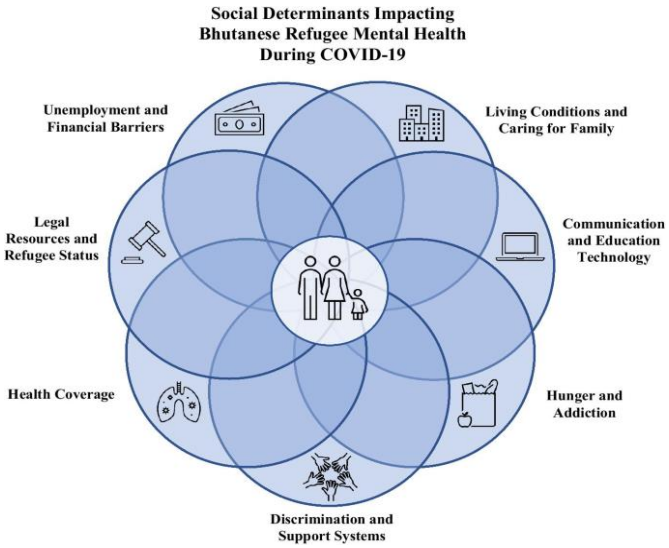


Fig. 3 Social determinants impacting Bhutanese refugee mental health during Covid-19 pandemic (47)

3.10.1. <u>Communication and education toward awareness.</u>

Many included studies have pointed to the importance that actions should be taken to inform refugees especially about the process and to provide access to personal protective equipment. In accordance with this objective, special training activities can be planned for refugees and special protective equipment can be distributed (34), to improve health literacy (40, 44, 45, 47) and to depict the real picture or reasons of the Covid-19 pandemic (45). Refugee resettlement agencies and public health profit and non-profit organisations are making great strides in providing essential mental and Covid-19 health information (47). SDIMH may also be effectively addressed through community mental health education. This may include Mental Health First Aid (MHFA) training (47). The findings suggest that programs that teach new immigrants' languages and bolster their sense of belonging to host country will highly

benefit their mental health. Moreover, learning a country's language will increase the likelihood of new immigrants finding jobs, which in turn enhances their socio-economic status (SES), which was found to be significantly positively associated with symptoms of anxiety and depression (37).The findings also highlight the importance of public health messages that specifically target culturally and linguistically diverse members of community, as well as those with limited literacy, in order to strengthen participation in Covid-19 public health preventative programmes, including vaccine uptake (36). It is important to strengthen the linkages between teachers and students during online learning, and also to provide alternative means of learning (e.g., paper-based for those with limited or intermittent access and adapted teaching modalities for adolescents with disabilities (40). Others suggested adding to the cognitive-behavioural interventions a precognitive component to enhance the will to exist, live and survive. This will be associated with resilience and posttraumatic growth (41) and implement other intervention programs based on resilience training (34, 38, 40, 43, 50). Lifestyle interventions, such as exercise and diet, and cognitive training were suggested to enhance executive functions that were negatively affected by Covid-19 stressors and infection (40). Social support, as important source of resilience (43) and could ensure the linkage to telephone helpline, group based mental health support and community counselling services (40).

In this context, it is necessary to note the important role of social capital, social assistance, or social support. According to the systematic review (Villalonga-Olives, 2022) social capital – the network, norms and trust that facilitate action and cooperation for mutual benefit, provides a broad array of benefits, including the exchange of favours and assistance, the maintenance of group norms, the stock of trust, the exercise of sanctions, diffusion of information, voluntary organizations within a social structure, and participation in social organizations. Literature on the beneficial nature of social capital for mental health outcomes highlights that social capital can protect against mental health problems such as depression and posttraumatic stress (51).

The same study states that social ties, whether in-group (bonding), between groups (bridging), or across levels of authority and hierarchy (linking) provide assistance and useful information, help overcome barriers to collective actions, and afford mutual aid even during the most stressful of crises and disasters whether natural or man-made (51).

3.10.2. Addressing social stigma and discrimination through respect and cultural humility.

Studies claimed that it is important to be more mindful of the detrimental effect of discrimination on mental health. Interventions that aim to mitigate mental health impact of the Covid-19 pandemic for refugees and migrants should include actions that reduce discrimination (42). This also requires individual health practitioner's awareness of the pervasive presence of racism during times of pandemic (50).

Systematic review (Yashadhana, 2021) aimed to identify and describe pandemic-related experience or perception of discrimination among non-indigenous, racially minoritized groups in high-income context, indicated the health professionals need to adapt their practices and direct their attention to the need of their clients, regardless of racial and cultural background, adequately recognise the social, environmental, and economic determinants of health, platforming racism as a public health problem and intersectoral engagement and action (50). (Yozwlak, 2021) emphasized that educating and informing current and future medical and legal professionals about SDIMH is imperative, and particular attention needs to be given to cultural humility to reduce social stigma of mental health and Covid-19 and combat discrimination and racism within the refugee's community. In addressing SDIMH among refugees, medical and legal professionals need to develop cultural humility that becomes habitual with every patient and client. This cultural humility emphasizes self-awareness of personal biases and beliefs, recognizing and appreciating individual cultural experiences and perspectives, and being willing to sensitively listen and learn from others through a lifelong process. When professionals understand the cultural SDIMH among the refugee community and appreciate their individual stories and experiences, culturally sensitive treatment for mental health can be effective and valued despite its stigma. Practicing cultural humility while working alongside with resettled refugees also leads to greater mutual respect and trust, and it provides a better foundation to address SDIMH. This novel coronavirus, inappropriately dubbed the "Wuhan virus" or "China virus", has led to increased violence and hate crimes particularly toward resettled refugees of Asian ethnicity who have been direct victims of xenophobia and thus proactively fostering respect and trust during this pandemic is a prerequisite to addressing SDIMH and empowering the mental health of resettled refugees of Asian ethnicity (47).

(Yashadhana, 2021) emphasized the need to frame racism as a public health problem, and for health policy and practice to be responsive to the differing needs and experiences of all

people. The latter requires individual health practitioner's awareness of the pervasive presence of racism during times of pandemic (50).

3.10.3. Access and availability of resources: fulfilling essential human needs.

As (Yozwlak, 2021) stated, lack of accessibility and availability of resources is a significant barrier to the mental health of refugees in the age of pandemic. The Covid-19 screening, and health coverage need to be prioritized. Mental health screening should be strongly encouraged, if not mandatory, to better support refugees and their vulnerability to mental health challenges (47).

Humanitarian organisations and government bodies need to arrange their activities to best respond to the needs of refugees during the Covid-19 pandemic (28). National and international organisations working on the rehabilitation of refugees should focus on ensuring their basic needs and supporting emotional and mental health (38).

The finding from study (Jones, 2021) with important implication for policy and programming indicating to an urgent need for investment in mental health services to support people more at risk of depression and anxiety, to support these people, especially in host communities, where the risk of social isolation appears greater (40). The living conditions of these high-risk groups, especially undocumented migrants and those living on the street and in unsecured housing situations need to be improved, in terms to their access to proper housing situations, clothing and food, their work situation (both in terms of access to proper jobs and overall working conditions), and their access to health care (42). The physical, social, and cultural life standards in the refugee centres need to be improved to be much better than now (44). For these groups effective political action needs to be taken to ensure access to mental health services (42). The increased mental health vulnerability of refugees and migrants living in asylum centres and refugee camps necessitate a broader availability of psycho-social interventions in these settings (42). Accessibility and continuity of treatment is very important and proactive strategies should be implemented to monitor emergent needs and provide territorial assistance, with online assistance where feasible (39) and the development of adapted mental treatment seems wise and urgently necessary (33).

(Palit, 2022) highlights urgent need for innovations in prevention and intervention with this new trauma type that is continuous, multi-layered, and severe, especially with refugee and

torture survivors. It indicates for modified new models and trauma protocols of continuous and cumulative trauma focused interventions that reach refugee virtually, face to face, in group, or through all traditional and social media and academic, community mental health, and international organisations to help alleviate their suffering (38). The accent has been emphasized to innovations and to explore new and potential avenues to enhance the effectiveness of current treatment protocols for such severe trauma type (Alpay, 2021) (41).

According to (Lupieri, 2021), from a policy perspective, recommendations include halting the deportation of refugees, improving public health messaging for marginalized communities, incorporating refugee camps within national health plans, and extending access to health coverage to non-citizen. Refugees are rarely included within policy decision-making and as active participants in healthcare responses. The underlying reasons that account for the exclusion of refugees from healthcare responses during the pandemic are little discussed in the literature (49).

Numerous studies highlighted the need for future research all around the world that are required to investigate the impact of the current pandemic on refugees' mental health (28), (33-38), (39-52), what is extremely important for the policies to be implemented in combatting the pandemic, and to depict the real picture of the reason behind Covid-19 pandemic and mental health of this extremely vulnerable population (44).

3.11. Proposed and implemented community interventions for mental health promotion

In accordance with (Yozwlak, 2021), social determinants impacting mental health may be effectively addressed through **community mental health education**. This may include **Mental Health First Aid** (MHFA) training which assisted Nepali communities in Massachusetts to better recognise depression and improve mental health literacy (47).

(Villalonga, 2022) stated that social capital interventions can be distinguished at the individual level, the community level and both levels simultaneously (multilevel). On the individual level, social capital may improve the exchange of individual psychosocial resources such as individual coping strategies and information, and emotional or instrumental support between members of a network, which may reinforce mental health. At the community level, social capital enables groups to organize and to undertake collective action. For example, members of a network that has suffered displacement can organize group

session among network members to navigate the new country they are in and promote the creation of new social ties and cohesion. Scholars have posited that multilevel interventions produce health effects by creating change at both the individual and community levels. Social capital interventions in refugees can target different levels. An example is the organisation of **therapy groups** to build cohesion in refugees in a new settlement to avoid the deterioration of mental health in the aftermath of a displacement event (51).

(Budak, 2020) accentuated that community education, specifically using **peer-led community health workshops**, is a culturally responsive way of promotion community health and social capital in refugees' communities. This form of community education could be the first step in overcoming the strong stigma surrounding mental health and begin to build trust between refugees' communities and public health and non-profit agencies. Good nutrition, exercise, and the **ability to connect with other, as interpersonal support** (44) impact mental health within refugees (47, 51). Studies have found that **social support** from withing a refugee's own community is related to lower PTSD symptoms, and higher level of structural social capital (i.e., membership groups) appears to be protective against the adverse effect of insecure visa status on depression and suicidality in refugee communities and factors that contribute to increased social inclusion have been associated with stronger psychological adaptation in refugees settled in Germany (36, 43, 47).

(Sharif-Esfahani, 2022) pointed to the importance of tackling fear to enhance mental well-being of refugees, introduce new **programs to teach new immigrants' language**, bolster their sense of belonging to the host country, which in turn could enhance their socio-economic status SES (37).

Refugee resettlement agencies and public health profit and non-profit organisations are making great strides in providing essential **mental and Covid-19 health information**. One such example is refugee response, an organisation that has paired up with Catholics charities in Cleveland, Ohio, to deliver animated videos about Covid-19 in 12 different languages. These videos are accessible on multiply devices and social media websites and have been viewed by nearly 60.000 persons in 9 countries, and in additional 34.000 individuals in refugee camps. School of Social Work and the non-profit Bhutanese Society of Western Massachusetts have produced videos in Nepali to teach Bhutanese refugees about Covid-19, recognising that many individuals in the Bhutanese populations are illiterate in their own

language. The videos were created after recruiting teachers, epidemiologists, and public health experts (47).

In keeping with (Yozwlak, 2021), lack of accessibility and availability of resources is a significant barrier to the mental health of refugees in the age of Covid-19 and providing greater accessibility and availability of mental health screening, Covid-19 screening, and health coverage need to be prioritized. Mental health screening should be strongly encouraged, if not mandatory, to better support refugees and their vulnerability to mental health challenges. Due to the Health Resources and Service Administration (HRSA) quality care measures in the USA, many federally qualified health centres (FQHCs) prior to the pandemic began the initiative to incorporate **mental health screening** as part of every patient visit. Initial mental health screening includes the two questions PHQ-2 survey which is typically given by a medical assistant. If a positive response is elicited, a follow-up Patient Health Questionnaire-9 may be given with additional assessments such as the Harvard Trauma Questionnaire (HTQ), the Vietnamese Depression Scale (VDS), the Comprehensive Trauma Inventory-104, the New Mexico Refugee Symptom checklist-121 (NMRCL-121), and the Refugee Health Screener-15 (RHS-15). Healthcare professionals need to be aware and well-trained to perform these mental health assessments, and healthcare centres must prioritize the utilisation of screening patient visits in clinics and via telehealth. These improvements to mental health screening may benefit all patient populations, including resettled refugee population, during the Covid-19 pandemic. Greater access and availability to mental health screening needs to be provided in the form of mental health training for all physicians and patients, and referral pathways and support services need to be established (47).

The qualitative data suggested that, for many young people, access to online peer networks had been a critical part of their coping strategies during the pandemic (40).

Longitudinal quantitative study and in-depth qualitative interviews (Jones, 2021) described adolescent specific program and confirmed the protective role of **Makani centres** (Azraq camp in Jordan)- national one-stop child and adolescent Makani centres managed by UNICEF and run through community organisation which improve support network and access to formal education. Makani centres have played an important supportive role during the pandemic for those who already were enrolled at the centres. Centre facilitators - who were able to rely on trusted relationship with adolescents and their caregivers – quickly pivoted to

provision online support, through WhatsApp and mobile phone text messages. A 17-year-old adolescent girl in Azraq expressed positive feedback on Makani's role:

"*Makani groups are very useful, because most of the people in the camp are staying home, not going out or coming back in. This programme has a big role in helping us know everything that is going on while staying home*." (40). Alongside access to programmes, the Jordanian government made a concerted effort to engage young people in adolescent empowerment activities (volunteering) to strengthen resilience during the pandemic (40).

Extensive **financial and political support** enables refugee-focused non-profit organizations to continue providing a network of services to resettled persons. One such organisation, Asian Services in Action (ASIA), Inc, in Ohio (USA), has had much success in this area: from health care services to translation services and English classes. ASIA, Inc maintains a myriad program aimed toward assisting the refugee community throughout their resettlement and provide legal, health, financial, and social support for resettled refugees (47).

Another way of coordinating community resources is through **clinical screening of SDIMH**. One example is the federal Accountable Health Communities Model (AHCM) in the USA, which seeks to reduce clinical spending by addressing social determinants. This prioritized clinical screening for unmet social needs and connects different community services to ensure the availability and responsiveness of resettled refugees needs, which are often unrecognized without established culturally sensitive clinical screening (47).

4. Discussion

The purpose of this scoping review was to synthesize the empirical evidence and to identify knowledge gaps concerning to the main mental health problems of refugees and asylum seekers in times of the Covid-19 pandemic. We also had to formulate sub-questions and hypotheses that we intended to answer and test in the course of our study.

We reviewed twenty-two articles concerning the mental health of refugees and asylum seekers in times of the Covid-19 pandemic. Most of the articles, 60%, had quantitative study design and concerned investigations in mental health of refugee's outcomes in times of the Covid-19 pandemic. Eight, or 57% of all included quantitative studies had cross-sectional design. According to (Mahajan, 2015), this method of research has many advantages, but also some disadvantages, such as the impossibility of analysing behaviour or make causal inferences about the relationship between Covid-10 related stressors and mental health outcomes, limits the dynamic of assessment, and could restrict the generalizability of results (54).

Six articles, 30%, with systematic and narrative reviews as study design, investigated the mental health of refugees during the pandemic and focusing on possible causes and consequences, research gaps and recommendations for health professionals and policy, and two studies, 10%, with qualitative systematic review of literature dealt with the social determinants impacting mental health and describe barriers to overcome toward mental health promotion.

4.1. What did the included studies focus on.

The aforementioned studies included in our scoping review provides an important information that is relevant to refugees worldwide during the pandemic and provide evidence for mental health practitioners, service providers and policy makers (36) to ensure that the Covid-19 strategies are inclusive and respond to the needs of vulnerable groups like refugees, and asylum seekers (36), highlights the vulnerability of migrants, and especially refugees and could serve as a basis for intervention programs based on resilience training (34), including social support, sense of purpose, and focus on future goals, which are key assets that may protect potentially vulnerable individuals from adverse outcomes (43), provides essential insight into possible coping strategy amidst refugees (38), highlighted the urgent need for innovation in prevention and intervention with this trauma type (the Covid-19 traumatic stress), that is continued, multi-layered, and severe especially with refugees and torture

survivors. It indicated the need for modified new models and treatment protocols (41), and also these studies could assist to health professionals in their efforts to advocate against human rights abuses and the implementation of international treaties prohibiting the use of torture, to highlight the mental health needs of affecting populations, and at international level to encourage policy makers to ensure that refugees and conflict-affected societies worldwide are assured of secure and supportive recovery environments (48).

4.2. Identification of major mental health problems of refugees and asylum seekers in times of the Covid-19 pandemic.

Studies show a significant deterioration in mental health of refugees and asylum seekers during the Covid-19 pandemic. Given all the difficulties that they had to overcome in the pre-, trans-, and post-migration period, as well as difficulties associated with adaptation in the host-country, which undoubtedly left its mark on the already vulnerable psyche, the Covid-19 pandemic has only succumbed to the negative impact on the mental health of this population group.

Conforming to (Alpay, 2021), the Covid-19 traumatic stress and pandemics' impact on mental health have never been study in history before (41). In addition to the threat of exposure to the virus, numerous other stressors have had a devastating effect on mental health of refugees and asylum seekers. Studies have noted these stressors as lockdown consequences with social and cultural isolation, limited access to mental and other health services, fear of being infecting, fear for family, linguistic barriers, stigma, pandemic related racism, and many other stressors (22, 33, 35, 36, 39, 45-46, 50, 52).

Studies revealed that during the Covid-19 pandemic the probability of PTSD, anxiety, stress, and depression increased in comparison with the already difficult situation before crisis and compared to the general population. Several studies stated that difficulties experienced during the lockdown triggered memories of past traumatic events which was a strongest predictor of PTSD, health anxiety, depression, and disability in refugees (33-34, 36, 39, 41).

It should be noted here that the main attention in the studies was paid precisely to the measurement of the mentioned above disorders and less attention was directed to other characteristics such as for example suicide, alcoholism, prolonged grief, feeling of loneliness and helplessness, well-being, and quality of life.

4.3. Fear, worry and anxiety

We were traced the link between fear and worry caused by the Covid-19 pandemic and mental health disorders. WHO points out that fear remains one of the key causes of stress, anxiety, and other mental problems (45)

Fear and worry are closely related to anxiety disorder and the results of studies suggest that health anxiety is an important disorder that should be considered in refugee population in future research (35-36).

4.4. Conflicting data

Interestingly that one of included cross-sectional study (Mistry, 2021) (45) to assess the level of fear and its association among Rohingya older adults in Bangladesh Cox's Bazar refugee camp, revealed two major findings. First there was a relatively low level of fear among refugees in survey and secondly, fear was associated with some socio-demographics characteristics of the refugees and the Covid-19 related factors. This study provides evidence to contradict the general assumption that the Covid-19 has created enormous fear among all population groups, especially among the aged population in the world. Participants in this survey having low level of fear of the Covid-19 and it can be considered a positive condition for their mental and psychological wellbeing. However, this finding is particularly interesting and need some explanations considering evidence that older adults are more likely to be infected and die from the Covid-19. (Mistry, 2021) suggested that there can be several reasons for less fear among the older Rohingya participants, such as poor literacy about this infectious disease, low Covid-19 cases in camp, or low exposure to media in the camps (45).

Furthermore, the cross-sectional survey with Syrian refugees (Alpay, 2021) (41) indicates that those who have a history of being hospitalized due to the Covid-19 have higher PTSD and depression symptoms and relatively lower Covid-19 traumatic stress, what is explained in the study by the possibility that being already infected, and the fear part of this trauma has been reduced.

It is already necessary to pay attention to the data obtained from longitudinal study of mental health before and during the Covid-19 pandemic in Syrian refugees (Akhtar, 2021)(35) in which it was established, that 'pre-existing levels of PTSD and depression symptoms do not necessary lead to worsened mental health during pandemic. Instead, many refugees are at risk of excessive worry and anxiety, and those more at risk maybe those with less severe

psychological distress prior to pandemic.'(35). The findings of this study contradict other studies and the seemingly ingrained assertion that refugees with pre-existing level of PTSD and depression symptoms are at greater risk during the pandemic than those with lesser pre-existing mental health issues.

More research is needed to better understand the causal relationship between pre-existing mental health problems and how it relates to the impact of the pandemic, as well as research related to fear, worry and anxiety, and the relationship of the Covid-19 stressors with hospitalisation due to the Covid-19 infection.

4.5. Geographic, socio-demographic characteristics and their relationship with the impact of the Covid-19 pandemic.

The studies overrepresent refugees from the Middle East, Arabic speaking countries (Syria, Afghanistan, Jordan, Lebanon, Iraq) 50% of all studies, and underrepresented refugees from other countries, in other settings. Nine articles were devoted to Syrian refugees living in low, middle, and high-income host-countries. Other studies have covered forcibly displaced Myanmar nationals, FDMN, living in Bangladesh, Nepali speaking Bhutanese refugees living in USA and other refugees from different setting: Africa, Asia, Europe, Middle East, Latin America, North America, without specifying country of origin.

Studies suggested that the probability of mental health disorders, especially women, the elderly, and people with comorbidities increased in comparison with the already difficult situation before crisis (33,38,42,46). Pandemic measures have negative impact on women' emotional, psychologic, and social wellbeing, but despite this women refugees have a more positive approach to protection from and combat against the pandemic than men. (Budak, 2020) mentioned that the reason of this maybe that women especially take care of their children in daily life in the family and act with urge to protect their family members by taking a more active role in combating the pandemic (44). Younger refugees, aged under 30 years old report a less negative effect of the Covid-19 on their anxiety, depression, and stress than adult over the age of 30 years old (38,40,42,44-45). But in spite of the fact that young people having adopted a range of coping strategies, only a small minority expressed high resilience (40). Based on these data, more research is needed to understand what specifically helps this small minority to have a stable resilience.

Children aged below 18 years old considered one of the risk refugee group due to the Covid-19 disruption of day-to day living (52). Refugees aged 60 and over and those with comorbidities are more vulnerable to the negative impact of the Covid-19 pandemic on their mental health (38,44).

Although we initially set ourselves the task of learning how gender and age are related to the impact of the pandemic, we were able to obtain data on other characteristics as well.

Married refugees were more receptive and perceived higher stress than singles and a possible reason according to (Budak, 2020) and (Mistry, 2021) may be that married couples, and especially those who have children, are more responsible for their family members, and therefore more sensitive to the impact of negative factors than single ones, whose field of responsibility covers only themselves (44-45). Studies also indicated that such characteristics as living conditions, residence status, employment, education, and discrimination can be considered as important factors contributing to increase stress and can have devastating effect on refugees' mental health (28,33,36,38-39,41-42,44-47,50,52).

4.6. Resilience and coping strategies

Eight of the included studies were focusing on resilience, resilience interventions and coping strategies amid refugees and asylum seekers in time of the Covid-19 pandemic. In order to better understand the property of resilience, we reviewed two additional studies (53, 55) not included in our scoping review.

In accordance with the definition of American psychological Association (APA), resilience is the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioural flexibility and adjustment to external and internal demands (56). Amid a global pandemic and the negative impact on refugees' mental health, one of the important factors in the survival of the vulnerable population is their resilience (52). Resilience is an interactive concept, referring to a relative resistance to environmental risk experiences, or the overcoming of stress or adversity, and it is thus differentiated from positive mental health. However, the factors that influence the development of resilience can be considered as analogous to those that promote mental health. These factors – or – determinants operate on two broad levels: each person's life and development; and the sociocultural context (53). Important sources of resilience are social

support, sense of purpose and focus on future goal, which are key assets that may protect potentially vulnerable individuals from adverse outcomes (43). Some authors have found that individuals with high level of resilience reported lower stress (34, 43). It can be stated that social support from within refugees' own community, from family, friends, interpersonal support, and such feelings as optimism, acceptance of uncertainty and a sense of purpose could be an important protective factor against psychological distress (28) and are core components of resilience.

In agreement with (Southwick, 2014), (55), to develop effective interventions to enhance resilience, it is critical to understand that humans are embedded in families, families in organisations and communities, and communities in societies and cultures. Interventions targeted at any one of these levels will impact functioning of at other levels. Sometimes the most effective strategy to enhance resilience at a specific level may involve intervening on a different level. It is also important to understand that determinants of resilience in one community may differ from those in another community. Human are endowed with great potential to weather adversity and to change or adapt, when necessary, but they need basic social and material resources to do so. One of the most important ways to foster resilience is to promote healthy family and community environments that allow the individual's natural protective systems to develop and operate effectively (55).

Despite the many hardships that refugees are experiencing, and especially during the Covid-19 pandemic, it is important to note that so many of them are not only vulnerable, marginalized victims of emergencies, but also very active, creative, and optimistic individuals who are able to adapt to difficulties and invent different ways and strategies to cope with adversities. Studies have shown that these coping strategies are based on a sense of unity, mutual assistance, support from family members, friendship, as well as faith in a higher power (God's will) that helps to survive and overcome all difficulties.

A mixed method study concerning to the impact of Covid-19 and lockdown on mental health among young refugees (Cesson, 2022), (43) pointed out that majority of refugees try to disengage from information related to the pandemic and prefer to simply communicate with each other and talk about abstract topics, but this can be explained both by a lack of understanding of the complexity of the current situation, poor literacy, and by a protective reaction, or kind of coping behaviour, since frequent viewing of pandemic news associated with higher level of distress. (43)

Unfortunately, not all coping strategies can have a positive outcome and some strategies with important health implication as tobacco and substance use (40) which may expose refugees' mental health to even greater problems in the future.

Special attention should be paid to this population group, as well as activities aimed to increase health literacy and understanding the harm from the use of toxic substances, possible involvement refugees in various kinds of activities as volunteering for example, and in other ways of social assistance.

4.7. Inclusion, inclusive strategies, inclusive health and social-ecological model.

(Yadhadhana,2021) (50) mentioned that Covid-19 strategies should be inclusive and respond to the needs of vulnerable groups like refugees and asylum seekers.

Conforming to (Renzaglia, 2003), inclusion is not a place; instead, it is a lifestyle in which a person is an active participant in his or her own life, rather than a passive observer and the recipient of decisions someone else has made. The conceptual base of inclusion is to create a life that is both satisfying and successful for a person (57).

The principle of 'inclusive health 'comes from the very concept of 'inclusion', and focuses on good health and wellbeing for everyone, and this entails health services that are equitable, affordable, and efficacious (58) This concept is also resonating with a right-based approach to health including political, social, economic, scientific, and cultural actions that are geared toward advancing the cause of good health and well-being for all (46).

In 1948, the WHO defined health as a 'state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity. Multi-sector and community based mental health approach can help address health and social inequities by promoting social well-being and addressing structural determinants of mental health. 2015 Cochrane review describer three assumptions that underlie community interventions. The first is an awareness of multiply forces that exist at all social-ecological levels (i.e., individual, interpersonal, organisational/institutional, community, and policy) that facilitate or obstruct mental health. (59)

This first statement is directly related to the proposition about the effectiveness of interventions to enhance human resilience (55) which emphasize understanding of the deep

connection between the individual, family, organisations and communities in societies and cultures.

The second is investment in community participation to provide resources and inform interventions, recognising experience outside of the healthcare system. The third is prioritization of community mental health and social outcomes. The community interventions highlight the success and promise of these interventions to promote mental health and broader outcomes at all social-ecological levels (59-60).

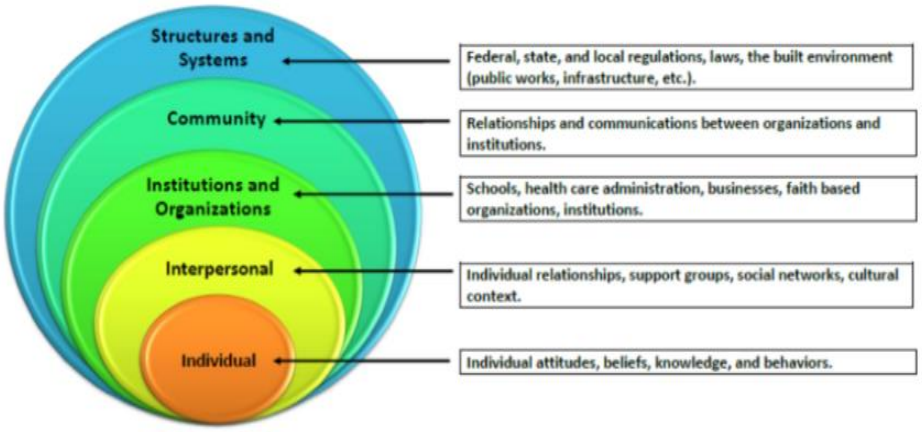


Fig. 4 Social-ecological model (61)

4.8. Recommendations for mental health promotion

In the process of our research, it became evident that some socio-demographic characteristics such as gender, age and marital status, communication and education, employment, living conditions, residence status, discrimination are directly associated with social determinants affecting mental health of refugees and asylum seekers in times of Covid-19 pandemic along with hunger, addiction, and health coverage.

Two studies written by McGuire and Yozwlak, (2021) (2022) (39-40) dealt with the social determinants affecting the mental health of refugees in time of Covid-19 pandemic as well as proposed barriers to overcome toward mental health promotion, and social justice. All other included studies offered their recommendations which we managed to combine and classify in accordance with the plan proposed by McGuire and Yozwlak (39-40), namely:

- Communication and education toward awareness

Communication and education are identified as the main barriers toward awareness and recommendations emphasize the need to obtain and assimilate truthful information related to the pandemic, incorporation of various educational and training programs, as well as interventions (life-style and cognitive based), highlight the importance of public health messages, community mental health education, and social support as important source of resilience (34, 36-38,40-47,50-51).

- Addressing social stigma and discrimination through respect and cultural humility

The recommendations are directed mainly to current and future health care professionals, social assistants, community, and policy leaders' awareness to 'frame racism as a public health problem' in accordance with (Yashadhana,2021), the need for them to understand the importance of SDIMH in refugee community and practicing cultural humility with mutual respect and trust while working with refugees and asylum seekers (42,47,50).

- Access and availability of resources toward fulfilling essential human needs

Lack of accessibility of resources is a significant barrier to the mental health of refugees in the age of pandemics. The recommendations have important implication for policy and programming: investment in mental health services, the Covid-19 screening, improving living conditions, accessibility and continuity of treatment, innovations in prevention with this new trauma type, halting the deportation of refugees, inclusion refugees of healthcare responses and decision making processes during the pandemic and investment in new research on mental health of refugees and asylum seekers in time of the Covid-19 pandemic (28,33,38-39,40-44,47-52).

4.9. Proposed and Implemented community interventions

Proposed interventions emphasized the use of social support, to increase the ability of refugees to connect with others as interpersonal support from withing a refugee's own community, peer-led community health workshops, incorporation of new programs to teach new immigrants' language, giving mental and Covid-19 health information conducted by refugee agencies and public health profit and non-profit organisations, and made accent on the importance of community participation (36-37,43).

We got very little data on the implemented community interventions to promote mental health of this vulnerable population. The studies included in our scoping review aimed to investigate

the mental health of refugees in times of the Covid-19 pandemic and were largely focused on this, as well as recommendations for follow-up, but nevertheless we were able to obtain little data regarding to implemented community interventions for mental health promotion.

Regarding the implemented community interventions, we based on studies performed by (Jones, 2021), (Yozwlak, 2021) et (Villalonga-Olives, 2022), (40,47,51).

(Jones, 2021), (40) confirmed the important role of Makani centres (Azraq camp in Jordan). Makani is UNICEF programme for providing educational learning support services, community-based child protection and early childhood development services to local communities. The programme aims to promote and contribute to the full development and well-being of children, youth, and their parents. There are 150 Makani centres spread throughout Jordan (62).

(Yozwlak, 2021), (47) referred to the organisation, that has paired up with Catholic charities in Cleveland, Ohio, concerning to 'mental and Covid-19 health information' via animated videos about Covid-19 in 12 different languages. Moreover, Mental health First Aid (MHFA) training in Massachusetts, USA, addressed through community mental health education. According to (Yozwlak, 2021), the way of coordinating community resources is through clinical screening of SDIMH. An example is the Federal Accountable Health Communities Model (FAHCM) in the USA, which seeks to reduce clinical spending by addressing social determinants. Many federally qualified health centres began the initiative to incorporate mental health screening as part of every patient visit. In keeping with (Yozwlak,2021), an organisation (ASIA),Inc, in Ohio, Asian Service in Action maintains a myriad program and provide legal, health, financial, and social support for resettled refugees.

(Villalonga, 2022), (51) pointed to the importance of social capital interventions in refugees at the different levels. An example is the organisation of therapy groups to build cohesion in refugees in a new settlement to avoid the deterioration of mental health in the aftermath of a displacement event.

4.10. Knowledge gaps

In the process of our scoping review, we based our conclusion on the results of included studies and were able to get answers to many questions of interest, but nevertheless still there are several gaps.

We found some knowledge gaps in our study. Little is known about research in low-middle income countries. 90% of all included studies were performed in high-income countries and just 10% in the middle and low-income countries, even though according to UNHCR' 83 percent of refugees are hosted by low-and middle-income countries' (10).

All included studies made accent on PTSD, anxiety, stress, depression, but less attention has been made to other problems related to mental health, as for example suicide, alcoholism, prolonged grief, well-being, quality of life. Studies overrepresent refugees from Arabic speaking countries and underrepresent refugees from other counties, from other settings. We got limited information about implemented community-based interventions to promote mental health.

Additionally, some gaps in research have been identified , namely methodological gaps and conflicting data, pointing to the need for future research.

All studies included in our scoping review pointed to gaps in research, emphasized usefulness and need for more research with quantitative and qualitative methods to gain a deeper understanding refugees and asylum seekers perspectives on the future in this complex period (28, 33-38,44,39-52).

5. Limitations and strengths

The purpose of this scoping review was to provide a general overview of the mental health of refugees and asylum seekers in times of the Covid-19 pandemic. Therefore, this review has some limitations. First, the age of the study population was not clearly defined and in most of the included studies, the age category was considered within eighteen and older and no special attention was paid to representatives of other ages, such as children (only two articles with young adolescents) and elderly population. Second, not enough attention has been paid to special population groups such as pregnant women, people with chronic diseases, refugees with disabilities face within the same refugee population, were not also considered enough in studies**.** Third, although the restrictions associated with the Covid-19 pandemic had been lifted at the time of our work on the review, we were unable to obtain enough data regarding the post-pandemic effect on mental health of this population group**.** Fourth, the research databases that we used in our search might not include all the research regarding on refugees and asylum seekers mental health in times of the Covid-19 pandemic. Fifth, we fixed our

attention to the questions and sub-questions predetermined in the beginning of our study and have not considered more detail some points that could be emphasized, namely, other mental health disorders, innovative methods for preventing mental disorders, and more detailed interventions to promote mental health of refugees and asylum seekers in times of the Covid-19 pandemic on each step of socio-ecologic model. Finally, we used only articles written in English, but given the fact that the pandemic is global in nature, we may have missed many data written in other languages.

Nevertheless, we managed to answer the main questions posed et the beginning of our review, answered sub-questions, tested the hypotheses, and traced important points that need to be paid attention in subsequent studies and future research. For our knowledge this is the first scoping review regarding the mental health of refugees and asylum seekers in times of the Covid-19 pandemic.

6. Conclusion

Refugees and asylum seekers are a vulnerable population due to the difficulties they have to overcome during the pre-, trans-, and post- migration periods. These difficulties have a strong impact on their health and directly on their mental health, which deteriorated significantly during the Covid-19 pandemic with reactivation of traumatic experience. Findings from review show common mental health problems as PTSD, anxiety, stress, and depression compared to general population. Age and gender influence mental health of refugees and asylum seekers in times of the Covid-19 pandemic. The mental health of women, children aged below 18 years old, the elderly, and those with comorbidities are more susceptible to the negative impact of the Covid-19 pandemic and related restrictions.

To promote mental health of refugees and asylum seekers in this challenging time, coordinated action is needed in accordance with the social-ecological model at all levels: individual, interpersonal/family, organisational/institutional, community and policy in accordance with determinants impacting mental health toward awareness, respect, cultural humility and fulfilling essential human needs through communication and education, addressing social stigma and discrimination, access and availability to resources with political, social, economic, scientific and cultural actions.

With this scoping review we encourage further research to explore mental health of the most vulnerable population, as refugees and asylum seekers in this challenging time, in order to be ready for an adequate and decent response in case of repeated pandemics.

7. Reference

1. World Health Organisation, WHO, Refugee and migrant health, 2 may, 2022; available on the website WHO : https://www.who.int/news-room/fact-sheets/detail/refugee-and-migrant-health#:~:text=More%20than%201%20billion%20people,4.4%20million%20are%20asylum%20seekers), [consulted online on the 6th June, 2022].

2. NEWS European Parliament, Exploring migration causes-why people migrate, updated 30-10-2020; available on the website: https://www.europarl.europa.eu/news/en/headlines/world/20200624STO81906/exploring-migration-causes-why-people-migrate#:~:text=Pull%20factors%20include%20higher%20wages,countries%20with%20a%20better%20outlook, [consulted online on the 1st Novembre, 2022].

3. CASTELLI F. (2018). Drivers of migration: why do people move? *Journal of Travel Medicine*, Volume 25, Issue 1, tay040.

4. SHAMSUDDOHA Md., MUNJURUL H., SAJID R., TANJIR H. (2012). Displacement and Migration from Climate Hot spots: Causes and Consequences, *Centre for Participatory Research and Development and ActionAid* Bangladesh, Dhaka, p.18, available on the website: https://unfccc.int/files/adaptation/groups_committees/loss_and_damage_executive_committee/application/pdf/displacement_and_migration_in_bangladesh.pdf, [consulted online on the 2nd Novembre, 2022].

5. UNHCR, Handbook for the protection of internally displaced persons, 2010, Action Sheet 1, Forced and Unlawful Displacement, available on the website: https://www.unhcr.org/4794b2d52.pdf, and https://reliefweb.int/report/world/handbook-protection-internally-displaced-persons-enar#:~:text=The%20Handbook%20for%20the%20Protection,%E2%80%9Cworking

%20together%20for%20protection%E2%80%9D.[consulted online on the 2nd Novembre, 2022].

6. UPHOFF E., ROBERTSON L., CABIESES B., VILLALÓN F. J., PURGATO M., CHURCHILL R., *et al.* (2020). An overview of systematic reviews on mental health promotion, prevention, and treatment of common mental disorders for refugees, asylum seekers, and internally displaced persons. *The Cochrane database of systematic reviews*, *9*(9), CD013458.

7. American Psychiatric Association, APA, Mental health Facts on Refugees, Asylum seekers, & Survivors of Forced Displacement, 2018, available on the website: https://www.psychiatry.org/File%20Library/Psychiatrists/Cultural-Competency/Mental-Health-Disparities/Mental-Health-Facts-for-Refugees.pdf, [consulted online on the 31st Octobre, 2022].

8. USA for UNHCR The UN Refugee Agency, 27th June 2022, available on the website: https://www.unrefugees.org/news/five-takeaways-from-the-2021-unhcr-global-trends-report/, [consulted online on the 2nd August, 2022].

9. REES S., FISHER J. (2020). COVID-19 and the Mental Health of People From Refugee Backgrounds. *International journal of health services: planning, administration, evaluation*, *50*(4), 415–417.

10. UNHCR, The UN Refugee Agency, Figures at a Glance, source: UNHCR Global Trends 2021, available on the website: https://www.unhcr.org/figures-at-a-glance.html, [consulted online on the 31st Octobre 2022].

11. PURGATO M., CARSWELL K., TEDESCHI F., ACARTURK C., ANTTILA M., AU T., *et al.* (2021). Effectiveness of Self-Help Plus in Preventing Mental Disorders in Refugees and Asylum Seekers in Western Europe: A Multinational Randomized Controlled Trial. *Psychotherapy and psychosomatics*, *90*(6), 403–414.

12. World Health Organization, Mental health and forced migration, 31 August 2021, available on the website: https://www.who.int/news-room/fact-sheets/detail/mental-health-and-forced-displacement, [consulted online on the 2nd Novembre 2022].

13. Migration Data Portal, The bigger picture, Forced migration or displacement, 27 May 2022, available on the website: https://www.migrationdataportal.org/themes/forced-migration-or-displacement, [consulted online 3rd Novembre 2022].

14. Refugee Health, Technical Assistance Center, Mental Health, 2022, available on the website: https://www.refugeehealthta.org/physical-mental-health/mental-health/, [consulted online 6th Novembre 2022].

15. BHUGRA D., BECKER M. A. (2005). Migration, cultural bereavement, and cultural identity. *World psychiatry: official journal of the World Psychiatric Association (WPA)*, *4*(1), 18–24.

16. KISELEV N., PFALTZ M., SCHICK M., BIRD M., PERNILLE H., SIJBRANDIJ M., *et al.* (2020). Problems faced by Syrian refugees and asylum seekers in Switzerland. *Swiss medical weekly*, *150*, w20381.

17. GLEESON C., FROST R., SHERWOOD L., SHEVLIN M., HYLAND P., HALPIN R., *et al*. (2020). Post-migration factors and mental health outcomes in asylum-seeking and refugee populations: a systematic review. *European journal of psychotraumatology*, *11*(1), 1793567.

18. PORTER M., HASLAM N. (2005). Pre-displacement and post-displacement factors associated with mental health of refugees and internally displaced persons: a meta-analysis. *JAMA*, *294*(5), 602–612.

19. JÚNIOR J. G., de SALES J. P., MOREIRA M. M., PINHEIRO W. R., LIMA C., NETO M. (2020). A crisis within the crisis: The mental health situation of refugees in the world during the 2019 coronavirus (2019-nCoV) outbreak. *Psychiatry research*, *288*, 113000

20. PINZÓN-ESPINOSA J., VALDÉS-FLORIDO M. J., RIBOLDI I., BAYSAK E., VIETA E. (2021) EFPT Psychiatry Across Borders Working Group. The COVID-19 Pandemic and Mental Health of Refugees, Asylum Seekers, and Migrants. *Journal of affective disorders*, *280*(Pt A), 407–408.

21. Royal College of Psychiatrists, Asylum seeker and refugee mental health, 2022, available on the website: https://www.rcpsych.ac.uk/international/humanitarian-resources/asylum-seeker-and-refugee-mental-health, [consulted online 4th Novembre 2022].

22. BLACKMORE R., BOYLE J. A., FAZEL M., RANASINHA S., GRAY K. M., FITZGERALD G., *et al.* (2020). The prevalence of mental illness in refugees and asylum seekers: A systematic review and meta-analysis. *PLoS medicine*, *17*(9), e1003337.

23. SAIFEE J., FRANCO-PAREDES C., LOWENSTEIN S. R. (2021). Refugee Health During COVID-19 and Future Pandemics. *Current tropical medicine reports*, *8*(3), 1–4.

24. TSAMAKIS K., TSIPTSIOS D., OURANIDIS A., MUELLER C., SCHIZAS D., TERNIOTIS C., *et al.* (2021). COVID-19 and its consequences on mental health (Review). *Experimental and therapeutic medicine*, *21*(3), 244.

25. BELLIZZI S., ALSAWALHA L., SAMAWI L., AL-SHAIKH A., ALFAR H., MUTHU N., *et al.* (2021). The Impact of the SARS-CoV-2 Pandemic on Mental Health in Vulnerable Population Settings: The Case of Jordan. *Frontiers in psychiatry*, *12*, 692541.

26. HODES M. (2022). Editorial Perspective: Mental health of young asylum seekers and refugees in the context of COVID-19. *Child and adolescent mental health*, *27*(2), 190–191.

27. GARRIDO R., PALOMA V., BENÍTEZ I., SKOVDAL M., VERELST A., & DERLUYN I. (2022). Impact of COVID-19 pandemic on the psychological well-being of migrants and refugees settled in Spain. *Ethnicity & health*, 1–24.

28. KURT G., ILKKURSUN Z., JAVANBAKHT A., UYGUN E., KARAOGLAN-KAHILOGULLARI A., ACARTURK C. (2021). The psychological impacts of COVID-19 related stressors on Syrian refugees in Turkey: The role of resource loss, discrimination, and social support. *International journal of intercultural relations: IJIR*, *85*, 130–140.

29. GRANT M. J., BOOTH A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. *Health information and libraries journal*, *26*(2), 91–108.

30. ARKSEY H., O'MALLEY L. (2005) Scoping studies: towards a methodological framework, International Journal of Social Research Methodology, 8:1, 19-32

31. LEVAC D., COLQUHOUN H., O'BRIEN K. K. (2010). Scoping studies: advancing the methodology. *Implementation science : IS*, *5*, 69.

32. TRICCO A. C., LILLIE E., ZARIN W., O'BRIEN K. K., COLQUHOUN H., LEVAC D., *et al.* (2018). PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Annals of internal medicine*, *169*(7), 467–473.

33. KIZILHAN J. I., NOLL-HUSSONG M. (2020). Psychological impact of COVID-19 in a refugee camp in Iraq. *Psychiatry and clinical neurosciences*, *74*(12), 659–660.

34. SOLÀ-SALES S., PÉREZ-GONZÁLEZ N., VAN HOEY J., IBORRA-MARMOLEJO I., BENEYTO-ARROJO M. J., MORET-TATAY C. (2021). The Role of Resilience for Migrants and Refugees' Mental Health in Times of COVID-19. *Healthcare (Basel, Switzerland)*, *9*(9), 1131.

35. AKHTAR A., BAWANEH A., AWWAD M., AL-HAYEK H., SIJBRANDIJ M., CUIJPERS P., *et al.* (2021). A longitudinal study of mental health before and during the COVID-19 pandemic in Syrian refugees. *European journal of psychotraumatology*, *12*(1), 1991651.

36. LIDDELL B. J., O'DONNELL M., BRYANT R. A., MURPHY S., BYROW Y., MAU V., *et al.* (2021). The association between COVID-19 related stressors and mental health in refugees living in Australia. *European journal of psychotraumatology*, *12*(1), 1947564.

37. SHARIF-ESFAHANI P., HOTEIT R., EL MORR C., TAMIM H. (2022). Fear of COVID-19 and depression, anxiety, stress, and PTSD among Syrian refugee parents in Canada. *Journal of migration and health, 5*, 100081.

38. PALIT S., YANG H., LI J., KHAN M., & HASAN M. J. (2022). The impact of the COVID-19 pandemic on the mental health of Rohingya refugees with pre-existing health problems in Bangladesh. *Conflict and health*, *16*(1), 10.

39. ARAGONA M., BARBATO A., CAVANI A., COSTANZO G., MIRISOLA C. (2020). Negative impacts of COVID-19 lockdown on mental health service access and follow-up adherence for immigrants and individuals in socio-economic difficulties. *Public health, 186*, 52–56.

40. JONES N., BAIRD S., ABU HAMAD B., BHUTTA Z. A., OAKLEY E., SHAH M., *et al.* (2022). Compounding inequalities: Adolescent psychosocial wellbeing and resilience among refugee and host communities in Jordan during the COVID-19 pandemic. *PloS one*, *17*(2), e0261773.

41. ALPAY E. H., KIRA, I. A., SHUWIEKH H. A., ASHBY J. S., TURKELI A., ALHUWAILAH A. (2021). The effects of COVID-19 continuous traumatic stress on mental health: The case of Syrian refugees in Turkey. *Traumatology, 27*(4), 374-387.

42. SPIRITUS-BEERDEN E., VERELST A., DEVLIEGER I., LANGER PRIMDAHL N., BOTELHO GUEDES F., CHIARENZA A., *et al.* (2021). Mental health of refugees and migrants during the COVID-19 pandemic: the role of experienced discrimination and daily stressors. *International Journal of Environmental Research And Public Health, 18*(12)

43. CECCON C., & MOSCARDINO U. (2022). Impact of COVID-19 and lockdown on mental health and future orientation among young adult asylum seekers in Italy: A mixed-methods study. *Transcultural psychiatry*, 13634615221098306. Advance online publication.

44. BUDAK F., BOSTAN S. (2020). The Effects of Covid-19 Pandemic on Syrian Refugees in Turkey: The Case of Kilis. *Soc Work Public Health*. 35(7):579-589.

45. MISTRY S. K., ALI A., AKTHER F., PEPRAH P., REZA S., PROVA S., *et al* (2021). Are older adults of Rohingya community (Forcibly Displaced Myanmar Nationals or FDMNs) in Bangladesh fearful of COVID-19? Findings from a cross-sectional study. *PloS one, 16*(6), e0253648.

46. MCGUIRE T., YOZWIAK D., AULTMAN J. (2021) The Mental Health of Refugees during a Pandemic: The Impact of COVID-19 on Resettled Bhutanese Refugees. *ABR* 13**,** 375–399.

47. YOZWIAK D., MCGuire T., AULTMAN J. (2022). The Mental Health of Refugees during a Pandemic: Striving toward Social Justice through Social Determinants of Health and Human Rights. *ABR* 14**,** 9–23.

48. STEEL Z., CHEY T., SILOVE D., MARNANE C., Bryant R. A., VAN OMMEREN M. (2009). Association of torture and other potentially traumatic events with mental health outcomes among populations exposed to mass conflict and displacement: a systematic review and meta-analysis. *JAMA, 302*(5), 537–549.

49. LUPIERI S. (2021). Refugee Health During the Covid-19 Pandemic: A Review of Global Policy Responses. *Risk management and healthcare policy*, *14*, 1373–1378.

50. YASHADHANA A., DERBAS A., BILES J., GRANT J. (2022). Pandemic-related racial discrimination and its health impact among non-Indigenous racially minoritized peoples in high-income contexts: a systematic review. *Health promotion international*, *37*(2), daab144

51. VILLALONGA-OLIVES E., WIND T. R., ARMAND A. O., YIREFU M., SMITH R., ALDRICH D. P. (2022). Social-capital-based mental health interventions for refugees: A systematic review. *Social science & medicine (1982)*, *301*, 114787.

52. KITEKI B. N., LOU S., LIU T. (2022). The Impact of COVID-19 Pandemic Lockdowns on Refugee Mental Health: A Narrative Review. *International journal for the advancement of counselling*, *44*(3), 395–413.

53. HERRMAN H., STEWART D. E., DIAZ-GRANADOS N., BERGER E. L., JACKSON B., YUEN T. (2011). What is resilience? *Canadian journal of psychiatry. Revue canadienne de psychiatrie*, *56*(5), 258–265.

54. MAHAJAN A. (2015). Limitations of cross-sectional studies. *Neurology India*, *63*(6), 1006–1007.

55. SOUTHWICK S. M., BONANNO G. A., MASTEN A. S., PANTER-BRICK C., YEHUDA R. (2014). Resilience definitions, theory, and challenges: interdisciplinary perspectives. *European journal of psychotraumatology*, *5*, 10.3402/ejpt.v5.25338.

56. American psychological association, APA – Dictionary of psychology – Resilience, available on the website APA: https://www.dictionary.apa.org/resilience, [consulted online August 12, 2022]

57. RENZAGLIA A., KARVONEN M., DRASGOW E., STOXEN C. C. (2003). Promoting a Lifetime of Inclusion. *Focus on Autism and Other Developmental Disabilities*, *18*(3), 140–149.

58. ADEBISI Y. A., EKPENYONG A., NTACYABUKURA B., LOWE M., JIMOH N. D., ABDULKAREEM, T. O., *et al.* (2020). COVID-19 Highlights the Need for Inclusive Responses to Public Health Emergencies in Africa. *The American journal of tropical medicine and hygiene*, *104*(2), 449–452.

59. CASTILLO E. G., IJADI-MAGHSOODI R., SHADRAVAN S., MOORE E., MENSAH M. O., 3rd, Docherty, M., *et al.* (2019). Community Interventions to Promote Mental Health and Social Equity. *Current psychiatry reports*, *21*(5), 35.

60. MCLEROY K. R., BIBEAU D., STECKLER A., GLANZ K. (1988). An ecological perspective on health promotion programs. *Health education quarterly*, *15*(4), 351–377.

61. KARNA LLC, A CELERIAN GROUP COMPANY, (2022)
How the Social Ecological Model Influences Health Outcomes, available online on the website: https://karna.com/how-the-social-ecological-model-influences-health-outcomes/, [consulted online Novembre 14th 2022].

62. The Jordan Times, Programme launched to support Makani centres, By JT - Jan 16,2019 - Last updated at Jan 16,2019, available on the website: https://jordantimes.com/news/local/programme-launched-support-makani-centres#:~:text=Makani%2C%20(%E2%80%9CMy%20Space%E2%80%9D,local%20communities%2C%20the%20statement%20added, [consulted online Novembre 12th, 2022].

8. Annexe 1. <u>Abstract</u>

NOM et PRENOM : Vermisheva Tatiana

Titre du mémoire: Mental health of refugees and asylum seekers in times of the Covid-19 pandemic. Scoping review

Promoteur: Professor Nicaise Pablo

Background: Refugees and asylum seekers are a vulnerable population in relation with the stressors and challenges they have to overcome during the pre-, trans-, and post- migration period. These conditions may have a strong impact on their physical and mental health. Therefore, these population have been at high risk in facing the Covid-19 pandemic. The purpose of this scoping review was to synthesize the empirical evidence and to identify knowledge gaps concerning to the main mental health problems of refugees and asylum seekers in times of the Covid-19 pandemic.

Methods: A scoping review methodology was chosen. The electronic databases: PubMed, ScienceDirect, Scopus, Embase, and PsycInfo were searched for relevant articles published in English. 22 articles were included in the scoping review. We classified the obtained data in tabular form and performed a narrative synthesis of the key findings regarding the mental conditions of refugees and asylum seekers in the pandemic period as well as the actions and interventions that were set up to face these conditions.

Results: Studies show a significant deterioration in mental health of refugees and asylum seekers in times of the Covid-19 pandemic compared to pre-pandemic times. The main mental health disorders identified were PTSD, anxiety, stress, and depression. Fear and worry were directly related to anxiety disorder. Specific socio-demographic characteristics were more strongly associated to mental health problems during the pandemic. One of the important factors in the survival of the vulnerable population is their resilience. Actions taken to develop resilience can be considered as analogous to those that promote mental health.

The main knowledge gaps identified were the lack of data from low-middle income countries and lack of data on the community interventions implemented to promote mental health of refugees and asylum seekers in times of the Covid-19 pandemic, as well as some methodological issues.

Conclusion: The result of the study indicates that to promote mental health of refugees and asylum seekers in times of the Covid-19 pandemic, a coordinated action is needed in accordance with the social-ecological model at all levels with political, social, economic, scientific, and cultural actions.

Keywords: mental health, refugees, asylum seekers, Covid-19 pandemic, lockdown, community- based interventions, resilience, scoping review

9. Annexe 2. Thesis project

Thesis project

(Plan du mémoire)

Promoter: Pablo Nicaise

Student: Tatiana Vermisheva

NOMA : 7980 - 18 - 00

2021 – 2022

1) The research topic

The mental health of refugees and asylum seekers in times of Covid-19 pandemic. Scoping review.

2) The problem

The Covid-19 pandemic is a defining global health crisis of our time. While the impact of Covid-19, including its mental health impact, is increasingly being documented, there remain important gaps regarding the specific consequences on particular groups, including refugees and asylum seekers.

This population groups across the world have been identified as a vulnerable population during the Covid-19 pandemic, due to precarious work, living, economic and health conditions they face. They are likely to experience stressors which may lead to mental health problems, including higher rates of depression, post-traumatic syndrome or anxiety disorders which are highly related to the load of traumatic circumstances. Many of them are severely traumatized and suffer a variety of symptoms and not all of them seek help.

3) Research question

The purpose of this Master thesis is to synthesise the findings about the mental health of refugees and asylum seekers since the Covid-19 pandemic has been affecting the population. For that purpose, we will carry out a scoping review of the existing literature.

4) Secondary objectives of the research

- Identification of major mental health problems of refugees and asylum seekers in time of Covid-19 pandemic.
- A particular attention will be drawn on population characteristics (e.g., age and gender), geographical characteristics that are likely to be associated with higher mental ill-being.

- We will also include an overview of community interventions proposed or implemented in order to promote mental health in the time of Covid-19 pandemic to refugees and asylum seekers.
- We will report and formulate recommendations for the promotion of the mental health of refugees and asylum seekers in times of Covid-19 pandemic.

5) Expected results

Based on the results obtained, I would like to consider

- The possible effects of how the Covid-19 pandemic on the mental health of refugees and asylum seekers?
- Whether variables such as age, gender, countries are associated differently to the mental health of these population groups in this context?
- The potential interventions used to promote the mental health of these target groups.

In the process of scoping review, we will also draw up an inventory of the topics that have been addressed in the literature on the mental health of refugees and asylum seekers in times of Covid-19 and possibly identify research gaps that would need to be addressed.

6) Choice of methodology – Scoping review (topic based)

Scoping review was guided in the methodological framework by (**Arksey and O'Malley's**, 2005) (1), and (**Daniel Levac et al ,2010)** (2)

which includes:

Stade 1 Identifying the research question

Stade 2 Identifying relevant studies

Stade 3 Study selection

Stade 4 Charting the data

Stade 5 Collating, summarising, and reporting the results

a) Database search: MEDLINE, Scopus, PubMed, Cochrane Library, and others available data
b) Included quantitative and qualitative data
c) Approximate search strategy: mental health AND (refugees OR asylum seekers) AND Covid-19
d) After removing duplicates, all hits are screened by their abstract and basic information is retrieved (target group, place, topic, number of participants, etc) Topic tree is established.
e) All the selected papers are reviewed according to the topic tree.

7) The estimated schedule (Planning and work calendar) = Draft

Thesis defence is scheduled for January 2023

What to do ?	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	July 2022	August 2022	Septembre 2022
Promoter agreement + plan of work									
Protocol content									
Database search									
Study selection									
Charting the data									
Collating, summarising, and analysing the data									
Reporting results									
Introduction									
Methods									
Results									
Discussion									
Conclusion									

Bibliography									

What to do?	October 2022	November 2022	December 2022
Abstract			
Revision, correction, preparation for publication. Dia for presentation and for defence			

References:

(1) International Journal of Social Research Methodology,8,1,19-32 Online as: https://journalsonline.tandf.co.uk, Open URL link to the article:

https://www.journalsonline.tandf.co.uk/openurl.asp?genre=article&eissn=1464-5300&volume=8&issue=1&spage=19

(2) Danielle Levac, Heather Colquhoun & Kelly K O'Brien, BMC, Scoping studies advancing the methodology,2010, https://www.implementationscience.biomedical.com

LOUVAIN-LA-NEUVE | **BRUXELLES** | MONS | TOURNAI | CHARLEROI | NAMUR
Clos Chapelle-aux-champs, 30 bte B1.30.02, 1200 W oluwe-Saint-Lambert, Belgique | **www.uclouvain.be/fsp**