Reframing Psychosis Risk:
Social-Structural Determinants and First-Person Experiences in Ethno-racially Minoritized Populations

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This thesis is dedicated to Mark and Paloma

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Abstract

Previous findings indicate that immigrants and ethnic minorities are at higher risk of developing psychosis, due to social disadvantage. However, there is great variation in risk, depending on the minoritized group and host country. These findings have been critiqued, including due to a lack of focus on systemic issues, and the near absence of first-person perspectives. We aimed to analyse scholars' explanations on previous findings; investigate the impact of policies supporting immigrants and social deprivation on the incidence of psychosis for minorities; and explore the experiences and views of ethno-racially minoritized youth with psychosis. In Study I, we conducted a critical discourse analysis of scholars' explanations for the higher risk of psychosis among immigrants and ethnic minorities. In Study II, a quantitative multilevel methodology was used to assess the impact of area-level exposures (migrant integration policies; rates of unemployment, low education, owner-occupied houses, and single person-households) on the incidence of psychosis across minority groups, using data from the European network of national schizophrenia networks studying Gene-Environment Interactions study. In Study III, in-depth qualitative interviews were conducted and thematically analysed to explore the experiences and socio-environmental contexts of persons with psychosis from diverse ethno-racial and immigrant backgrounds. Study IV also explored the experiences and views of persons with psychosis from diverse backgrounds but via a different lens, using an arts-based participatory method (cellphilming). In Study I, three main discursive themes were identified from the explanations of previous findings about higher risk of psychosis among minority groups: institutional racism in psychiatry; psychiatry as a scientific discipline that sees and treats all patients equally; and the social locus of high rates. These map into intertwined and at times, divergent psychiatric discourses, portraying tensions between objectivist and constructivist approaches, which have been shaped by local contexts and reflect societal dynamics of power.

Ultimately, divergent perspectives may have impeded social change towards lower rates of psychosis among and better care for ethno-racially minoritized groups. Study II demonstrated that policies supporting immigrants and higher rates of owner-occupied houses were associated with lower incidence, and high rates of unemployment and single-person households with higher incidence of psychosis. These variables partially explained the relative risk of psychosis among minority groups. In Study III, our analysis generated five themes: Spaces and societies of oppression; Nothing to hold on to; Mistreated, invisible or seen in the wrong light; Places of freedom, connection and safety; and Healing and well-being. Participants (particularly from minoritized groups) described having navigated oppressive environments, connected to experiences of precarity, isolation and mistreatment. Spaces of freedom, connection and inclusivity were described as facilitating healing and well-being. In study IV, four themes were identified: Facing adversity; Apart from the world; (Re)building structure and meaning; and Cellphilming as possibility and connection, mapping onto participants' accounts of their contexts, experiences and causality. These findings highlight the relevance of critical approaches and of considering context at different levels and through different views, particularly first-person, to advance understanding of social-structural determinants in psychosis. This body of work is innovative and timely, as it focuses on actionable aspects that could ameliorate the mental health of different groups, while attending to the larger mission of seeking equity and social justice in society, and in psychiatry.

Résumé

Des études antérieures indiquent que les migrants et les minorités ethniques sont plus à risque de développer une psychose dû à leur situation sociale défavorisée. Néanmoins, il existe une grande variation de risque, selon le groupe minoritaire et le pays d'accueil. Ces conclusions ont été critiquées, notamment dû au manque d'attention portée aux aspects systémiques et points de vue basées sur l'expérience vécue. Notre but était d'analyser les explications proposées sur les résultats précédents, étudier l'impact des politiques de soutien aux migrants et de la déprivation sociale sur l'incidence de la psychose chez les minorités, et d'explorer les expériences et perspectives des jeunes issus de minorités, atteints de psychose. L'étude I porte une analyse critique des discours académiques sur le risque accru de psychose chez les migrants et les minorités ethniques. L'étude II, une analyse quantitative multiniveaux, a été menée pour évaluer l'impact des politiques d'intégration des migrants, taux de chômage, faible niveau d'éducation, taux de logements occupés par leur propriétaire et de personnes vivant seules sur l'incidence de la psychose parmi les minorités, à partir des données du *EUropean network of national schizophrenia networks studying Gene-Environment Interactions study*. Dans l'étude III, des entretiens ont été analysés thématiquement afin d'explorer les expériences et les contextes socio-environnementaux de personnes atteintes de psychose issues de divers milieux ethnoraciales. L'étude IV a aussi exploré ces aspects, en utilisant une méthode participative (cellphilming). Dans la première étude, trois thèmes ont été identifiés à partir des explications des résultats antérieurs concernant le risque accru de psychose chez les minorités: le racisme institutionnel en psychiatrie; la psychiatrie en tant que discipline scientifique qui voit et traite tous les patients de manière égalitaire; et le locus social des taux élevés. Ceux-ci se traduisent par des discours entrelacés et parfois divergents, illustrant les tensions entre approches objectivistes et constructivistes, qui ont été façonnées par le contexte, reflétant dynamiques sociétales du pouvoir.

Ces divergences ont peut-être empêché un changement visant à réduire les taux de psychose et à améliorer les soins apportés aux minorités. La deuxième étude a démontré que les politiques de soutien aux migrants et les taux plus élevés de maisons occupées par leur propriétaire étaient associés à une incidence plus faible, et les taux élevés de chômage et de personnes vivant seules étaient associés à une incidence plus élevée de psychose. Ces variables expliquaient en partie le risque de psychose chez les minorités. L’étude III a permis d'identifier cinq thèmes: les espaces et les sociétés d'oppression; rien à quoi se raccrocher; maltraités, invisibles ou mal perçus; espaces de liberté, de connexion et de sécurité; et guérison et bien-être. Les participants (en particulier ceux issus de minorités) ont décrit avoir traversé des environnements oppressifs, liés à des expériences de précarité, isolement et maltraitance. Les espaces de liberté, connexion et inclusion ont été décrits comme facilitant la guérison et le bien-être. Dans l’étude IV, quatre thèmes ont été identifiés: faire face à l'adversité; être à l'écart du monde; (re)construire une structure et un sens; et le cellphilming comme possibilité et connexion, en fonction des récits des participants sur leur contexte, leurs expériences et la cause de leur état. Ces résultats soulignent la pertinence des approches critiques et de la prise en compte du contexte à différents niveaux et perspectives, pour mieux comprendre les déterminants socio-structurels de la psychose. L’ensemble de ces résultats se centre sur des aspects concrets susceptibles d'améliorer la santé mentale de différents groupes, tout en s'inscrivant dans une mission plus large de recherche de l'équité et de la justice sociale dans la société et la psychiatrie.

Acknowledgements

First and foremost, I would like to thank my supervisor, Dr. Srividya Iyer. She supported me throughout these years in every possible way, both as a mentor and a friend. Considering that this journey had a rough start due to COVID restrictions, I am not sure I would have had the strength to persevere if it was not for her. I was deeply inspired by her brightness, kindness, relentless curiosity, love and dedication to research, and by how she brilliantly balances critical thinking with pragmatic, grounded and meaningful research work. I am so thankful to Drs. Els van der Ven, Manuela Ferrari, Laurence Kirmayer, Amal Abdel-Baki and Eric Jarvis for so generously sharing their time and knowledge, providing guidance, encouragement and support towards the work done during my doctoral years and my growth as a researcher. I was so lucky to have them as mentors. Knowing that people with their integrity and values occupy leadership roles in academia and psychiatry makes me hopeful about the future, especially during these challenging times.

I would like to thank all the Youth Mental Health Collective team. Each of you are inspiring in so many ways and I could not imagine a better research environment to be immersed in than this vibrant group of bright, generous and kind-hearted people. Specifically, I would like to thank Aarati, Sally, Navdeep, Nikki, Kevin, Kathleen, Ruben, Tovah, Giuseppe, Neha, Daniel, Nora and Elissa for their support with my research and for being such good mentors, colleagues and friends. I would also like to thank all participants that enrolled in my research project. They took time and engaged in deep (and difficult) reflections out of goodwill, because they believed in the project and wanted to help. This is extremely generous and should never be taken for granted. Thank you to the clinical and research teams where my qualitative project was implemented. It would not have been possible without their support. Being able to work with these teams and see how beautifully they cooperate and connect research and clinical work was truly inspiring.

I would like to also acknowledge the support of my friends and family. Thank you Sofia, Filipa, Vera, Catarina, João, João, Francesca, Pedro, Sérgio, Isa and Teresa, for the times we exchanged ideas and reflections about psychiatry and academia or for when you simply listened attentively when I needed to think aloud about my research. You kept me grounded and connected to the real world when I travelled too far in my own head. Thank you, Sarah and Sarah, for being the funniest office mates. We shared many laughs and have been there for each other through joyful and difficult times. Thank you, Caroline, Katherine and Eleni, for being the kindest colleagues and friends. Thank you António, for pushing me to keep doing music and playing live, even when I was so self-conscious about it. Thank you, Ana, for always being an inspiration on how to juggle between things while still being able to enjoy the process, by keeping connected to what matters the most. For all my friends, the time we spent together for walks, hikes, dinner parties, picnics and concerts during these years was essential for my own mental health, and I will forever cherish those moments. I would like to thank my parents, Jorge and Alcídia, and my aunts Regina and Célia and uncles Jorge and José. You were the ones who taught me to be a hard worker, a critical thinker, and a dreamer. You always supported my choices even when it meant being apart for a while. Finally, thank you Mark for being such a wonderful partner and such a calm force of nature. You were my family, my best friend and my greatest pillar throughout these years and I will never forget how you let go of everything just to follow me and my dreams.

Contributions of authors

This thesis comprises four published manuscripts, of which I, Salomé Xavier, am the first author. I was responsible for the design, implementation data analysis, interpretation and writing of each of these manuscripts, which are based on research projects in which I took a leading role, supervised by Dr. Srividya Iyer and the remaining members of my advisory committee, and working in collaboration with additional co-authors.

Manuscript I. Reflections on the explanations of higher psychosis rates among migrant and ethnic minority populations: a critical discourse analysis

Authors: **Salomé M. Xavier** and Srividya N. Iyer

This manuscript was published in *Transcultural Psychiatry,* in April 2025. DOI: 10.1177/13634615251326020. This study was conceptualized and designed in close collaboration with my supervisor, Dr. Srividya Iyer, who is a co-author. We identified several different discursive interpretations regarding the findings of higher risk of psychosis among ethno-racially minoritized populations and considered pertinent to explore this issue through a critical lens that highlights the discourses underpinning interpretative repertoires. Database searches, analysis, interpretation and manuscript writing were conducted by me, through an iterative process that was regularly supervised by Dr. Iyer, who supported the interpretation of results, reviewed and edited the manuscript.

Manuscript II. Migrant integration policies, regional social disadvantage, ethnicity and psychosis risk: Findings from the EU-GEI study

Authors: **Salome M. Xavier**, Hannah E. Jongsma, Charlotte Gayer-Anderson, Diego Quattrone, Sophie Blackmore, Ilaria Tarricone, Pierre-Michel Llorca, Eva Velthorst, Robin M. Murray, Peter B. Jones, James B. Kirkbride, Craig Morgan, Jean-Paul Selten, Els van der Ven, Srividya N. Iyer

This manuscript was published in *Social Sciences and Medicine – Mental Health*. DOI: 10.1016/j.ssmmh.2025.100530. This study was conceptualized and designed by me, Dr. Srividya Iyer and Dr. Els van der Ven, and used previously collected incidence data from a multinational study (the EUropean network of national schizophrenia networks studying Gene-Environment Interactions – EU-GEI). We conceived this follow-up study using the original incidence database, pertaining to five European countries (France, United Kingdom, Spain, Italy and the Netherlands), to study the impact of area-level variables pertaining to national policies to support immigrants and regional measures of social deprivation and fragmentation. Dr. Iyer and Dr. van der Ven also supervised the analysis, collaborated with me on the interpretation of results, and reviewed and edited the manuscript. Sophie Blackmore, at the time a master's student under the supervision of Dr. van der Ven at Free University of Amsterdam, supported me in data analysis and provided feedback on the final manuscript. Finally, several members of the EU-GEI group were also included as co-authors of this manuscript (Hannah Jongsma, Charlotte Gayer-Anderson, Diego Quattrone, Ilaria Tarricone, Pierre-Michel Llorca, Eva Velthorst, Robin Murray, Peter Jones, James Kirkbride, Craig Morgan, and Jean-Paul Selten). All of them have contributed by reviewing and making suggestions to the initial research proposal, as well as reviewing and editing the final version of this manuscript.

Manuscript III. Experiences and socio-environmental contexts in the lead-up to psychosis: a qualitative analysis of the narratives of persons with psychosis from different ethnic, racial and immigrant backgrounds

Authors: **Salomé M. Xavier**, Adrianne Both, Els van der Ven, Manuela Ferrari, Amal Abdel-Baki, Nicole van den Bogerd, Imke Lemmers-Jansen, Srividya N. Iyer

This manuscript was published in *Frontiers in Psychiatry*. DOI: 10.3389/fpsyt.2025.1602468. This project was conceived primarily by me and Dr. Srividya Iyer, in close collaboration with Dr. Els van der Ven and Dr. Manuela Ferrari. I led the implementation of this project (including protocol design, ethics submission, recruitment, and data collection – through in-depth interviews), analysis, interpretation of results, and manuscript preparation. Dr. Iyer, as well as Drs. van der Ven and Ferrari, closely supervised all these research steps. Adrianne Both, a doctoral student at Free University of Amsterdam, collaborated with me in the initial stages of data analysis and later, in the interpretation of results, reviewing and editing the final manuscript. Dr. Nicole van Bogerd and Dr. Imke Lemmers-Jansen provided input towards the final interview topic guide, supported the interpretation of the results and reviewed and edited the final manuscript. Dr. Amal Abdel-Baki supported the project implementation at one of the study sites and further collaborated by reviewing and editing the final manuscript.

Manuscript IV. Narratives in context: a cellphilm study on the social experiences of persons with psychosis with different ethnic, racial and migrant backgrounds

Authors: **Salomé M. Xavier**, Adrianne Both, Els van der Ven, Manuela Ferrari, Amal Abdel-Baki, Susanne Serres, Nicole van den Bogerd, Imke Lemmers-Jansen, Srividya N. Iyer

This manuscript has been published in *Arts & Health*. DOI: 10.1080/17533015.2025.2551538. The larger research project underpinning this manuscript was also the basis for manuscript III. As such, the roles taken by all authors overlap with respect to study design and implementation, which in this case included the roles of conducting cellphilm workshops and moderating group discussions. Similarly to paper III, I took the lead in conducting the implementation activities, supervised by Drs. Iyer, van der Ven and Ferrari. The same applied to data analysis and results' interpretation, as well as manuscript writing. Adrianne Both, Dr. Nicole van Bogerd, Dr. Imke Lemmers-Jansen and Susanne Serres provided feedback regarding the study design, and collaborated with results' interpretation, reviewed and edited the final manuscript. Dr. Amal Abdel-Baki supported the implementation of the research project (as the lead PI for one of the main recruitment sites) and reviewed and edited the final manuscript.

Contributions to original knowledge

This dissertation includes four manuscripts, all of which have been published in peer-reviewed journals. Each manuscript contributes with novel insights to the discussion on the topics of psychosis, immigration, ethnicity, and social determinants. More specifically, their common point of departure is the finding that rates of psychosis are higher among some ethno-racially minoritized populations, across several countries. Altogether, they contribute to the field by shifting the focus from a third person, individual-level lens to a critical and broader perspective, encompassing a greater emphasis on the broader social environment and first-person subjectivity.

I. The findings from previous studies looking at psychosis risk among immigrants and ethnic minorities have been previously collated, and at a first glance the explanation for it seems rather consensual in the field of epidemiology, as most studies have linked it to the impact of social determinants. However, a closer look to the literature revealed great controversy throughout the years, fuelled by distinct interpretations of these findings and, in a wider sense, different views on the foundations of psychiatric diagnosis and of psychiatry as a discipline. By conducting a critical discourse analysis looking at editorials, letters and commentaries around these findings, we were able to examine several related discursive repertoires, as well as their contextual social, historical and political underpinnings. By describing different perspectives on the same finding in a single manuscript, as well as their wider contexts and the ways in which they influenced each other, we were uniquely placed to identify research gaps and caveats not previously identified or insufficiently emphasized in previous papers.

II. Building from the findings of Manuscript I, we identified an important knowledge gap and locus of critique in previous epidemiological studies. These have mostly focused on individual-level exposures and have less often analysed the impact of the social environment itself, particularly with respect to macro-level exposures. By focusing on modifiable societal-level variables and considering their differential rates for minority and non-minority populations, new opportunities for intervention may arise. Further, it can contribute to shifting the focus from the individual, which may have inadvertently contributed to victim blaming in the past. As such, in Manuscript II, we assess the impact of several area-level variables at the country-level (migrant integration policies) and regional-level (regional markers of social deprivation and fragmentation) on psychosis incidence, across several population groups, in five European countries. Ours is the first study looking at overall policies supporting immigrants and markers of social deprivation amongst immigrants, and their impact on psychosis incidence.

III. Another aspect identified as a gap from previous studies is the fact that there has been very little attention to first person experiences and perspectives before, even if what is at stake are precisely patients' very own experiences and contexts. Innovatively, we conducted a study in which young persons with psychosis stemming from different backgrounds (both majority and ethno-racially minoritized populations) retrospectively recollected experiences of the social environment prior to their onset of psychosis. Conducting this study is a timely response to previous calls to investigate the contribution of social determinants qualitatively, notably as part of the quest for a better understanding and broader picture regarding the findings of higher risk of psychosis among ethno-racially minoritized populations. Additionally, we explored this in two different ways, through interviews (Manuscript III) and an arts-based study – cellphilming (Manuscript IV). To our knowledge, no previous studies have investigated qualitatively the retrospective (before illness onset) experiences and perspectives of young persons with psychosis with a focus on social determinants. Moreover, ours is the first study using cellphilming as a method to explore these issues among a population of service-users with psychosis.

Statement of support

My doctoral studies have been supported by a doctoral fellowship from *Fundação para a Ciência e Tecnologia* (FCT) (SFRH/BD/143544/2019). The implementation of the study in the background of Manuscripts III and IV has been supported by a Seed Grant from the Society for the Study of Psychiatry and Culture (SSPC). The studies in this thesis were also supported by a Canadian Institutes of Health Research (CIHR) Foundation grant (Project # 143333, Principal Investigator: Iyer), and by Iyer's CIHR Canada Research Chair in Youth, Mental Health and Learning Health Systems, as well as a salary award Iyer received earlier from *Fonds de Recherche Québec Santé*.

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Chapter 1. Introduction

1.1. Literature Review

1.1.1. Psychosis and Early intervention services

The term “psychosis” has undergone many definitions across time (Beer, 1996), reflecting contemporaneous historical, social, political and cultural contexts. As such, the definition of psychosis has closely followed historical trends in defining what it means to be mentally ill, or “mad”, concepts that have been shaped by a larger notion of normalcy, dictated by society (Foucault, 2013). In current times, in the context of academia and clinical practice, the term “psychosis” is mostly used to refer to a syndrome characterized by psychotic symptoms, such as hallucinations, delusions, and disorganization of thought (Liddle, 2024). It is also commonly used to refer loosely to all diagnostic categories that include psychotic symptoms under their symptomatic picture, termed as psychotic disorders (Gaebel & Zielasek, 2015). These include most nosological categories under the schizophrenia spectrum, as well as some affective disorders, such as bipolar disorder type I and depression with psychotic features. Importantly, besides the core symptoms of hallucinations, delusions and disorganized thought, those who experience psychosis may report, at some point after illness onset, mood symptoms (depression, elation), anxiety, cognitive symptoms (e.g.: problems with abstract reasoning, problem solving, attention and memory) and negative symptoms (e.g.: blunted affect, apathy, anhedonia, social withdrawal, and poverty of speech) (Liddle, 2024). In a wider sense, the term “psychosis” has also been used as an identifier of severe mental disorders, the experience of an alternative reality or a radical detachment from a putative shared theoretical (cartesian) and pragmatic (common sense) rationality (Parnas et al., 2010).

The focus on psychosis as a transdiagnostic syndrome is relatively recent and has been put forward by two interrelated important movements taking place over the last three decades. The first pertains to a dimensional approach to psychiatric diagnosis, as an alternative (or an addition) to previous categorical classifications focusing on discrete entities (Allardyce et al., 2007; Helzer et al., 2006). The aim of dimensional classification systems is to provide a framework that is more attuned with evidence reporting non-pathological (or attenuated) manifestations of what would otherwise be termed as psychiatric symptoms, as well as shared aetiology, symptomatology and treatment response between nosological categories previously described as discrete. Using psychotic disorders as an example, evidence supporting a dimensional approach includes studies reporting psychotic symptoms and sub-clinical/attenuated psychotic manifestations among non-clinical populations, as well as overlapping risk and protective factors, neurobiological correlates, manifestation (particularly in early stages), and treatment response between different psychotic disorders including, for instance, bipolar disorder type I and schizophrenia (Guloksuz & van Os, 2018).

Second, aligned with this approach, the development of early intervention services for psychosis that took place over the last three decades brought an enormous visibility to psychosis as the field of study and of clinical practice that we know today (Commission, 2012; Iyer et al., 2015; McGorry, 2015). Seminal evidence supporting the development and implementation of early intervention services for psychosis included studies reporting a deleterious impact of long periods of psychotic symptoms without treatment (commonly designated as the duration of untreated psychosis, or DUP) and the identification of a critical period, between two and five years after psychosis onset, in which intervention is more likely to shape future prognosis (Birchwood et al., 1998; Harrison et al., 2001; Howes et al., 2021). Early intervention services for psychosis have been said to have contributed to a major philosophical shift in the field of psychosis throughout the last two decades, and Canada has been at the forefront of early intervention services development and research (Iyer et al., 2015). The idea that patients with psychosis would necessarily face poor prospects has been challenged by this new service model that emphasises intervening early and promoting easy access, engagement and family involvement, while providing recovery-focused, person-centered and typically youth-oriented stage-specific care. Early intervention services for psychosis have been welcomed by service-users (Daley et al., 2020), and reported promising results in terms of several outcomes including treatment adherence, number of psychiatric hospitalizations, work and school involvement, and severity of psychotic symptoms. This intervention model has been reproduced in different parts of the world, extending recently to a broader transdiagnostic scope to cover the broader spectrum of youth mental health problems (Malla et al., 2016).

1.1.2. Incidence, prevalence, mortality and morbidity of psychotic disorders

As per the latest systematic reviews, psychotic disorders have a pooled incidence of 26.6 per 100 000 person-years, (Jongsma et al., 2019), and a median point and lifetime prevalence of 3.89 and 7.49 per 1000 persons, respectively (Moreno-Küstner et al., 2018), with men being at higher risk of non-affective psychosis, compared to women (Jongsma et al., 2019). Despite its low incidence and prevalence, psychotic disorders contribute significantly to the global burden of disease (Whiteford et al., 2015), notably due to their early onset and frequent chronic or intermittent course (Lally et al., 2017). The onset of psychosis typically takes place during adolescence and early adulthood, and depending on the intensity, duration and frequency of symptoms, it can have a tremendous impact on everyday life and overall well-being, namely by affecting well-being, education, work and interpersonal relationships (Casetta et al., 2024). The experience of psychosis can be terrifying and difficult to explain to others. Often, persons with psychosis feel misunderstood and stigmatized, which contributes to great isolation and loneliness (Alyahya et al., 2022; Jones & Shattell, 2016).

The morbidity of psychotic disorders is further compounded by poor physical health (Foley & Morley, 2011; Leucht et al., 2007) and social disadvantage (housing, employment, socio-economic conditions, etc.) which can both precede and be a consequence of psychosis (Revier et al., 2015). Mortality, mostly attributable to cardiometabolic causes and suicide (especially during the early stages of illness) (Pompili et al., 2011; Sicotte et al., 2021), is higher for those with psychotic disorders compared to the general population. Notably, this gap has widened over the years, despite overall increased in life expectancy (Hjorthøj et al., 2017; Saha et al., 2007). Contrarily to what was suggested in the past, incidence rates of psychotic disorders vary greatly geographically, as does the more detailed epidemiological picture of psychosis (age of onset, differences between genders, duration of psychosis, percentage of affective/non-affective psychosis), for reasons that go beyond heterogeneity in studies' methodology (Jongsma et al., 2018; McGrath et al., 2004; Morgan et al., 2023; Selten et al., 2020). This highlights the relevance of local contexts in shaping psychosis incidence.

1.1.3. Etiology of psychotic disorders

The etiology of psychosis is known to be multifactorial and has often been framed under a stress-vulnerability model (Fusar-Poli et al., 2017; Pruessner et al., 2017; Zubin & Spring, 1977), which views genetic and environmental factors, often combined at different levels and over the life course, as shaping the likelihood of the development of psychosis (Vargas & Mittal, 2022). Importantly, these factors (either genetic or environmental) are neither necessary nor sufficient for the development of psychosis. These are also not exclusive to psychotic disorders as they may also impact risk for other mental disorders and sub-clinical psychotic experiences (Casetta et al., 2024).

With respect to genetic risk, there is now consistent evidence from genome-wide association studies (GWAS) that multiple genes are involved, each contributing with a small effect towards greater liability to psychosis (Horwitz et al., 2019; Ripke et al., 2020). In the specific case of schizophrenia, it was found that polygenic risk scores could only explain 7% of the variance in case-control studies, and that heritability attributable to genetic variants (SNPs, Single Nucleotide Polymorphisms) is of approximately of 24%, a much lower estimate than what had been reported previously in family and twin studies (64 to 81%) (Gottesman et al., 2010; Hilker et al., 2018). Even though one explanation could be that GWAS so far may not have been powerful enough to detect all relevant variants, these findings strongly suggest that environmental factors, either isolated or in interaction with genetic factors, play a central role.

Individual level socio-environmental risk factors that have been implicated in the etiology of psychosis include pregnancy and perinatal complications (e.g.: maternal infection or malnutrition and complications during labor) (Davies et al., 2020), advanced paternal age (Malaspina et al., 2002), early childhood adversities (incl. emotional, psychological, physical and sexual abuse, neglect and bullying) (Varese et al., 2012), cannabis use (especially if continued and from an early age) (Marconi et al., 2016), discrimination (Pearce et al., 2019), migration (Bourque et al., 2011; Selten et al., 2020), life events (Beards et al., 2013), and other forms of social adversity, such as low (early life or parental) socioeconomic status, unemployment and social isolation (Castle et al., 1993; Gayer-Anderson & Morgan, 2013; Reininghaus et al., 2008; Stilo et al., 2017). At a wider scale, being born, raised or living in urban (vs rural) centers (Fett et al., 2019; Krabbendam et al., 2021; Vassos et al., 2012), and living in socio-materially deprived, socially disorganized or fragmented areas (Allardyce et al., 2005; Burns & Esterhuizen, 2008; James et al., 2025; Jongsma et al., 2018; Kirkbride et al., 2014; Veling et al., 2015) has also been associated with higher incidence of psychosis. Importantly, concepts of social deprivation, disorganization and fragmentation have been operationalized in various ways in different studies and some of its components sometimes overlap. These typically contemplate different combinations of area-level measures, including urban density, residential mobility, voter turnout, unemployment, average income, income inequality, housing quality, living arrangements, educational level, crime rates, ethnic density and ethnic diversity. Overall, environmental exposures have been found to have cumulative and synergistic effects in increasing the risk to develop psychosis and sub-clinical psychotic symptoms (Aas et al., 2023; Flinn et al., 2025; Morgan et al., 2014; Pries et al., 2018; Stilo et al., 2017).

1.1.4. First-person experiences of psychosis and perspectives on psychosis

The experience of psychosis has been described as very difficult to explain to others or to fit into diagnosis labels or a conventional illness description. This may lead to a general feeling of loneliness and isolation, of being different and not understood by others, including close relatives and clinical staff (Jones & Shattell, 2016; Kinderman et al., 2006). While positive experiences have been described during and as a result of psychosis (Jordan et al., 2017), several dimensions of loss have been highlighted in previously collated evidence. These may pertain to the connection with the outside world overall (loss of touch with a consensual reality and related feelings of disconnection, fear, confusion and mistrust), with oneself (loss of self-esteem, notably due to internalized stigma and guilt, loss of hope and sense of possibility) or with significant others (loss of close relationships, namely romantic ones) (Boydell et al., 2010; McCarthy-Jones et al., 2013; Noiriel et al., 2020). As part of a process of meaning making, interviewed persons with psychosis have suggested different explanations for the development of psychosis, often in various combinations, which ranged from a broad focus on society/environment or spiritual causes to more concrete references to psycho-social stress (e.g.: in the context of relationships, work and school), experiences of abuse and trauma, loneliness and drug-use. Less often, heritability, personality traits ("sensitivity"), genetics and neurotransmitter imbalances have also been pointed out as potential causes, among others (Barker, 2001; Holzinger et al., 2003; McCarthy-Jones et al., 2013; Nixon et al., 2010). Importantly, in previous studies comparing explanatory models of psychosis between different stakeholders, it was found that service-users tend to put more emphasis on psychosocial, religious, spiritual and de-pathologizing models, compared to psychiatrists and nurses, who tend to give prominence to biological explanatory models. This has important consequences not only with respect to issues of trust and alliance in the therapeutic relationship, but also pertaining to communication, and adequate understanding and assessment of subjective experience in the clinical encounter (Colombo et al., 2003; Harland et al., 2009; Rosenthal Oren et al., 2021).

1.1.5. Ethnicity, migration and psychosis

Over the last decades, we have witnessed a growing interest in the research of risk and protective factors of psychosis, as an attempt to shed light on its still-unravelled etiological mechanisms and thus inform prevention and clinical interventions. Although clear aetiology and illness mechanisms are still to be determined, recent accumulation of evidence and theory suggest that complex and multi-level interactions between genetic and environmental factors could be responsible for the onset of psychosis (Van Os et al., 2010). Importantly, even though different probable causes for psychosis have been identified, many of them at a socio-environmental level, none has been found to be necessary nor sufficient to fully explain psychosis development.

Strikingly, within the literature looking at risk factors for psychosis, one of the most consistently reported findings (and for which there is more convincing evidence) is that psychosis rates are higher for some minoritized populations (Bourque et al., 2011; McGrath et al., 2004; Radua et al., 2018; Selten et al., 2020). Specifically, immigrants and their descendants have been found to be at higher risk to be diagnosed with psychosis compared to the majority population, a finding that has been replicated in several countries across the Global North (Bourque et al., 2011; McGrath et al., 2004; Selten et al., 2020). The most recent meta-analysis reported that immigrants have a pooled relative risk of 2.13 (95% CI 1.99–2.27) and 2.94 (95% CI 2.28–3.79) of developing non-affective and affective psychosis, respectively. This study also reported that, in studies where data was available for both first and second generation immigrants, risk of psychosis did not differ significantly among them, and that risk was higher for racialized minorities and for individuals migrating from the Global South to the Global North (Selten et al., 2020), as is the case for Moroccans and Surinamese in the Netherlands (Selten et al., 2001), and for Black-African and Black-Caribbeans in the UK (Termorshuizen et al., 2022; Tortelli et al., 2015). Several explanations for these findings have been investigated and many have been ruled out over the last decades. For instance, there is no evidence that differences across population groups in terms of genetic or neurodevelopmental risk, perinatal complications or substance use explain the reported risk disparities (Eagles, 1991; Morgan et al., 2010). Moreover, if and when some of these aspects play a role (e.g., with respect to perinatal complications), what is critical is that they reflect issues of structural inequity, shaping how environmental exposures known to increase psychosis risk disproportionally impact some ethno-racially minoritized groups (Anglin et al., 2021). It has been reported that cannabis plays a role in mediating the impact of aspects of social disadvantage on risk of psychosis (Trotta et al., 2023). Moreover, recent evidence also suggests that cannabis use is more prevalent in areas of higher social deprivation, therefore confounding the association between the latter and risk of psychosis (Brink et al., 2024). On a particular note, previous evidence (although limited) did not find a higher prevalence of use amongst ethno-racially minoritized groups for whom risk of psychosis was reportedly higher (Cantwell et al., 1999; McGuire et al., 1995; Veen et al., 2002). Selective migration as a possible explanation has also been discarded by previous studies. In fact, if anything, migrants' health at arrival to the host country has been found as good as (or better) than the health of those belonging to the majority population, probably due to entry restrictions related to baseline health status and to the challenges associated with the migration process itself, making it harder for those who may already be experiencing poor health to succeed in such a demanding task (Rechel et al., 2013; Vang et al., 2015). Importantly too, reports of higher rates of psychosis amongst some ethno-racially minoritized groups were reported to persist even after adjusting for age, sex and socio-economic status (Kirkbride et al., 2008; Kirkbride et al., 2017).

What seems to contribute to the development of psychotic disorders in higher rates among ethno-racially minoritized populations is the fact that they are more often exposed to a substantial number of adversity experiences known to be determinants of mental disorders (Allen et al., 2014; Kirkbride et al., 2024; Lund et al., 2018) and, more specifically, psychotic disorders (Jester et al., 2023). These include individual-level experiences of parental separation or family breakdown and other forms of childhood adversity and trauma (Brandt et al., 2019; Madigan et al., 2023; Stanton et al., 2020; Varese et al., 2012), social and economic disadvantage (e.g.: housing, education, and financial instability) (Jongsma, Gayer-Anderson, et al., 2021; Morgan et al., 2008; Stilo et al., 2017), discrimination (Bardol et al., 2020; Pearce et al., 2019), and marginalisation (Bhugra, 2004; McIntyre et al., 2016; Reininghaus et al., 2010; Veling et al., 2010). It has been posited that the process of migration itself (Tarricone et al., 2021), along with aspects of linguistic and cultural distance (Jongsma, Gayer-Anderson, et al., 2021), as well as acculturation stress and cultural incongruency (Bhugra, 2004; DeVylder et al., 2013) could play an important role for first-generation migrants. Pre-migration experiences have also been considered as a noteworthy area of exploration when trying to explain higher rates of psychosis among migrants considering that some studies have identified a higher risk among refugees, compared to non-refugee migrants (Brandt et al., 2019). However, the fact that risk is higher among those who migrate at an early age (Anderson & Edwards, 2020), persisting (and at times being even higher) for further generations, highlights the relevance of post-migration experiences.

Importantly, most epidemiological studies exploring the issue of higher psychosis rates among ethno-racially minoritized groups have been conducted in a few northern European countries. Therefore, it remains unclear whether these findings replicate in different parts of the world. For instance, in Canada, the three studies assessing psychosis incidence within migrant and ethnic minority populations have reported nuanced results. One historical retrospective study documented higher rates of schizophrenia for European migrants in the early 20th century (Smith et al., 2006), and a cohort study from Ontario reported higher rates of psychotic disorders during the early 2000s for some refugee groups (East African and South Asian) and first-generation immigrants from the Caribbean and Bermuda. In the same study, migrants from Europe and East Asia were reported to have lower psychosis rates than other immigrant groups and the majority population (Anderson, Cheng, et al., 2015). Finally, in a more recently published paper from British Columbia, children of immigrants were reported to have reduced risk for psychosis, compared to the majority population (Magee et al., 2022). Moreover, at a larger scale, there is a great variation in relative risk of psychosis not only according to the ethnic minorities/immigrant groups being considered but also depending on their countries of residence (Bourque et al., 2011; Selten et al., 2020). This highlights the relevance of taking into account geographical, social, cultural and political contexts when interpreting findings of psychosis risk across different population groups.

Besides individual-level exposures, socio-environmental exposures at the macro- and meso-level (e.g.: regional social deprivation and social fragmentation, inequality, societal values and policies) also impact population groups differently and may also help explain between-group variation (Das-Munshi et al., 2012) in psychosis rates. For instance, ethno-racially minoritized populations have been historically placed in segregated areas with limited access to resources and high levels of poverty, crime and violence (Anglin, 2023). Additionally, studies on ethnic density have shown that living in areas where one's own ethnic group comprises a small proportion of the population is associated with higher psychosis risk for some populations minoritized by immigrant status, race or ethnicity (Baker et al., 2020; Bécares et al., 2018; Schofield et al., 2017; Veling et al., 2008). The investigation of structural factors as exposures contributing to risk of psychosis, and more specifically, to higher risk among ethno-racially minoritized communities, is still an underexplored area of research. However, emphasizing the role of systems and societal structures in psychosis risk research may enable the development of interventions targeting primary causes at the level of the social environment, while straying away from an individual focus that could inadvertently place the blame on individuals.

Building from these findings, a socio-developmental model for psychosis has been proposed by Morgan and Hutchinson (Morgan & Hutchinson, 2010), suggesting that cumulative experiences of social disadvantage (and threat) might impact brain development at critical times, interacting with genetic factors and increasing stress sensitivity, thus creating a liability for psychosis that could, by further accumulation of stressors, conduce to the expression of psychotic symptoms (Tortelli et al., 2018) and (eventually) a full-blown psychotic episode (Morgan & Hutchinson, 2010). Other authors, building from the work of Marmot (Marmot, 2004, 2015) on the impact of social determinants (and more specifically of perceived lower social position and inequality) on (mental) health have emphasized the experience of disempowerment and lack of control over one's life, identity and narrative as central to understand heightened psychosis risk among ethnic minorities (Jongsma, Gayer-Anderson, et al., 2021; Jongsma, Karlsen, et al., 2021). Relatedly, a mismatch between expectations and achievements (Reininghaus et al., 2008; Tarricone et al., 2021), the experience of social defeat (the negative experience of being excluded by the majority group) (Selten & Cantor-Graae, 2005), as well as the experience of social marginalization, threat, disidentification and mistrust (McIntyre et al., 2016) have also been suggested as particularly relevant experiences to explain these findings. Several plausible mechanisms that link experiences of social adversity, disadvantage, disempowerment, defeat, exclusion, trauma and discrimination to psychotic experiences have also been suggested by studies in the fields of cognitive science and neurobiology. These include the development of cognitive biases (e.g.: jumping to conclusions, externalization), stemming from negative cognitive schemas about self (belief in self-susceptibility to threat, vulnerability and worthlessness) and others (belief in the dangerousness, controlling or rejecting nature of others), emotional distress/dysregulation and dissociation, and social isolation (Alameda et al., 2019; Garety et al., 2001; Kramer et al., 2014). Some neurobiological correlates to these cognitive mechanisms include a hyper-activation of the hypothalamic-pituitary-adrenal axis and a higher sensitivity of the mesolimbic dopaminergic pathway (Akdeniz, Tost, & Meyer-Lindenberg, 2014; Akdeniz, Tost, Streit, et al., 2014; Alameda et al., 2019; Egerton et al., 2017). The mentioned mechanisms provide some possible models on how chronic stress, resulting from prolonged exposures to disadvantage, disempowerment and marginalization, could ultimately lead to the experience of psychosis.

Importantly, beyond influencing the development of psychosis, social determinants also influence illness manifestation, engagement with services, and other longitudinal outcomes among ethno-racially minoritized groups. While experiences differ across sub-groups and findings have sometimes been inconsistent, in general, ethnic minorities (or some ethnic minority groups) tend to use mental health services later in the illness course and less frequently than the majority population; are more likely to access services through the emergency room and police involvement; are more frequently forcibly hospitalized and may also disengage earlier and more frequently from treatment (Anderson, Flora, et al., 2015; Jarvis et al., 2005; Flora et al., 2017; Ouellet-Plamondon et al., 2015) compared to the majority ethnic group. Aspects compromising access and engagement with services may include a lack of effective information about services in the community, difficulty navigating services, previous negative healthcare experiences, inadequacy of care and stigma (Thomson et al., 2015). Furthermore, some migrant and ethnic minority populations have also been reported to face worse functional and clinical outcomes than their counterparts, particularly in the same settings where higher risk for developing psychosis was also reported (Golay et al., 2019; Maguire et al., 2020; Morgan et al., 2017). These findings suggest that some of the same factors that may confer a higher risk for being diagnosed with psychosis continue to influence migrant and minority populations' course of illness and overall experiences with mental healthcare services. Clearly, mental healthcare institutions may struggle to provide adequate care if they reproduce and/or are shaped by the very social inequalities and exclusions that put migrants and minorities at higher risk.

Critiques of previous research

An important critique that has been made with respect to previous epidemiological studies on psychosis risk among minoritized populations is that the terms immigrant, racial and ethnic minority have been used interchangeably in the literature, often paying little attention to what these concepts might mean in terms of individuals' contexts and experiences, challenging the interpretation of previous findings (Cantor-Graae & Selten, 2005; Selten et al., 2020). Moreover, in the context of research, individuals with highly diverse backgrounds frequently need to be grouped in broad ethnic categories for the methodological expediencies of working with, for instance, small sample sizes. Such monolithization inevitably results in the glossing over of important differences between minority groups. Overall, the use of these classifications as fixed categories has been challenged and criticized as reductive (Jongsma, Karlsen, et al., 2021). What confers risk for developing psychosis is not ethnicity, race or migrant status per se, but rather the concrete implications of these social attributions for individuals and their communities. Although different meanings have been attributed to these terms, ethnicity is understood as a form of social categorization that may also correspond to a self-ascribed identification, grouping together individuals with a common geographic origin or cultural (e.g.: language, systems of belief, values or practices), religious or historical background (Banks, 2003). Ethnic groupings and their attendant implications are commonly (although mistakenly) ascribed exclusively to ethnic minorities and outgroups, even though majority groups represent their own cultural perspectives, and their products (including psychiatry) are also culturally crafted (Kirmayer, 2007). Race is another form of group identification, primarily attributed by others, based on superficial physical characteristics. Although the significance of these physical, or racial, characteristics has been discredited (Gravlee, 2009; Koenig et al., 2008), the association of race with biological/essential characteristics of individuals continues to influence social dynamics of power, perpetuating politics of cleavage, conflict, overt racism and violence (Fredrickson, 2015). Naturally, this has serious consequences for racialized communities (Fernando, 2012). It bears to note that the ways in which social categorizations of ethnicity and race are intertwined with other individual and group identities are complex. Identities are multiple, intersecting, shifting, and how we make use of them depends largely on context (Hermans, 2012). However, the privilege of identity plurality and complexity is often denied to minoritized communities, who are often seen, described and treated as a homogenous group, as part of established dynamics of power that seek to maintain dominance ascribed to the majority population, through processes of othering, dehumanization, exclusion and segregation (Sen, 2007).

Another critique of previous studies pertains to issues of diagnosis attribution, and its accrued complexity in the cross-cultural context. The relevance of taking culture into consideration in clinical practice in general (and diagnosis attribution in particular) relates to the ways in which it shapes experience. Culture, nowadays conceptualized as a dynamic entity, an overarching milieu existing both in the external world and within every person (Hofstede, 1984), influences illness development, manifestations and explanatory models; coping mechanisms; help-seeking behaviours; treatment preferences; and recovery conceptualizations (Kirmayer, 2005; Whitley, 2016). Moreover, psychiatry and service providers have cultures of their own (Alegria et al., 2010), and their practices reflect very specific values, beliefs and preferences, which pertain to dominant societal groups. Culture and socio-historical contexts also underpin determinants of illness, as cultural demarcations stemming from social categorizations (such as race and ethnicity) and related moral attributions have long been related to social gradients and dynamics of power between and within societies (Kirmayer, 2012). Ignoring or underplaying the role of culture or attributing it only to the patient would compromise basic aspects of a therapeutic relationship, while risking replicating societal dynamics of prejudice and marginalization, the very forces that contribute to mental illness in the first place (Anglin et al., 2021).

Current psychiatric classification systems, although reflecting Western cultural concepts of personhood and normativity, espouse neutrality by assuming that diagnostic categories are linked to natural kinds. This is supported neither by evidence nor by clinical practice, which poses significant difficulties to clinicians trying to fit illness narratives into diagnostic categories. Naturally, this exercise is even more challenging (and potentially even more error-prone) when the patient comes from a different cultural background (Rousseau et al., 2005). Arriving at a diagnosis in the absence of contextual knowledge about a person’s culture, norms and beliefs is challenging and can even be harmful (Kleinman, 1987). In psychosis, for instance, phenomenological aspects that usually support or refine diagnoses, such as poverty of speech, disorganized thought, incongruent or flattened affect, disorders of the self and beliefs that defy cultural normativity (interpretable as delusions), are difficult to assess when there are cultural and language barriers. Particular note should also be made of the similitudes between the experiences around migration and settlement in the host country and the experience of psychosis. Persecutory beliefs, ideas of reference and feelings of estrangement and alienation associated with psychosis might be quite similar in quality to the feelings of marginalization and otherness that minority groups are likely to experience (Veling et al., 2016).

All in all, comparing rates of psychosis depends on reliable diagnosis in differently groups. However, due to the challenges described before, it has been suggested by several authors that misdiagnosis may play a role in the observed psychosis risk discrepancies between the majority population and migrant and ethnic minorities (Fernando, 2010, 2012; Metzl, 2010; Schwartz et al., 2019). This was corroborated by studies assessing diagnostic change when a culturally sensitive instrument was applied, suggesting an over-diagnosis of schizophrenia and an under diagnosis of mood disorders and PTSD (post- traumatic stress disorder) among these populations (Adeponle et al., 2012; Zandi et al., 2010). Narratives of trauma are pervasive in patients from socially disadvantaged backgrounds and may influence psychosis in direct and indirect ways (Rosen et al., 2017). Hallucinatory experiences occur in individuals with trauma histories (regardless of a psychotic disorder diagnosis), and PTSD symptoms can co-occur with psychotic symptoms (Stevens et al., 2017). This is not to say that a diagnosis of psychosis should be dismissed *a priori* in immigrant populations, but that care should be taken to understand psychotic symptoms in the context of personal and group narratives of trauma. In sum, misdiagnosis might result from the cultural shaping of psychiatric symptoms, diagnostic bias for racialized groups, and the cultural frames that shape psychiatry as a research and clinical field of knowledge (Gara et al., 2019; Gara et al., 2012; Jarvis, 2008). For instance, it has been argued that the description of experiences of racial discrimination could be misinterpreted as delusional, and that individuals belonging to racialized (especially Black) minorities could be more easily stereotyped as (potentially) violent by White clinicians (Neighbors et al., 1989). This would in turn increase the probability of a schizophrenia diagnosis among Black patients, due to existing stigmatized views of persons with schizophrenia as dangerous (Metzl, 2010). Moreover, in general, it has been posited that standardized instruments in psychiatry may not be appropriate to use with ethno-racially minoritized individuals (Neighbors et al., 2003; Olbert et al., 2018) and in cross-cultural contexts overall (Jarvis & Kirmayer, 2021; Kleinman, 1987; Kleinman et al., 1978). Many have argued that clinical assessment demands time, culturally appropriate tools (Lewis-Fernández et al., 2014; Lewis-Fernández & Kirmayer, 2019) and training in aspects of cultural humility, safety and competence (Brascoupé & Waters, 2009; Kirmayer et al., 2008; Sue, 2001; Tervalon & Murray-Garcia, 1998).

In spite of the complexities associated with exposure classification and diagnostic attributions in psychiatry, there is substantial support for elevated rates in some immigrant and ethnic minority populations and for the possibility that the exposure to social adversity is critical to the higher rates of psychotic disorders observed (Morgan et al., 2019). Additionally, it has been posited that solely attributing the findings of high rates to misdiagnosis could have the unintended effect of detracting attention from the different ways in which ethno-racially minoritized populations are impacted by intersecting systems of oppression and how these have an important effect on their (mental) health.

1.2. Research rationale, objectives and approach

As previously outlined, an increased risk for psychosis among immigrants and ethnic minorities has long been reported in the literature. Recent accumulation of evidence suggests that these findings should be interpreted in light of a socio-developmental pathway for psychosis that considers the ways in which different facets of social disadvantage intersect and accumulate throughout the life course for some individuals, in some contexts. Known social determinants of psychosis such as family breakdown, social and economic disadvantage, discrimination, social exclusion and marginalization are more likely to be experienced by some ethno-racially minoritized groups and have been consistently reported to partially explain the higher psychosis risk among these populations. However, the ways in which issues of psychosis, immigration, race and ethnicity have been conceptualized in academia and how the findings of high rates of psychosis diagnosis among ethno-racially minoritized communities have been interpreted are far from being consensual. Different discourses in this field should be framed in their specific contexts, acknowledging the weight exerted by dominant cultural frames and local power dynamics, as well as the perspectives that have been absent from the discussion. One of the critiques of previous evidence with respect to the topics of interest of this thesis is that studies have mostly focused on determinants operating at an individual level. However, it is important to note that there is a great variation in risk, depending not only on the ethnic minority/migrant group but also on the host country in consideration, highlighting the need to consider determinants operating at a larger, societal level. Although meso- and macro-level exposures (e.g.: pertaining to neighbourhoods or countries) are known to influence psychosis risk, they have been considerably less explored with respect to the finding of higher rates of psychosis among ethno-racially minoritized populations. Another aspect that has been highlighted by previous studies pertains to the difficulty of exploring and understanding the impact of the social, historical, political and cultural contexts on the subjective experience of different populations, due to its great complexity and nuance. Accordingly, there have been calls for qualitative studies to generate insight into the ways in which the social environment impacts the everyday lives and mental health of individuals who eventually develop psychosis (Dykxhoorn & Kirkbride, 2019). Moreover, even though this body of literature is concerned with first-person experience and contexts, participants' perspectives have rarely been sought, and their experiences have never been qualitatively explored with a specific focus on social determinants.

The studies that make part of this thesis aim to address the aforementioned gaps in the research on social determinants for psychosis among immigrant and ethnic minority populations by:

1) Reviewing and critically analysing the academic discourse on the topics of psychosis risk among immigrants and ethnic minorities.

2) Investigating the contribution of macro-level social factors (in particular of policies supporting immigrants) to risk of psychosis among immigrant and ethnic minority populations.

3) Exploring the subjective experiences and contexts prior to psychosis onset of individuals with different ethnic, racial and immigrant backgrounds.

4) Exploring the views of individuals with psychosis regarding psychosis causality and, more specifically, the higher risk for psychosis attributed to immigrant and ethnic minority populations.

Accordingly, research questions that the research projects under this thesis seek to answer are the following:

a) What are the different explanations proposed in academia with respect to higher rates of psychosis among immigrants and ethnic minorities? What are the overall discourses and contexts underlying these interpretative repertoires? (Manuscript I)

b) What is the impact of country-level policies supporting immigrants and of regional social deprivation and fragmentation on psychosis risk among immigrants and ethnic minorities? (Manuscript II)

c) How do service-users with psychosis with different ethnic, racial and immigrant backgrounds describe their lives before they were diagnosed with psychosis? How do these narratives portray aspects of their social environment and, more specifically, the roles that social networks, structures/institutions, and policies have played in their lives? (Manuscripts III and IV)

d) To what do service users attribute psychosis and its higher risk among some immigrant and ethnic minority populations? What solutions do they propose to change the social problems that might contribute to this higher risk? (Manuscripts III and IV)

Considering these research questions, a range of different methodologies, both quantitative and qualitative, were used in the studies this thesis comprises, presented in the form of four manuscripts.

For Manuscript I, a qualitative methodology (a pattern-based critical discourse analysis) was applied to dissect scholars' explanations for the higher risk of psychosis among immigrants and ethnic minorities, along with broader discourses and underpinning contexts. Through a critical lens, this methodology identifies patterns of discourse, while acknowledging the influences that systems of power have on what is studied and conceptualized as valid knowledge. This study also served the purpose of identifying gaps and limitations of previous research, as a point of departure to the following studies. Notably, it allowed us to identify the perspectives and voices that were absent from the discussion around the topics of immigration, ethnicity, psychosis and the social environment.

For Manuscript II, a quantitative, deductive, hypothesis-driven approach was taken to investigate the impact of societal-level exposures (country-level policies supporting immigrants and regional proxies of social deprivation and fragmentation) on risk of psychosis among immigrants and ethnic minorities, across five European countries. A multilevel (mixed effects) regression was performed using incidence data, considering its nested nature (individuals, regions and countries), to investigate the association between incidence of psychosis across different population groups (defined by country of birth and self-ascribed ethnicity) and societal-level exposure variables.

Manuscripts III and IV pertain to the two components of a qualitative study exploring retrospective accounts of experiences and contexts prior to the onset of psychosis of persons with different ethnic, racial and immigrant backgrounds, receiving early intervention services for psychosis in Montréal, Canada. In Manuscript III, transcripts of in-depth interviews were analysed through a mainly inductive approach, whereas in Manuscript IV an arts-based methodology was applied, under a participatory action research framework, by which visual and written data were triangulated and subjected to thematic analysis.

The higher risk for developing psychosis among immigrant and ethnic minority populations has long been described as a major public health concern (Morgan & Hutchinson, 2010). These findings have motivated a renewed attention to social determinants in mental health and to the need to better understand and intervene at the level of the social environment. These issues are complex and so are the academic discourses they have generated, along with the proposed solutions to tackle the identified social problems. The relevance of this body of work derives from the imperative of early psychosis research, public health and clinical work being based on and informed by first-person and contextual perspectives. A critical appraisal of the extant discourses and interpretations regarding previous findings is an important point of departure to identify gaps, as well as strengths and weaknesses of previous approaches. By looking at societal-level variables that may impact risk, new solutions may arise, placing the onus of intervention outside of the individual. Research privileging first-person opinions and experiences brings first-hand knowledge into the light. Moreover, participatory-research studies applying visual methodologies have the potential to empower individuals and communities whose experiences have been disregarded, and for whom several aspects of disadvantage intersect. This work paves the way towards a more complex understanding of how social, cultural and political aspects permeate life narratives and influence well-being, illness, and ultimately the development of psychosis. Understanding the sociocultural contexts of the experience of psychosis may help create more comprehensive models of illness development; shed light on social determinants and on how individuals negotiate adversity in their environment; and generate useful insights about potential targets of intervention at the level of both public health and clinical services.

1.3. Research paradigms and frameworks guiding this thesis

Albeit building from a common background, the research projects (presented in the form of manuscripts) that are part of this thesis apply different (qualitative and quantitative) methods, which are based on distinct paradigms. Specifically, the paradigm that typically guides qualitative research is constructivism (based on relativism and subjectivism), whereas quantitative research is typically founded on post-positivism (based on essentialism and objectivism). Specifically, constructivism holds that there is no such thing as an objective and unbiased view of the world. Instead, the ways in which human beings make sense of the world around them is not simply the result of observation, and it is not thereby directly connected to a single “truth” or reality. Rather, our understandings of the world are constructs, socially, culturally and historically crafted, through daily human interactions (Burr, 1996; Guba & Lincoln, 2005). Under the paradigm of post-positivism, it is assumed that there is a “truth” and an objective real world, even if it is acknowledged that the process of meaning making is depending in both the subject and the observer. However, in contrast with constructionism, the belief is that it is possible (and desirable) to know the truth and to get close to describing the reality through an objective stance, which should be as much as possible value-free and bias-free.

Accordingly, while constructionist approaches are mostly inductive and focus on "understanding" social phenomena, post-positivist approaches use a deductive and confirmatory approach and focus on "explaining" the world using empirical laws and following the scientific method (Guba & Lincoln, 2005).

Although switching between different paradigms may be challenging, it is not new to the field of psychiatry, which has historically situated itself between different disciplines (e.g.: sociology, philosophy, biology, chemistry), that apply different forms of knowledge inquiry. Both clinicians and researchers in psychiatry have often adopted multiple and competing paradigms as part of their practice (Luhrmann, 2011), each of which determine a particular way of conceptualizing, explaining, and studying mental health (Cooper, 2007). This involves a stance of dialectical pluralism, through a constant dialogue between different approaches and perspectives regarding a given phenomenon, seeing them not as opposite or competing but complementary and mutually enriching (Johnson, 2017). Building from dialectical pluralism as a meta-paradigm, this thesis is further guided by a contextualist paradigm which, by "sitting in between the two poles of essentialism and constructivism" (Braun & Clarke, 2006, p. 81), assumes an ontological stance of critical realism (assuming the existence of a reality, which however may only be partially grasped through the use of rigorous scientific procedures) (Willig, 1999) and an epistemological position of subjectivism (i.e., acknowledging that meaning is co-constructed by the interpreter and the phenomenon under observation, being fundamentally shaped by their social, cultural, historical and political contexts) (Denzin & Lincoln, 2011).

Additionally, while this thesis did not follow strictly one single framework, it was guided by several concepts, theories and frameworks which are relevant to the field of social and cultural psychiatry. The first is the framework of *Social determinants of health*, pertaining to the study of all aspects of the social environment that shape health, from interpersonal relationships to social structures and institutions (Marmot et al., 2012). This framework built on foundational earlier work, looking at how socio-economic class, social deprivation and isolation (at an individual-level and at the area-level) impacted mental health, including that of Faris and Dunham, *Mental Health in Urban Areas* (1939) in Chicago, USA; Hollingshead and Redlich, *Social Class and Mental Illness* (1958) in New Haven, USA; Leighton & Murphy's *Stirling County Studies* (1959-1963) in Nova Scotia, Canada; Srole et al (1962), *Mental Health in the Metropolis* in Manhattan, New York, USA; and Brown and Harris, *The Social Origins of Depression* (1978) in Camberwell, London, UK. Social determinants of health gained further notoriety through the publications of Wilkinson and Marmot describing a social patterning of health, whereby lower social classes have higher morbidity and mortality (Wilkinson & Marmot, 2003). The *Social determinants of health* framework gained popularity during the last decades of the twentieth century, inspired the work of several scholars, and fuelled the publication of the WHO Commission on the Social Determinants of Health (CSDH) in 2005, signalling a clear commitment to social justice and equity, hereby considered as crucial to population well-being and health (WHO, 2004).

Another important concept linking social, political and economic forces and health patterns is *Structural violence*, first introduced by Galtung (Galtung, 1969) and popularized within the field of anthropology of health by Farmer (Farmer, 1996). While the concepts of Social Determinants of health and Structural violence stem from different disciplines (Social epidemiology and Anthropology, respectively) they both try to describe and explain how social, political and economic contexts impact health. They also share the common goal of tackling inequality to achieve better health outcomes. However, while the literature of Social Determinants of Health focuses on identifying causal links and mechanisms between social inequality and health, striving to make concrete and operationalizable suggestions based on evidence, scholars focusing on the notion of Structural violence emphasize the need to politicize discourses when tackling inequality, and to prioritize the identification of underlying hierarchical structures and power imbalances that generate and maintain inequality in society (Herrick & Bell, 2022). Although these two notions have developed for the most part in parallel, two emerging concepts may be considered as the merging of the two frameworks described above. These include the notions of *Structural determinants*, in which the focus regarding Social determinants is placed on structures and institutions, over individuals and behaviours (Heller et al., 2024), and of *Structural competence*, which seeks to translate the knowledge from the fields of Social determinants of health and Structural violence into clinical practice in healthcare institutions (Metzl & Hansen, 2014).

Relatedly, this thesis was also informed by the principles of eco-social theory and the critical praxis of intersectionality. Nancy Krieger's eco-social theory seeks to advance the study of health inequalities by considering socio-environmental contexts that determine exposure, susceptibility and resilience across space and time, and at several, nested and interacting levels (from a macro to micro level). Key to Krieger's theory is the concept of embodiment and its pathways, i.e., the multiple ways in which the environment gets under our skin, shaping biological processes. Additionally, this theory also emphasizes issues of agency and accountability when researching and interpreting patterns of population health (Krieger, 2001), by being specifically concerned with what and who contribute to patterns of health at the population level. Intersectionality has been defined as a "broad-based knowledge project" (Collins, 2015, p. 3), as a framework, an analytical strategy, and a critical praxis. The term, first coined by Kimberlé Crenshaw in 1989, emerged in the backdrop of theories of Black feminism, Indigenous feminism, third-world feminism, Queer movement, and postcolonialism. From its origins, it looked at how interconnected, overlapping and reinforcing systems of oppression and inequality (racism, sexism, income inequality) impact persons through social groupings based on race, gender and class, by producing and sustaining inequality in health and social outcomes. Previous studies on intersectionality have been criticized of deviating from the original concept, as they focused on the intersections individual characteristics or identities (gender, race, class) instead of looking at (or at least relating them to) intersecting systems of oppression. The notion of structural intersectionality brings these back to the forefront, by exploring how multiple, interlocking and mutually reinforcing systems of oppression, exclusion and subordination of minoritized groups impact their rights, opportunities, resources, exposure to stressors and, ultimately, their well-being and mental health (Homan et al., 2021). Eco-social theory and intersectionality overlap in their concern with social justice, by recognizing and problematizing power imbalances in larger society (instead of looking solely at individual determinants) as critical for health inequalities.

Finally, particularly regarding the qualitative papers of this thesis, I have been guided by participatory action research principles, which emphasize participants' perspectives and knowledge. This research approach acknowledges the existence of power imbalances that privilege some voices to the detriment of others and the necessity to move towards participatory democracy. However, considering that the timeframe of the presented studies was circumscribed by the timeline of a doctorate, and acknowledging the difficulties associated with full participatory studies (Jenkins & Carpentier, 2013), we did not aspire (nor attained) full participation, as many choices, namely about what was investigated and how, had been taken by the researchers beforehand. Nevertheless, for our qualitative papers, we strived to engage participants in ways that would go beyond being informational or consulting tasks (Arnstein, 1969). Particularly, in the case of the last study, using arts-based methods, participants were involved in data analysis and results' discussion and their preferences had primacy with respect to the analytical strategy, chosen modes and content of knowledge dissemination (Herrick & Bell, 2022).

1.4. Reflexivity and Positionality

In the context of qualitative research, it is common practice for scholars to engage critically and reflexively with their work, notably through a process of self-assessment that examines the researcher's subjectivity. This involves an examination of positionality, by reflecting on previous assumptions, viewpoints, values, beliefs, and biases. It requires critical thinking in asking the questions of why and how a given research project was conceived and conducted, considering the researcher's subjectivities. This process is believed to increase transparency and therefore the validity and trustworthiness of qualitative work. Even though this is not usually applied in quantitative research, it has been argued that such practices would be beneficial, since there is no absolute objectivity or neutrality in any kind of research. In other words, who conducts the research will necessarily have an impact on which kind of questions are asked, which hypotheses are considered and how data is reported and interpreted, regardless of the attempts to minimize bias and despite the use of rigorous methodology. In the context of this thesis, it is important to note my background as Portuguese woman, White, upper middle class, a medical doctor, a psychiatrist, an artist (musician) and more recently, a researcher and an international student in Canada.

As a medical doctor, I was first trained under a positivist paradigm, which emphasizes objectivism, by which medical disorders are seen as the result of pathology, altered or dysfunctional biological processes, which are usually phenotypically expressed through signs and symptoms. Treatment is mostly sought at the biological level as well, ideally by identifying a cause and/or a given mechanism that can be manipulated and fixed. As such, it mostly operates under a deficit-based paradigm. The instinct of the medical practitioner is, in many cases, to find a problem and fix it. However, medicine is also a humanistic profession, which involves the establishment of a relationship between the doctor and the patient (and in many cases, their family). The relevance of such a relationship, and of its foundations of trust and respect have long been established and although they are crucial in any medical profession, they may be even more critical in psychiatric practice. However, the time allocated to the study of (and even more importantly the reflection upon) these issues along with ethical ones is relegated to a second place in conventional medical teaching. I also acknowledge that, as a student, I found myself worrying more about learning the technical aspects of the profession than with these more subjective aspects of practice which seemed, back then, quite abstract. It was only later that I, as a practitioner, found myself needing to reassess what being a doctor really meant as an everyday practice, as I engaged in clinical relationships with people and not malfunctioning body parts. Moreover, my experience as a service user in healthcare institutions and as a family member of persons diagnosed with psychiatric disorders contributed to a shift in perspective between my medical student-self and clinician-self. Because of the shift, patients were no longer conceptualized abstractly and their diagnosis reified, but rather seen as real people (like myself, my family, and friends) with real-life problems.

Coming across the work of Michel Foucault, Robert David Laing and Franz Fanon, among others who have put forward a critical approach to psychiatry, was crucial for me to problematize and critically approach psychiatric practice. Moreover, my immersion in the field of social and cultural psychiatry, psychodynamic psychotherapy and phenomenology helped me find meaning in my practice, by focusing on a contextualized, person-centered, critical and reflexive approach. These disciplines were more aligned with my way of thinking, and I also found they gave me more satisfactory answers regarding my practice, as opposed to, for instance, the several neuroscience disciplines. This is not to say that I do not recognize the value of the latter. I truly believe that interdisciplinary work is crucial to advance the field of psychiatry. Moreover, I would say that the metaphors of the social sciences resonate more for me and that conceptualizing psychological suffering under a biopsychosocial model that acknowledges context and sees humans as social and cultural beings, first and foremost, has been more helpful to me as a clinician as opposed to, say, the more dominant paradigm of biological psychiatry.

Moreover, psychiatry as a field can be particularly challenging in its emphasis on deficit-based and mechanistic paradigms. Diagnosis is an intricate procedure, highly subjective and overly simplistic under the existing classification systems and yet, psychological suffering is very real to completely relativize and discard the existence of psychiatric conditions. While it is hard (and perhaps impossible) to find a perfect match between the problem brought to the psychiatrist, the proposed diagnosis and treatment, there may also be great harm in making the wrong assessment or suggesting an inappropriate treatment course. Therefore, I also believe that some structure and protocolization building from the available evidence is needed when it comes to psychiatric practice and research, even if the available tools to this end are imperfect. As such, ultimately, relying on person-centered, comprehensive and critical approaches in both research and clinical practice should be paramount in this field.

Finally, freedom, equity, humility, tolerance and social justice are among my personal core values, and so are the beliefs that humanity is enriched by and cannot be understood without taking diversity seriously (different ways of thinking, feeling and being), and that knowledge has many forms and sources, and should not be attributed only to those few who retain power. My beliefs, values, curiosity, my history and previous knowledge have greatly influenced my interest in research in the first place, as well as the kind of questions I believed relevant to ask, and how I designed, implemented and interpreted the results of the studies presented in this thesis.

Preface

As previously outlined in the introduction of this dissertation, previous discussions on the explanations for findings of higher rates of psychosis among ethno-racially minoritized populations seem far from reaching consensus. Although this is not something exclusive to these topics, a first search through the literature revealed that the debate between different interpretations on the mentioned findings were intensely disputed, and seemed to contain larger discursive divergences, pertaining to issues of diagnosis and the weight given to different approaches to knowledge in psychiatry. In Manuscript I, we aimed to explore academic discourses on the topics of migration, ethnic minorities and psychosis through a critical lens, acknowledging the social underpinnings of such discourses and their power to shape practices. Previous epidemiological studies looking at psychosis rates among ethnic minorities and immigrants had been collated before in 2011 (Bourque et al., 2011) and 2020 (Selten et al., 2020). Therefore, in this study, we sought to display different academic perspectives on previously reported evidence, side by side, contextualizing them, and critically analysing them. By doing this, we sought not only to identify research gaps and limitations from previous studies, but also the consequences of having some discursive constructions prevailing over others and the missing voices in the overall discussion around the topic of immigration, ethnicity and psychosis.

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Chapter 2: Manuscript I

Reflections on the explanations of higher psychosis rates among migrant and ethnic minority populations: A critical discourse analysis.

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Transcultural Psychiatry

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Abstract

A growing number of studies suggest that migrant and ethnic minority populations are at higher risk for being diagnosed with psychosis. However, the reasons why have been disputed. This study aims to explore different interpretations of the observed higher rates of psychosis diagnosis among immigrants and ethnic minorities in some parts of the world. We sought to examine these interpretations through a critical lens, acknowledging the social underpinnings of discourses and their power to shape real-world practices. Peer-reviewed editorials, commentaries and letters regarding the topics of interest were retrieved from database searches and subjected to a pattern-based critical discourse analysis. Across a 30-year span of literature, conceptualizations and explanations of higher psychosis rates amongst migrant and minoritized populations evolved in relation to the larger social context, at times opposing one another. Three discursive themes were identified, reflecting intersecting explanations: institutional racism in psychiatry; psychiatry as a scientific discipline that sees and treats all patients equally; and the social locus of high rates. Tensions surrounding psychiatry as a field, including issues of evidence, biological reductionism, and the conceptualization of psychiatric nosological categories have played out within the evolution of this discourse. Exploring how discursive constructions in relation to psychosis and minoritization have been shaped by historical and social factors, we consider the role of local and global dynamics of social power in favouring one explanatory model over another and how these may have affected efforts to prevent and better treat psychosis amongst immigrant and minoritized groups.

Background

For several decades now, higher rates of psychosis have been reported for some migrant and ethnic minority populations, making migration, as a risk factor for psychosis, one of the most consistently replicated findings in psychosis research (Radua et al., 2018). This higher risk has been reported to persist in later generations, and to be higher for racialized minorities and for individuals migrating from the Global South to Northern European countries such as the Netherlands and the United Kingdom (UK) (Selten et al. 2020). Currently, these findings have been framed in the context of higher exposure to social adversity (e.g., material and social deprivation, childhood adversity experiences, marginalization and discrimination) that punctuates the everyday realities of individuals belonging to some minoritized populations. Prior explanations, like biological causes or selective migration, have largely been discredited (Morgan et al., 2019). Several scholars have also highlighted that migrant and ethnic minority populations (and in particular, Black ethnic minorities) have been historically subject to diagnosis bias (Hairston et al., 2019; Hampton, 2007), and that the psychosis diagnosis has been used as a means to exert social control, following political agendas, for instance, by conflating issues of violence and mental illness and labelling those who rebel against the system or do not conform to social norms as dangerous, deviant or mentally ill (Metzl, 2010). Relatedly, given that social and cultural backgrounds shape human experience and behaviour, the use of diagnostic instruments that disregard such backgrounds has been seen as problematic, as these have been developed within a western framework of health, illness and self (Adeponle et al., 2012; Gara et al., 2012; 2019; Zandi, Havenaar, Smits, et al., 2010).

The various interpretations of these findings demonstrate the complexity inherent to explanation of psychiatric disorders. Indeed, the breadth of psychiatry has fostered input from diverse disciplines that use remarkably different languages and follow distinct philosophical paradigms

(Cooper, 2007) that are sometimes at odds with each other. For instance, mental disorders may be conceptualized as factual entities or as value-laden social constructions; their causes may be perceived to arise primarily from inside or outside the individual; and the preferred ways to understand them may place more emphasis on causes or processes, on case-stories/narratives, or on global/universal laws (Zachar & Kendler, 2007). Preferred explanations depend on the diagnosis being considered, the stakeholder group in question (clinicians, researchers, or patients) and the overarching social and cultural context (Kirmayer, 2018; Kleinman, 1977; 1987; Rosenthal Oren et al., 2021; Young, 1982). For instance, many psychiatrists and scholars from Europe and North America emphasize that psychotic disorders arise more from biogenetic than psychosocial causes. (Brog & Guskin, 1998; Colombo et al., 2003; Harland et al., 2009; Miresco & Kirmayer, 2006).

How different causes of a specific phenomenon of interest are valued and which ones take precedence over others are shaped by the opinions of academics about what gets published, along with the social and cultural contexts in which they are generated. As such, discursive constructions put forward by academics regarding mental disorders set the tone for what is considered valid knowledge and deeply influence general opinion, research, clinical work, policymaking, and possibly the very manifestation of mental disorders, through looping effects, in the settings where these categories are being used (Hacking, 1995; 1999). In turn, these discourses are largely determined by the social, political and historical contexts in which research and clinical activities are embedded (Foucault, 1972; Jarvis & Kirmayer, 2021; Kuhn, 1970).

Objectives

In this study, we describe and critically analyze academic discursive constructions regarding the reported findings of more psychosis diagnosis among migrants and ethnic minorities. By doing this, we aim to unpack underlying assumptions and attributed meanings concerning causality, processes, consequences and proposed courses of action, while retaining focus on the social and historical contexts in which these discursive constructions emerged and played out.

Method

As the focus of the study was not only to describe discourses on the topic of interest but also to elucidate their underlying social meanings, we conducted a critical discourse analysis (Fairclough, 1985; 1989; 1992), using a pattern-based approach (Potter and Wetherell, 1994; Willig (1999). Accordingly, we developed this study under the assumption that discourses express tacit knowledge systems embedded in particular social structures that are in turn influenced by power dynamics and relationships. Furthermore, discourses also have an active role in shaping social realities (Foucault, 1972). Analysis of discourses was thus centred on the multiplicity of their meanings, and their connections and functions and their social relatedness.

According to Fairclough (1992), the corpus of data for critical discourse analysis should be constituted by a comprehensive (although not necessarily exhaustive) collection of documents that are representative of discourses on the topic of interest. These documents should cover a broad range of discourses and be considered relevant for people in the specific context of the social practice in focus (in this case, scholars and clinicians in psychiatry doing research and/or working with minoritized communities). Considering this and the study's aims, an online search was conducted to identify editorials, letters, opinion articles and commentaries. These documents were chosen because they are inherently argumentative, revealing implicit beliefs and motivations. Furthermore, these are usually concise papers that focus on specific issues that influential scholars consider to be of relevance.

The online search started with major databases in the field of psychiatry, such as PubMed/Medline, EMBASE and PsycINFO, using general keywords related to the topics under investigation (e.g., psychosis, migrants, immigrants, ethnic minorities, racial minorities). Additional searches were conducted on an ongoing basis during the process of analysis and writing of results to generate a more comprehensive collection of documents. This was achieved by adding new search terms (e.g., Black, race, racism, Asian, African American, Latino, African-Caribbean); searching in additional databases (JSTOR, SCOPUS); and searching the online archives of high-impact psychiatric journals. Attention was paid to retrieving research materials containing interpretative repertoires from various fields within and related to psychiatry (e.g., social psychiatry, phenomenology, epidemiology, etc.). The initial data corpus was complemented by searches within the reference lists of the initially retrieved documents and the final choice of editorials, letters, opinion articles and commentaries was refined by consulting experts in the field. Searches were restricted to peer-reviewed journals published in English, starting from 1990. The authors chose this date range with the intent of focusing on material reflecting a contemporary era in the study and treatment of psychotic disorders. By then, atypical antipsychotics were on the market, first episode psychosis was taking off as a clinical organizing construct, and the fourth and 10th versions of the DSM and ICD-10 were underway (Bürgy, 2008; McGorry et al., 1996).

After an initial stage of familiarization with the data, initial discursive themes were identified by the first author. These were grouped together checking for patterns, variability, consistency, functions and effects. The interpretation of the themes was conducted by a process of multiple readings, referring to relevant literature to situate discourses in historical, political and sociocultural contexts. Themes were checked against the texts, examined for differences and convergences, combined and aligned with examples of quotations defining main and sub-themes (Potter & Wetherell, 1994).

Both authors of this article are clinicians and researchers in the fields of psychosis, and social and cultural psychiatry. Both have experience in the field of interest to this paper and in qualitative research methodologies. Overall, data analysis was guided by a contextualist paradigm (Braun & Clarke, 2006), aligned with the critical discourse analysis method (Jorgensen & Philips, 2002). This approach is situated between essentialist and constructivism paradigms and assumes an ontological stance of critical realism. This perspective acknowledges the existence of a concrete social reality, which may only be partially grasped, namely, through the analysis of discursive constructions. Epistemologically, this study adopted a position of subjectivism, acknowledging that meaning is co-constructed by the interpreter and the phenomenon of interest and is fundamentally shaped by social, cultural, historical and political contexts (Braun & Clarke, 2006). To ensure rigor, several measures were implemented, including prolonged engagement, multiple readings, debriefing sessions, consulting with specialists, and the elaboration of an audit trail (Cho & Trent, 2006; Padgett, 1998).

Results

A total of 54 documents was subjected to analysis. Of these, 40 were written by scholars based in Western European countries, of which 32 came from the UK, 7 from Netherlands and 1 from Germany. The remaining publications came from the United States of America (USA) ($n = 10$), Canada ($n = 2$), Georgia ($n = 1$) and India ($n = 1$). The analyzed documents portray a vivid debate about issues related to excess rates of psychosis diagnosis and coercive hospitalization in migrant and ethnic minority communities. The titles of the chosen papers varied in their tone and purpose, being at times provocative, alarming, blaming, and at other times serving as calls to action or reconciliatory statements (see Table 1 for more details about included papers). Scientific arguments and personal ideologies were often conflated, shaped by the historical and sociocultural context of the nations where these discourses were generated (mostly the UK and to a lesser extent the USA), acknowledging that discourses may originate in one place and time, be picked up somewhere else and then appear again later at the point of departure. The different discursive themes correspond to attempted explanations of psychosis risk among minoritized communities and map onto larger, often opposing, discourses on psychiatry, psychosis, migration, race and ethnicity: 1) Institutional racism in psychiatry; 2) Psychiatry as a scientific discipline that sees and treats all patients equally; and 3) The social locus of high rates (Figure 1). Additionally, two sub-themes were identified under the first discursive theme (Misdiagnosis and Problematizing psychiatry as a discipline), and one sub-theme was identified under the third theme (Aiming for interdisciplinarity). Sub-themes refer to aspects discussed under the first and third themes that deserved particular attention across the analyzed documents. Discursive constructions suggested links to underlying assumptions about what the problem was considered to be (i.e., the higher risk for psychosis among some ethnic minorities versus racism within psychiatric institutions), and about its causes and possible solutions. For each theme, we sought to describe and give examples of a given discursive construction, and to situate it within the larger landscape of discourses and counter-discourses. Accordingly, while all quotations were extracted from the analyzed documents (see Table 1), in agreement with the chosen methodology, we referred to other publications throughout the text to establish context. For clarity, all citations referring to analyzed documents are indicated with an asterisk. While the first two themes coexisted temporally and developed in opposition to each other, the third theme portrays a relatively more recent focus on the social determinants of (mental) health and an attempt to integrate social adversity within prominent explanatory models in psychiatry.

The most vivid academic debate regarding rates of psychosis in migrants took place in the UK from the late 1990s to the early 2000s. The discussions were underpinned by historical events, notably two national inquiries on racial discrimination that prompted a national debate on institutional racism. The first concerned the contentious conduct of the police over the investigation of the racially motivated murder of a Black teenager, culminating with a report that denounced and criticized the practices of the police and suggested ways to tackle institutional racism (Macpherson, 1999). The second concerned the death of a young Black man with schizophrenia following the use of physical restraints in a psychiatric institution. The report mentioned that the patient had earlier been involved in an altercation that had followed his being racially abused by another patient (Norfolk, Suffolk and Cambridgeshire Strategic Health Authority, 2003). This last inquiry extended to broadly analyze the ways that Black and other ethnic minority communities were treated in mental health services, concluding that these populations were not getting the care they needed due to institutional racism within the National Health Service in England. At that time, service users and practitioners expressed concerns over racial inequalities within mental healthcare. Simultaneously, higher rates of psychosis diagnosis (Harrison, 1990; Harrison et al., 1997) and coercive admissions (Cole et al., 1995) were reported among Black (especially Black Caribbean) communities in the UK. The debate surrounding the issues of race, ethnicity and psychosis has been alive ever since and it has extended to other locations in Europe where similar findings have been reported (Selten et al., 2001; Zolkowska et al., 2001). The three themes (and their sub-themes) are detailed below.

Institutional racism in psychiatry

Across some analyzed documents, psychiatry, as an institution, was criticized for its inability to provide good care to ethnic minorities and for discriminating against these communities, and for contributing to the maintenance of patterns of social stratification based on race. Several scholars pointed out that besides having less access to mental health services and facing harsher pathways to care, minoritized populations have also been targets of prejudiced diagnostic procedures and research agendas by psychiatric institutions, attitudes or practices that can be traced back to 19th century "race science", whereby theories of racial or ethnic inferiority attempted to justify or support biased and discriminatory attitudes toward certain groups based on their race or ethnicity. As two scholars from the UK, put it,

> *The testimony of Black patients and carers and the perceptions of the Black communities also appear to be consistent with this general theme that there is no aspect of contemporary psychiatric care that favours Black people when compared to White patients and, in overall terms, psychiatry, like policing, the criminal justice system, educational institutions and social work, militates against the interests of Black people in this country. (Sashidharan, 2001, p. 246)**[1]
>
> *The disproportionate numbers of black people in psychiatric detention, the overdiagnosis of schizophrenia in black people, the exclusion of black people from the "softer end" of psychiatric practice [...] the alienation of black patients from mainstream psychiatric services, the general lack of trust and extreme skepticism about psychiatric practices [...] the professional preoccupation with theories of ethnic vulnerability or inferiority, which continue to echo the sentiments of 19th century "race science", all confirm the similarities between policing the black communities and controlling their minds. (Sashidharan & Francis, 1999, p. 254)**

The previous quotation also aligns psychiatry with the police—both are institutions concerned with surveillance, control and risk management of Black communities. The points raised by these authors greatly overlapped with earlier discourses from North American scholars, that where particularly prolific in the aftermath of the civil rights movement (Adebimpe, 1981; De Hoyos & De Hoyos, 1965; Neighbors et al., 1989; Simon et al., 1973). In the documents included in our analysis, we saw this issue being brought up by Metzl (2011)*, who underlined the ways in which societal structures of power had permeated psychiatric ideologies and practices, namely, by defining the typical patient with mental illness as a violent Black man:

> *From a historical perspective, shifting connections between violence and mental illness also connect uncomfortably with shifting anxieties about race. In the 1960s and 1970s, many of the men depicted as being armed, violent, and mentally ill were, it turned out, African American. (p. 2172)*

In this quotation, Metzl highlights the fact that Black people in the USA were historically stereotyped as dangerous and severely mentally ill whenever they opposed established powers, as in periods of historical emancipation like the civil rights movement of the 1960s. Another blatant example of this can be traced to the 19th century, when reports of the higher rates of psychosis among African Americans mainly in the Southern states was interpreted as resulting from neurological weakness, which would supposedly make these individuals more vulnerable (susceptible to breakdown) when in contact with the "civilized" (i.e., western, industrialized) world. Such ideas were used as arguments to justify practices of slavery, violence, abuse and discrimination against African Americans (Erevelles, 2014; Jarvis, 2008; Summers, 2010), and it has been posited that these prejudices continue to influence clinical and research practices regarding psychosis (Jarvis & Kirmayer, 2021).

Misdiagnosis. The excess rate at which psychosis is diagnosed among ethnic minorities has been interpreted by some scholars, physicians and minoritized populations to be the result of diagnostic error due to clinician racial biases. These biases have been suggested to arise from a misinterpretation of culturally shaped emotional distress and social suffering, such as mistrust of authority and reluctance to be open with treatment providers, as paranoia. This point was supported by Sashidharan and Francis (1999)*, who argued against the uncritical attribution of diagnostic categories based on Eurocentric theories:

> *The theories and assumptions of psychiatry are problematic when they are applied to people who are socially excluded or culturally marginalized. Black communities in the United Kingdom will continue to bear the brunt of such a professional bias as long as the coordinates of psychiatric practice remain fixed. (p.254)*

Furthermore, Fernando (1998)* advised researchers to cautiously interpret epidemiological data reporting high rates of psychosis for ethnic minorities to protect these communities from stigma. Moreover, high rates of psychosis could compound the problem of misdiagnosis by reinforcing pervasive racial prejudice that positions Black people as prone to psychosis. One important argument used to support the misdiagnosis hypothesis was that the high rate of psychosis diagnosis found in clinical reports and treated incidence studies was not as pronounced in population-based studies in the UK (Nazroo, 2015)*. A similar point had previously been made by North American scholars, such as Adebimpe (2004)*:

> *The evidence for racial equality in the distribution of mental disorders came from two national surveys in which major technical problems of earlier studies were solved. [...] Each showed*

> *an equal distribution of mental disorders in its community sample, putting to rest more than a century of controversy and biased debates. (p. 544)*

The two national surveys mentioned by Adebimpe in this quote were the Epidemiologic Catchment Area Study (Robins & Regier, 1991) and the National Comorbidity Survey (Kessler et al., 1994). Notably, the former may have precipitated an important shift towards the misdiagnosis hypothesis within the USA (Jarvis, 2007a), as differences between racial groups in the prevalence of mental disorders did not remain after statistically controlling for socioeconomic status.

While the results of these surveys contributed to a shift of discourse in the USA, scholars involved in the studies reporting higher rates of psychosis among minoritized populations in the UK stressed that these findings were too pronounced to be disregarded or solely attributed to misdiagnosis. Moreover, some scholars considered that denying these rates hindered scientific progress and fostered distrust in the system. As a result, vulnerable populations would be further alienated from adequate care:

> *The question of the increased rates of psychotic disorders reported in these papers is too important to be reduced to simplistic formulations [...]. In particular, we must avoid unwise generalizations about misdiagnosis, which risk alienating mentally ill people from the services they need and which may delay effective and speedy intervention and treatment. (Harrison, 1998, p. 497)**

Furthermore, some scholars have raised concerns over an excessive focus on institutional racism within psychiatry, an attitude that was considered unfair and seen as potentially jeopardizing scientific progress in the field: “The clamour about institutional racism has obscured the real causes of the increased incidence of schizophrenia and mania among British African–Caribbeans" (Murray & Fearon, 2007, p. 365*).

> *The debate has so far been conducted in a Black and White manner, with psychiatrists seen as oppressors and patients as victims [...]. We would not consider blaming hospital physicians for the rising rates of obesity in the population [...]. Staff in such services need our support for doing a difficult job in difficult circumstances, not our disdain for failing this or that group. (Singh, 2007, pp. 365, 364)**

Statements like the one above, that interpret statements about institutional racism in psychiatry as directly attacking healthcare providers, were considered by some to be overreactions born of misunderstanding. As Patel and Heginbotham (2007, p. 367)* pointed out, "they appear to misunderstand the concept of institutional racism and dismiss the legitimate concerns of the Black community. We have yet to find recent articles that charge psychiatrists or psychiatry with racism."

Problematizing psychiatry as a discipline. The challenge in accurately diagnosing and providing adequate care to ethnic minorities was considered by some authors as evidence of deeply rooted ideological problems in psychiatry. In other words, not only institutional practices but also fundamental aspects of psychiatry as a scientific discipline should be considered problematic and questioned, so as to address larger issues of discrimination, power, and postcolonial dynamics in western psychiatry. As stated in the following excerpts:

> *Until we begin to address racism within psychiatry, its knowledge base, its historical and cultural roots and its practices and procedures, we are unlikely to achieve significant progress in improving services for minority ethnic groups. (Sashidharan, 2001, p. 244)**

> *The construction of semiotic equivalence of knowledge and cultural systems that are widely diverse is another demonstration of the moulding of otherness into terms and perceptions understandable to the European mind and is as such the sine qua non of the European colonial experience. […] We must be consistently aware that society legitimises psychiatry diagnosis in the same ways that it does racism. Uncritical acceptance of these concepts can be used and reflected in the relegation of otherness and difference to illness. (Hickling & Hutchinson, 2000, p. 94)**

According to these authors, attention should be paid to the danger of using psychiatry as an instrument of social control or normativity. Solutions should be sought within psychiatry, which can only happen by first acknowledging the limitations of psychiatry as a field and engaging in serious self-scrutiny, since "History and experience show that any challenge to institutional racism, if it is to be successful, will have to start with a clear acceptance of the intent and nature of the problem and a commitment to defeat racism" (Sashidharan, 2001, p. 247)*.

Psychiatry as a scientific discipline that sees and treats all patients equally

While acknowledging social and cultural factors, some scholars accorded greater relevance in psychiatric practice to clinical judgment; the universality of suffering rather than distinct forms it may take among various groups; and a commitment to sound science. As pointed out by Singh (2007)*,

> *Although it is important to be aware of and be sensitive to cultural issues, we must not treat our patients as members of groups rather than as individuals. This is what racists do […]. By focusing inappropriately on culture and ethnicity at the expense of sound clinical judgement, we risk offering poorer rather than better care to patients from minority ethnic groups […].*

> *Our shared humanity and the commonality of human suffering, pain and loss should allow us to understand the influences of culture without demanding that patients from minority ethnic groups be treated in a fundamentally different way. (p. 364)*

In response to the challenges raised about diagnostic validity in incidence studies in the UK, several scholars posited that evidence should speak for itself, through the use of "standardized procedures for assessing symptomatology, with diagnosis being made blind to ethnicity" (Morgan & Hutchinson, 2010a, p. 705)*.

Criticism of nosology in cross-cultural contexts was considered misleading and diagnostic categorizations were conceptualized as the best possible approximations to natural kinds in psychiatry, which could therefore be operationalized as universal structures as opposed to social constructions (Branton, 1999)*.

It was also contended that issues of pathways to care and related concerns about institutional racism should be detached from matters of causality:

> *In the same way that improving customer services for insurance claimants following an accident is irrelevant to reducing the rate at which such accidents occur, so reforming mental health services (important as this no doubt is) will have no impact on population rates of disorder. (Morgan & Hutchinson, 2010a, p. 876)**

These authors added that:

> *An important consequence of conflating issues of service use and population rates of disorder is that there has been no single policy initiative directed at reducing the high rates of*

> *psychosis in these populations, in the UK or elsewhere. A crucial public and social health problem has been obscured and ignored. (p. 706)*

Publications devaluing institutional practices in psychiatry as a possible explanation for higher rates of psychosis among minoritized populations might have had the unintended effect of adding to discourses undermining the focus on structural racism and the impetus to implement structural reforms in psychiatric institutions in the UK (Bhui et al., 2012). This could be because, as pointed out by Nazroo (2015, p. 1066)*, "Addressing contemporary racism is difficult to pursue, particularly in the current UK climate where questions of racial inequality have disappeared from the policy agenda. Redressing the legacies of historic racism is even more challenging".

Institutional racism has also been de-emphasized as an explanation for more challenging pathways to care experienced by migrants and ethnic minorities:

> *Serious mental illnesses such as schizophrenia are more prevalent in migrant and ethnic minority groups, therefore so are the consequences of treating these disorders, including detention. (Singh, 2019, p. 276)**

In sum, these perspectives imply that future interventions should focus on evidence arising from epidemiological studies, and science will slowly unravel the mechanisms underlying the reported higher risk of psychosis in ethnic minorities and migrant populations.

The social locus of high rates

As stated by Fernando (1999, p. 374)*, "We may then see that treatment must be directed at society rather than the individual".

Despite the mentioned differences, as per the analyzed documents and their temporal sequence, the idea that society should also be held responsible for the reported higher rates of psychosis among minoritized populations gathered strength over the years, particularly in the UK (see Table 1). This interest was accompanied by a more general tendency to look into social determinants of health (Marmot & Wilkinson, 2005) and mental health (Allen et al., 2014), which was represented in public reports, such as the one by the WHO Commission on Social Determinants of Health (2008) which stated that measures should be taken to tackle inequality in the distribution of resources and to improve the daily living conditions of all individuals.

With respect to social determinants of psychosis, different authors have privileged different environmental aspects (risk or protective factors), aligned with their research focus. These have been mostly at the individual level of exposure. For example, while Morgan & Hutchinson's (2010a)* opinion statements and research focused on the concept of social disadvantage (parental separation, low educational attainment, unemployment, housing instability, social isolation and their cumulative effects), Selten & Cantor-Graae (2010)* focused on the theory and biological underpinnings of social defeat:

> *We feel that the concept of social adversity is too broad. If poverty, which is also a form of social adversity, were a risk factor for psychotic disorders, one would expect to find very high rates in developing countries [...]. Consequently, we feel that the concept of social defeat, defined as the chronic experience of an inferior position or social exclusion, may fit the data better. (p. 732)*

Along similar lines, other authors have interpreted the findings of higher risk for psychosis within minoritized populations as being predominantly linked to experiences of discrimination and social exclusion. According to van Os (2012)*, these experiences could trigger the development of subclinical psychotic symptoms through the attribution of salience to a wider range of phenomena:

> *Victimised individuals and ethnic minority populations at risk of discrimination and exclusion have higher rates of service use for syndromes that in DSM are conceptualised as psychotic disorder […]. These populations also display higher rates of (subclinical) psychotic experiences […]. Stress-induced alterations in how a person attributes meaning to internal and external stimuli may represent the first step in explaining how population ethnic minority–majority interactions affect mental health. (p. 258)*

Finally, studies showing that ethnic density, or living in neighbourhoods where one's own ethnic group comprises a relatively substantial share of the population, could partially buffer the effects of discrimination and social disadvantage (Baker et al., 2021) were seen as important breakthroughs. They helped recognize both the role played by supportive communities and the deleterious effects of discriminatory and exclusionary experiences when minoritized populations comprised a small part of the population (Patel & Goodman, 2007)*.

Even in the most recent articles, racism was still an important part of the story, but it was mainly approached through its interpersonal and intergroup dimensions and its individual-level consequences. Institutional racism continued to be mentioned, but mostly at a larger societal level (and not particularly with respect to psychiatric institutions):

> *If institutional racism is relevant, it is that which affects every institution in society, structuring access to decent housing and heating, to an adequate education, to employment and effective social services. The problem is not "in" migrant populations, it is not "in" psychiatry. The problem is "in" society. (Morgan & Hutchinson, 2010a, p. 707)**

Nevertheless, others continued to emphasize that psychiatry was still a crucial context where institutional racism should be addressed:

> *It is worth interrogating the role of psychiatric institutions and consequent practice within our society and how this sits alongside and interacts with other regulatory and surveillance institutions [...] When we ask "where is the harm?" we should consider the implications of psychiatric diagnosis and (often aggressive) treatment for the life-course. (Nazroo, 2015, p. 1067)**

This trend implies that scholars came to accept the high rates findings as fact, so it was time to move on to uncovering its mechanisms and causes. How would social factors affect people in such a way that they would end up developing psychosis? Where, in society, should we be looking? As another UK scholar pointed out:

> *We need to move beyond studies which consistently and robustly demonstrate a disproportionate burden of psychotic disorders is shouldered by a few migrants and ethnic minority groups, to novel population-based studies which seek to identify the determinants and mechanisms through which this risk is shaped. (Dykxhoorn & Kirkbride, 2019, p. 146)**

The same authors have suggested that this goal should be achieved by embracing interdisciplinary research:

> *We now need to develop novel, epidemiologically informed interdisciplinary longitudinal studies to identify the risk and protective factors which underpin this risk. These studies should include qualitative components and input from a variety of stakeholders, including public and patient involvement. (Dykxhoorn & Kirkbride, 2019, p. 149)*

As for ways to address the social determinants of psychosis, suggestions ranged from interventions targeting populations at risk to larger public health promotion and prevention interventions that tackle various societal risk/protective factors for psychosis. A harder question was whether the responsibility for these larger promotion and prevention interventions fell to public health, psychiatric institutions or governments. As per Selten and Cantor-Graae (2010, p. 876)*: "Since the causes of the epidemic are mainly of a social nature, prevention is primarily a job for politicians, not for psychiatrists. Psychiatrists could develop useful prevention strategies for those immigrants who are at an extremely high risk". However, as pointed by Morgan and Hutchinson (2010b)*:

> *Of course, achieving significant policy change that may ameliorate the impact of social disadvantage, particularly in high-risk groups, is extremely difficult. But we do not agree […] that this is primarily a job for politicians. Psychiatry has a role – perhaps even a moral responsibility – in advocating for, and contributing where possible to, the implementation of change. (p. 876)*

All in all, however, it was noticeable that discourses on interventions to address the higher rates for psychosis among ethnic and migrant minorities were still infrequent in the more recent literature in psychiatry or public mental health. Ambivalence about the best course of action and associated actors may have stemmed from evolving explanations for the higher psychosis rates among minoritized communities and the varying levels of precedence accorded to these. However, some authors did continue to call for action suggesting joint efforts towards prevention and better services for these communities:

> *Either there is an epidemic of mental illness among certain Black groups or there are seriously worrying practices that are leading to disproportionate levels of admission. Wherever the answer lies on the spectrum between the two extremes it is essential that we find out as a matter of urgency. (Patel & Heginbotham, 2007, p. 367)**

> *One way forward would be simply to accept that there may be differences in opinion. It may be possible to build a consensus around the assertion that social factors lead to an increased rate of presentation of people of African and Caribbean origin to mental health services and those who come to services have symptoms of mental health problems that require treatment. Prevention strategies often improve more than one problem. (McKenzie, 2010, p. 735)**

Aiming for interdisciplinarity. Interdisciplinarity was one of the most used terms across the most recent papers (i.e., over the last decade). Nevertheless, although many disciplines were considered essential to understand complex processes such as the social causation of psychosis, most concrete examples referred to epidemiological and neuroscience research. At the same time, the broader field of psychiatry witnessed exponential growth, interest and investment in neuroscience and cognitive sciences (Insel et al., 2010) and, as a corollary, their associated foci on objectivism and reductionism (Kirmayer & Crafa, 2014).

These disciplines were progressively seen as the most essential components of research in epidemiology and the social sciences, as a way to align different levels of knowledge, from the social world to the molecular underpinnings of neuronal functioning:

> *There has been a recent upsurge of evidence implicating social experiences and environments in the etiology of psychosis [...]. Perhaps most importantly, several plausible biological and psychological mechanisms have been identified [...]. Perhaps the most significant recent*

> *advance is the realization that genes and environment frequently interact to shape adult outcomes, including psychosis. (Morgan & Hutchinson, 2010a, p. 707)**

Proposed explanatory models encompassing biological, social, and psychological levels became more frequent, and many concurred that “to fully understand, prevent, and treat schizophrenia and other brain disorders, we need to understand the relationships between social context, stress, and brain health that cut across diverse psychiatric and neurological conditions” (Wager & Gianaros, 2014, p. 622)*.

Nonetheless, it did not take long for some scholars to caution that an excessive focus on biology was leaving little space for the social, thus significantly compromising the aim of interdisciplinarity: “The prevailing attitude in the North American psychiatric literature continues to be that psychotic disorders arise principally from biological factors; social causes of psychosis remain neglected [...]. The lack of North American psychiatric literature on this topic is startling” (Jarvis, 2007b, p. 275)*. Jarvis (2007b) * has also suggested that this “pervasive neglect of social factors in the aetiology of psychosis” could be explained by historical and cultural factors that “encourage scientific inquiry in some domains while limiting work in other areas” (Jarvis, 2007b, p. 275). Perhaps, as mentioned by Selten & Cantor-Graae (2010)*, one explanation for this could be that:

> *Psychiatrists remember the dogma from their textbooks that the rates of schizophrenia do not vary between sites, sexes, ethnic or cultural groups and that the heritability of the disorder is about 80–85%. Consequently, so they believe, there is hardly any room for an environmental effect. (p. 731)*

Discussion

The three discursive themes that we identified in the analyzed opinion texts spanning the last 30 years were: institutional racism in psychiatry; psychiatry as a scientific discipline that sees and treats all patients equally; and the social locus of high rates of psychosis. These themes express attempts to make sense of, integrate or choose from among different (and many times divergent) discourses to explain the epidemiological findings around the reported higher psychosis risk (rates of psychotic disorders) among minoritized populations and, at a broader level, to explain psychosis. They also incorporate the struggle that exists within psychiatry to reconcile different explanations, and they show that—typically—explanations that are aligned with the biomedical model tend to dominate and exclude others, even when there is a commitment to interdisciplinarity (Jarvis, 2007a). Although it is possible (and even desirable) for people endorsing different discourses in psychiatry to communicate and work together (Campaner, 2014; Kendler et al., 2011; Murphy, 2006, 2010), including by focusing on pragmatic goals and on what is relevant for practice and policy, professional rivalry and internal imbalances of power have been pointed out as major obstacles for communication between those who offer different explanations and causal theories (Cooper, 2007). Our results highlight that, on the one hand, primacy is placed on the medical model and associated theories that focus on universal entities and essences, detached from their social and cultural trappings. On the other hand, there is the belief that psychiatry and its products (such as diagnosis) are socially constructed and influenced by cultural attitudes and power hierarchies. Therefore, the foundations of psychiatric theory and practice deserve careful critique and questioning.

We argue that several events which were concomitant with the analyzed discourses played a crucial role in shaping and shifting academic talking points. For instance, in the 1990s, the public events raising concern over racism in British institutions prompted an important discussion between scholars, which motivated the development of race equity polices for mental health. Nevertheless, these discussions also fuelled a strong countermovement, as uncovering racism and its effects seemed to elicit deep anxieties and uncertainties, provoking strong reactions. The failure to commit to a reconciliatory perspective may have hindered the implementation of race equity policies and associated intervention programs in the UK (Bhui et al., 2012), as evinced by the scarcity of concrete interventions that target the social determinants of psychosis (either in clinical work or through policy development) in the current literature. Furthermore, in many settings, the emphasis on interventions tackling institutional racism in psychiatry has faded over time or shifted towards a discourse on cultural competence that—despite its enormous value—risks being elusive (especially when unaccompanied by pragmatic guidance) and too often lacks explicit references to racial stratification and institutional racism (Nazroo et al., 2020).

The fact that the discussion of the interplay among issues of race, ethnicity, migration and psychosis nearly disappeared from the mainstream North American literature for several decades is also a manifestation of how historical and socio-political contexts shape professional and academic discourses. In fact, these issues were intensely debated in the USA during the 1960s, 1970s and 1980s (Adebimpe, 1981; De Hoyos & De hoyos, 1965; Neighbors et al., 1989; Simon et al., 1973) when misdiagnosis took precedence, favouring an interpretation of findings that highlighted the weight of racial stereotypes in diagnostic procedures and the ways in which established powers (and psychiatry in particular) perniciously used science to validate social stratification based on race (Jarvis, 2008; Metzl, 2010). The adoption of misdiagnosis over other explanations remains prevalent in North American academic psychiatry (Gara et al., 2019;

Hairston et al., 2019; Hampton, 2007; Olbert et al., 2018; Schwartz et al., 2019). Even though this was an important discourse switch in the 1970s after a long legacy of racial oppression and marginalization closely connected with psychiatric practices (Jarvis & Kirmayer, 2021), it may also have had the unintended effect of detracting from discourses on the social determinants of mental health and on how these affect some populations more than others (Gee & Ford, 2011). Meanwhile, the interest in biological psychiatry discourses grew and has been dominating professional conversations and scientific priorities in North America (Compton & Guze, 1995). That kind of focus, in turn, might have had the effect of situating the problem in individuals, disregarding the importance of structural racism in shaping risk for mental disorders and thus reinforcing the otherness and inferiority labels attached to minority populations, especially those with mental illnesses. However, a change of discourses seems to be emerging, notably in North America, at a time when movements such as Black Lives Matter have prompted an increase in references to racism in literature (Krieger et al., 2021). Indeed, new research is being produced looking at how structural racism and its relationship with intersecting aspects of social disadvantage may relate to psychosis development, pathways to care and illness outcomes (Anglin et al., 2021; Jones et al., 2019, 2021; Rosen et al., 2017). At the same time, public acknowledgements of the pervasiveness of racism within academia have also been made (Ben-Cheikh et al., 2021; Canady, 2021).

Importantly, discursive constructions that focus on institutional racism have been more dominant in the USA, while in the UK (and other European countries), there has been greater emphasis on social determinants and migration experiences. This variation should be understood considering the differential historical context of these two nations, a settler society and a colonizer society, and the ways in which otherness is constructed and played out in such contexts. This is reflected, for instance, in the ways that official statistical agencies categorize ethnic groups—along racial categories in the USA and categories based on self-ascribed ethnicity in the UK (as per the country of origin of an individual or their parents/grandparents) (Jarvis, 2008).

The results of this study also show how deeply power dynamics determine which discourses are given voice (Foucault, 1972). For instance, it is worth noting that, over the last 30 years, most editorials, opinion pieces or commentaries on the rates of psychosis in ethnic minorities were written by UK-based (and to a lesser extent USA-based) scholars, most of them psychiatrists and university professors, holding positions of power in renowned institutions and working in the fields of clinical, biological and epidemiological psychiatry and (to a much lesser extent) social sciences (see Table 1). Furthermore, the academic discourses explored in this article seemed to be predominately disconnected from other forms of knowledge. Apart from a few exceptions (Fernando, 1998; Sashidharan, 2001), the opinions of individuals with psychosis belonging to ethnic minorities were not the focus of the discussion but were relegated to the background, or most commonly, completely absent. The fact that lived experience has rarely been sought in this literature has been highlighted by some authors as a major limitation for progress in the field of psychosis (Jones & Shattell, 2016). In fact, publications addressing the lived experience of psychosis in minoritized populations (Ferrari et al., 2015; Jones et al., 2021; Lawrence et al., 2021a,2021b; McCabe & Priebe, 2004; Whitley et al, 2016), and/or assessing their opinions on the topics covered by this paper (Schofield et al., 2019), are scarce.

Several study limitations should be noted. The chosen timeframe as well as document type may have resulted in a restricted collection of materials considered in our analysis. As a critical discourse analysis, we have attempted to situate our findings within a broader understanding of social relations, power structures, and discursive context. As such, in our results, we refer to articles and analyses that were not included in the formal analysis and chosen timeframe. In doing so, we recognize that other contextual features could shift the ways that our discursive themes intersect or could emphasize different aspects of these. Likewise, the choice to restrict the searches to papers published in English excluded a group of discourses from outside the Anglosphere that pertain to different schools of thought, such as those from the Francophone world (Radjack et al., 2012). We chose to analyze editorials, letters, opinion articles and commentaries given their explicit focus on providing an elaborate opinion on a given topic. Nonetheless, a limitation of our study is that it did not include original papers, whose discussions and to a lesser extent abstracts, also contain interpretations and speculations about findings. Furthermore, by browsing documents within mainstream journals and databases, the analyzed data corpus was a priori restricted to discourses that make it into these platforms, which, by a process of epistemic injustice, are typically the ones produced by scholars originating from Euro-American (and mostly Anglophone) countries (Bhakuni & Abimbola, 2021). Moreover, this methodology may have also led us to miss the voices/discourses of individuals with lived experience (or of survivor-researchers). Additionally, we decided to target papers on discourses around the epidemiological findings regarding immigrants and ethnic minorities (in general) and their putative higher risk for psychosis. Had we specified our research terms to, for instance, “refugees”, we may have found a different set of discourses, as the experiences of refugees may differ considerably from those of other migrant or ethnic minority groups.

The discourses portrayed in this study should not be understood in a simplistic manner. The issues approached here are complex and so are peoples’ opinions about them, which translate into multi-layered, sometimes contradictory and often changing views and explanations. While there was an effort to frame most of the excerpts within particular socio-political and scientific environments, an extensive contextual account would undoubtedly provide a more comprehensive, situated and embodied portrait of the various lines of discourse. Nevertheless, we believe that we have described and analyzed in considerable depth the kind of discourses that are accessible to individuals interested in the topics of race, ethnicity, migration and psychosis, and in particular, the findings of higher rates of psychosis among immigrants and ethnic minorities. In so doing, we attempted to highlight important aspects of these discourses, namely their action-prone, active and influential properties, aligned with different perspectives and philosophical standings that have played out across geographies.

A final limitation of this study relates to how its authors work in the fields of social and transcultural psychiatry and early intervention for psychosis without lived experience perspectives. This may have influenced the interpretation of the results towards a particular worldview, one that considers the social and cultural embeddedness of experience, meaning and knowledge systems, while valuing evidence-based practices and epidemiology studies that put forward concrete systemic health inequities. Nonetheless, we believe that the steps taken to enhance the study's rigor (such as the clarification of the authors' positionality and the consultation with specialists with distinct academic backgrounds) helped attenuate this limitation.

Conclusion

By analyzing scholars' discourses gathered from psychiatric literature on issues of migration, race, ethnicity and psychosis, this article found evolving perspectives on how sociocultural dynamics are integrated into explanatory models of psychosis. Our work highlights the relevance of historical, social, cultural and political factors in shaping academic knowledge, and the role that hierarchies of power play in influencing the discourses of psychiatric research and practice. The paradigms, subjects, objects and methods of research and the interpretation and use of its results are defined by the beliefs, philosophical commitments and socio-political positions of a few actors, mostly from Anglosphere academia. Despite discourse about the higher rates of psychosis among immigrants and ethnic minorities shifting towards social determinants, the focus remains at the individual level, with limited attention to subjectivity, diversity and social context. The evolution and interplay of, and the varying levels of importance accorded to, explanations for the higher rates of psychosis may have acted as distractions and thus hindered meaningful progress towards concrete solutions for tackling institutional racism and addressing social determinants in prevention and intervention.

Going forward, research in the field of migration, race and psychosis should prioritize the perspectives, wisdom and subjective experiences of persons with psychosis from migrant and ethnic minority groups and view them as unique knowledge producers. This could entail everything from qualitative inquiries to including them in all phases of research development. Finally, what is warranted is a commitment to interdisciplinarity and a broader, intersectional approach to social determinants of mental health that go beyond controlling for individual level variables to take into account local, institutional and larger societal processes. From such an approach, along with a critical posture in the field that engages with the social, historical and political contexts of prevailing discourses, new and creative possibilities could arise, not only to explain and understand psychosis more comprehensively but also to provide solutions that improve mental health at the individual and societal level.

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Table 1.

Articles included in the analysis

Name of the article	**Reference**	**Profession(s) of corresponding author**	**Affiliation**	**Journal**	**Country (journal/ author)**	**Type of article**	**Themes and sub-themes**
Ethnic minorities and the psychiatric system	Fahy & Dunn, 1990	Psychiatrist, professor and researcher	Institute of Psychiatry de Crespigny Park	*The British Journal of Psychiatry*	UK/UK	Letter	Psychiatry as a scientific discipline that sees and treats all patients equally
RE: Ethnic minorities and the psychiatric system	Littlewood, 1990	Psychiatrist, Anthropologist, professor and researcher	University College and Middlesex school of Medicine	*The British Journal of Psychiatry*	UK/UK	Reply	Institutional racism in psychiatry; Misdiagnosis
Racial Stereotypes	Fernando, 1991	Psychiatrist, professor and researcher	Chase Farm Hospital	*The British Journal of Psychiatry*	UK/UK	Letter	Institutional racism in psychiatry; Misdiagnosis
Rethinking the relationship between ethnicity and mental health: the British Fourth National Survey of Ethnic Minorities	Nazroo, 1998	Sociologist, professor and researcher	Policy Studies Institute	*Social Psychiatry Psychiatric Epidemiol*	DE/UK	Editorial	Institutional racism in psychiatry; Misdiagnosis; Problematizing psychiatry as a discipline
To the Editor:	Fernando, 1998	Psychiatrist, professor and researcher	Tizard Centre, University of Kent and Canterbury	*Psychological Medicine*	UK/UK	Letter to the editor	Institutional racism in psychiatry; Misdiagnosis; Problematizing psychiatry as a discipline
RE: The Author replies	Harrison, 1998	Psychiatrist, researcher and professor	University of Bristol	*Psychological Medicine*	UK/UK	Reply	Psychiatry as a scientific discipline that sees and treats all patients equally
RE: Roasting Roast Breadfruit psychosis	Ojo, 1999	Psychiatrist	Lewisham & guys mental health nhs trust	*Psychiatric Bulletin*	UK/UK	Letter	Psychiatry as a scientific discipline that sees and treats all patients equally

Name of the article	**Reference**	**Profession(s) of corresponding author**	**Affiliation**	**Journal**	**Country (journal/ author)**	**Type of article**	**Themes and sub-themes**
RE: Roasting Roast Breadfruit psychosis	Fernando, 1999	Psychiatrist, professor and researcher	Tizard Centre, University of Kent and Canterbury	*Psychiatric Bulletin*	UK/UK	Reply	The social locus of high rates; Institutional racism in psychiatry; Problematizing psychiatry as a discipline
RE: Roasting Roast Breadfruit psychosis	Littlewood, 1999	Psychiatrist, Anthropologist, professor and researcher	University College Center for Medical Anthropology	*Psychiatric Bulletin*	UK/UK	Reply	The social locus of high rates; Aiming for interdisciplinarity
RE: Roasting Roast Breadfruit psychosis	Cornwall, 1999	Psychiatrist, professor and researcher	Royal Victoria Infirmary	*Psychiatric Bulletin*	UK/UK	Reply	Institutional racism in psychiatry; Problematizing psychiatry as a discipline
RE: Roasting Roast Breadfruit psychosis	Branton, 1999	Psychiatrist, researcher and professor	High Royds Hospital	*Psychiatric Bulletin*	UK/UK	Reply	Institutional racism in psychiatry; Misdiagnosis
RE: Post colonialism and mental health – Understanding the Roast Breadfruit	Hickling & Hutchinson, 2000	Psychiatrist, researcher and professor	Psychotherapy Associates International Ltd.	*Psychiatric Bulletin*	UK/UK	Reply	Institutional racism in psychiatry; Misdiagnosis; Problematizing psychiatry as a discipline
Something borrowed from the blues? We can use Lawrence inquiry findings to help eradicate racial discrimination in the NHS	McKenzie, 1999	Psychiatrist, researcher and professor	King's College London	*British Medical Journal*	UK/UK	Editorial	Institutional racism in psychiatry
Racism in Psychiatry Necessitates Reappraisal of General Procedures and Eurocentric Theories	Sashidharan & Francis, 1999	Psychiatrist, professor and researcher	Northern Birmingham Mental Health NHS Trust	*British Medical Journal*	UK/UK	Letter	Institutional racism in psychiatry; Misdiagnosis; Problematizing psychiatry as a discipline

Name of the article	**Reference**	**Profession(s) of corresponding author**	**Affiliation**	**Journal**	**Country (journal/ author)**	**Type of article**	**Themes and sub-themes**
Are there bullets in the smoking gun?	Jones, 1999	Psychiatrist, professor and researcher	University of Nottingham	*British Journal of Psychiatry*	UK/UK	Letter	Institutional racism in psychiatry; Misdiagnosis
The jury is still out	King, 1999	Epidemiologist, professor and researcher	University College Medical School	*British Journal of Psychiatry*	UK/UK	Letter	Institutional racism in psychiatry; Misdiagnosis
Institutional racism in British psychiatry	Sashidharan, 2001	Psychiatrist, professor and researcher	Northern Birmingham Mental Health NHS Trust	*Psychiatric Bulletin*	UK/UK	Comment	Institutional racism in psychiatry; Misdiagnosis; Problematizing psychiatry as a discipline
Racial discrimination and mental illness	Eagles, 2003	Psychiatrist	Adult Mental Health Directorate	*British Journal of Psychiatry*	UK/UK	Letter	Psychiatry as a scientific discipline that sees and treats all patients equally; Aiming for interdisciplinarity
Constraints on the validity of black/white differences in epidemiologic measurements	Adebimpe, 2003	Psychiatrist, professor and researcher	Department of Psychiatry, Mercy Providence Hospital,	*Journal of the National Medical Association*	USA/USA	Comment	The social locus of high rates; Institutional racism in psychiatry; misdiagnosis
A second opinion on the use of white norms in psychiatric diagnosis of black patients	Adebimpe, 2004	Psychiatrist, professor and researcher	Allies behavioral center	Psychiatric Annals	USA/USA	Comment	Institutional racism in psychiatry; misdiagnosis
Training in Transcultural Psychiatry to Reduce Racial and Ethnic Disparities	Adetunji et al., 2004	Psychiatrist	Drexel University College of Medicine in Philadelphia	*Psychiatric Services*	USA/USA	Letter to the editor	The social locus of high rates; Institutional racism in psychiatry Misdiagnosis
The prejudices of good people	Esmail, 2004	General practitioner, professor and researcher	Medical Practitioners Union, MSF Centre, London	*British Medical Journal*	UK/UK	Editorial	Institutional racism in psychiatry; Problematizing psychiatry as a discipline

Name of the article	**Reference**	**Profession(s) of corresponding author**	**Affiliation**	**Journal**	**Country (journal/ author)**	**Type of article**	**Themes and sub-themes**
Immigration and schizophrenia: the social causation hypothesis revisited	Cooper, 2005	Psychiatrist, professor and researcher	Section of Old Age Psychiatry, Institute of Psychiatry	*British Journal of Psychiatry*	UK/UK	Editorial	The social locus of high rates
Social defeat: risk factor for schizophrenia?	Selten & Cantor-Graae, 2005	Professor and researcher	University Medical Centre Utrecht	*British Journal of Psychiatry*	UK/NL	Editorial	The social locus of high rates; Psychiatry as a scientific discipline that sees and treats all patients equally
Race and mental health: there is more to race than racism	Singh & Burns, 2006	Psychiatrist, professor and researcher	University of Warwick	*British Medical Journal*	UK/UK	Comment	Psychiatry as a scientific discipline that sees and treats all patients equally
Institutional racism in psychiatry: lessons from inquiries	Singh, 2007	Psychiatrist, professor and researcher	University of Warwick	*Psychiatric Bulletin*	UK/UK	Comment	Psychiatry as a scientific discipline that sees and treats all patients equally
RE: Searching for racists under the psychiatric bed	Murray & Fearon, 2007	Psychiatrist, researcher and professor	King's College London	*Psychiatric Bulletin*	UK/UK	Reply	Psychiatry as a scientific discipline that sees and treats all patients equally
RE: Institutional racism in mental health services does not imply racism in individual psychiatrists	Heginbotham & Patel, 2007	Professor and researcher	Mental Health Act Commission	*Psychiatric Bulletin*	UK/UK	Reply	The social locus of high rates; Institutional racism in psychiatry
RE: Better mental healthcare for minority ethnic groups - moving away from the blame game and putting patients first	McKenzie & Bhui, 2007	Psychiatrist, researcher and professor	University of Central Lancashire, University College London	*Psychiatric Bulletin*	UK/UK	Reply	The social locus of high rates; Institutional racism in psychiatry; Problematizing psychiatry as a discipline
Researching protective and promotive factors in mental health	Patel & Goodman, 2007	Psychiatrist, researcher and professor	London School of Hygiene & Tropical Medicine	*International Journal of Epidemiology*	UK/UK	Editorial	The social locus of high rates

Name of the article	Reference	Profession(s) of corresponding author	Affiliation	Journal	Country (journal/ author)	Type of article	Themes and sub-themes
Commentary: Race and mental health – more questions than answers	Williams & Earl	Sociologist, professor and researcher	Harvard School of Public Health	*International journal of epidemiology*	UK/USA	Comment	The social locus of high rates; Institutional racism in psychiatry; Misdiagnosis
Rethinking Social Causes of Psychosis	Jarvis, 2007b	Psychiatrist, researcher and professor	McGill University	*The Canadian Journal of Psychiatry*	CAN/CAN	Guest editorial	The social locus of high rates
Does misdiagnosis explain the schizophrenia epidemic among immigrants from developing countries to Western Europe?	Selten & Hoek, 2008	Professor and researcher	University Medical Centre Utrecht	*Social Psychiatry Psychiatric Epidemiology*	GER/NL	Editorial	The social locus of high rates; Psychiatry as a scientific discipline that sees and treats all patients equally
The Role of Epigenetics in the Raised Incidence Rates of Psychoses Among Migrant Groups	Peedicayil, 2009	Pharmacologist, Professor and researcher	Christian Medical College	*Archives of General Psychiatry*	USA/IND	Letter to the editor	Aiming for interdisciplinarity
The social determinants of psychosis in migrant and ethnic minority populations: a public health tragedy	Morgan & Hutchinson, 2010a	Psychiatrist, researcher and professor	King's College London	*Psychological Medicine*	UK/UK	Editorial	The social locus of high rates; Aiming for interdisciplinarity
RE: The denial of a psychosis epidemic	Selten & Cantor- Graae, 2010	Researcher and professor	University Medical Centre Utrecht	*Psychological Medicine*	UK/NL	Reply	The social locus of high rates; Psychiatry as a scientific discipline that sees and treats all patients equally
RE: Building consensus for moving forward	McKenzie, 2010	Psychiatrist, researcher and professor	University of Toronto	*Psychological Medicine*	UK/CAN	Reply	The social locus of high rates; Institutional racism in psychiatry

Name of the article	**Reference**	**Profession(s) of corresponding author**	**Affiliation**	**Journal**	**Country (journal/ author)**	**Type of article**	**Themes and sub-themes**
RE: Psychosis in migrant and minority populations: prescriptions for scientific and social policy	March et al., 2010	Epidemiologist, professor and researcher	Mailman School of Public Health, Columbia University	*Psychological Medicine*	UK/USA	Reply	The social locus of high rates; Institutional racism in psychiatry
RE: Response to 'The social determinants of psychosis in migrant and ethnic minority populations: a public health tragedy'	Singh, 2009	Psychiatrist, professor and researcher	Warwick Medical School, University of Warwick	*Psychological Medicine*	UK/UK	Reply	Psychiatry as a scientific discipline that sees and treats all patients equally
RE: Prevention is better than cure: a reply to McKenzie, March et al. and Selten & Cantor-Graae	Morgan & Hutchinson, 2010b	Psychiatrist, professor and researcher	King's College London	*Psychological Medicine*	UK/UK	Reply	The social locus of high rates
Incidence of schizophrenia among Moroccan immigrants to the Netherlands	Selten et al., 2010	Professor and researcher	Maastricht University Medical Centre	*Schizophrenia Research*	USA/NL	Letter to the editor	Psychiatry as a scientific discipline that sees and treats all patients equally; The social locus of high rates
RE: Response to letter written by Selten et al.	Zandi, Havenar, Kahn, et al., 2010	Psychiatrist and researcher	Symfora Group, Institute for Mental Health Care	*Schizophrenia Research*	USA/NL	Reply	Institutional racism in psychiatry; Misdiagnosis
Why are the mentally ill still bearing arms?	Metzl, 2011	Psychiatrist, professor and researcher	Vanderbilt University, Center for Medicine, Health, and Society	*The Lancet*	UK/USA	Comment	Institutional racism in psychiatry; Problematizing psychiatry as a discipline; Misdiagnosis
Migrant status, vitamin D and risk of schizophrenia	McGrath, 2011	Psychiatrist, professor and researcher	Queensland Brain Institute, University of Queensland	*Psychological Medicine*	UK/UK	Letter to the editor	Aiming for interdisciplinarity

Name of the article	Reference	Profession(s) of corresponding author	Affiliation	Journal	Country (journal/ author)	Type of article	Themes and sub-themes
Psychotic experiences: disadvantaged and different from the norm	van Os, 2012	Psychiatrist, professor and researcher	School of Mental Health and Neuroscience, Maastricht University	*British Journal of Psychiatry*	UK/NL	Editorial	The social locus of high rates; Aiming for interdisciplinarity
Diagnostic Bias: Racial and Cultural Issues	Escobar, 2012	Psychiatrist, professor and researcher	University of Medicine and Dentistry of New Jersey–Robert Wood Johnson Medical School	*Psychiatric Services*	USA/USA	Comment	Institutional racism in psychiatry; misdiagnosis
Can the new epidemiology of schizophrenia help elucidate its causation?	Abed & Abbas, 2014	Psychiatrist	Mental Health Tribunals	*Irish Journal of Psychological Medicine*	IRE/UK	Editorial	The social locus of high rates
The Social Brain, Stress, and Psychopathology	Wager & Gianaros, 2014	Psychologist, professor and researcher	Department of Psychology and Neuroscience, University of Colorado	*JAMA Psychiatry*	USA/USA	Editorial	Aiming for interdisciplinarity
A new hypothesis about increased rates of schizophrenia among migrants	Geleishvili, 2015	Psychiatrist, professor and researcher	Georgian Mental Health Coalition	*International Journal of Social Psychiatry*	USA/ GEO	Editorial	The social locus of high rates
Ethnic inequalities in severe mental disorders: where is the harm?	Nazroo, 2015	Sociologist, professor and researcher	Centre on Dynamics of Ethnicity and Sociology, University of Manchester	*Social Psychiatry Psychiatric Epidemiology*	GER/UK	Comment	Institutional racism in psychiatry; The social locus of high rates
Migration and psychosis: our smoking lung?	Kirkbride, 2018a	Epidemiologist, professor and researcher	University College London	*World Psychiatry*	USA/UK	Editorial	The social locus of high rates
"Ethnic density of neighbourhood at age 15 modifies the risk for psychosis." So what?	Selten & Termorshuizen, 2017	Professor and researcher	School for Mental Health and Neuroscience, University of Maastricht	*Schizophrenia research*	USA/NL	Comment	The social locus of high rates

Name of the article	Reference	Profession(s) of corresponding author	Affiliation	Journal	Country (journal/ author)	Type of article	Themes and sub-themes
Addressing ethnic inequalities in the pathways to care for psychosis	Kirkbride, 2018b	Epidemiologist, professor and researcher	University College London	*British Medical Journal*	UK/UK	Comment	The social locus of high rates
Psychoses sans Frontieres: towards an interdisciplinary understanding of psychosis risk amongst migrants and their descendants	Dykxhoorn & Kirkbride, 2019	Epidemiologist, professor and researcher	University College London	*Epidemiology and Psychiatric Sciences*	UK/UK	Comment	The social locus of high rates; Aiming for interdisciplinarity
Automatic outgroup categorisation" and limbic brain activation: A mechanism underlying psychosis risk in migrants and city dwellers	Kircher, 2020	Psychiatrist, professor and researcher	University of Marburg	*Schizophrenia research*	USA/GER	Letter to the editor	Aiming for interdisciplinarity
How to serve our ethnic minority communities better	Singh, 2019	Psychiatrist, professor and researcher	Warwick Medical School, University of Warwick	*The lancet Psychiatry*	UK/UK	Comment	Psychiatry as a scientific discipline that sees and treats all patients equally
Advancing the study of local ethnic density and psychosis	Anglin, 2020	Psychologist, professor and researcher	The City College of New York	*The Lancet Psychiatry*	UK/USA	Comment	The social locus of high rates
Racial and ethnic disparities in research and treatment of people with schizophrenia	DeLisi & Sommer, 2021	Psychiatrist, professor and researcher	Cambridge Health Alliance, Harvard Medical School, Boston, Massachusetts	*Current opinion in psychiatry*	USA/USA	Editorial	The social locus of high rates; Institutional racism in psychiatry; Misdiagnosis

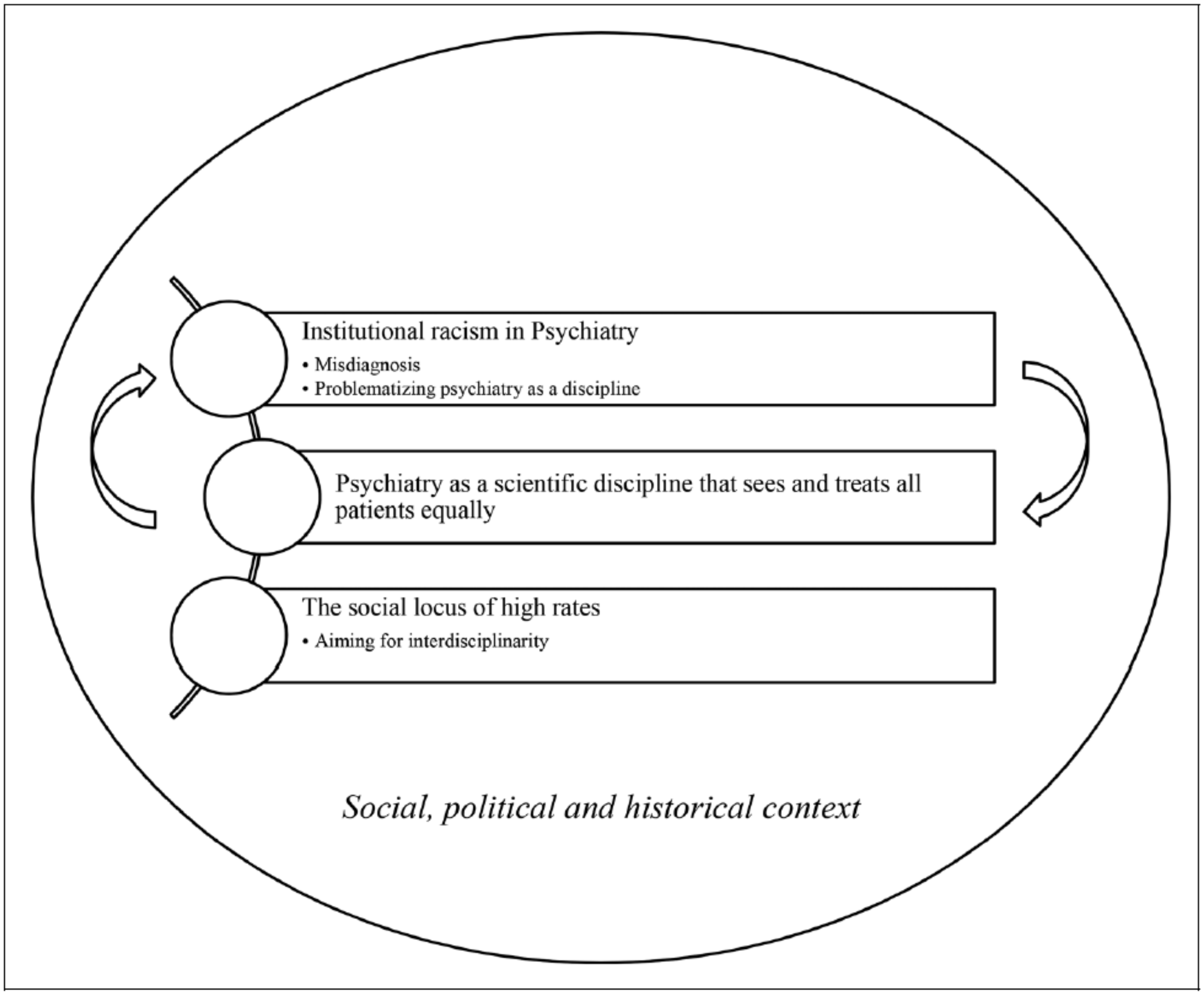

Figure 1. Discursive constructions on explanations for the high rates of psychosis among migrant and ethnic minority populations. The depicted themes and sub-themes represent explanations of the epidemiological findings of higher rates of psychosis in minoritized populations. The themes emerged from a critical discourse analysis of academic papers across a 30-year span. The first two themes were contemporary and evolved in opposition to each other; the third theme represents a more recent focus on the social determinants of (mental) health.

Bridge 1

The higher risk for developing psychosis within immigrant and ethnic minority populations has long been described as a major public health concern. These findings have brought attention to social determinants in mental health and to the need to better understand their impact and intervene at the level of the social environment. However, a previous focus on individual-level (over systemic) risk factors may have hindered action towards novel intervention strategies at the population level. Studies including modifiable societal-level exposures have the potential to directly inform public health interventions and policy. Despite this, few studies looked at the impact of broad area-level variables on the incidence of psychosis among immigrants and ethnic minorities, and no previous studies focused specifically on the impact of policies supporting immigrants. In Manuscript II, using incidence data from five European countries, we assessed the impact of country-level migrant integration policies and regional-level proxies of social deprivation and fragmentation (percentages of unemployment, low education, owner-occupied houses, single person-households) on psychosis risk. The results from this study highlight the relevance of investigating social factors beyond the individual level, and focusing on larger scale, modifiable exposures (considering their differential rates for minority and non-minority populations), e.g., unemployment rates for Asian immigrants in a region. It thus answers previous calls for incorporating multi-level ecological approaches in social epidemiology studies of psychosis.

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Chapter 3: Manuscript II

Migrant integration policies, regional social disadvantage, ethnicity and psychosis risk: Findings from the EU-GEI study

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Abstract

Background: Compared with individual-level factors, macro-level exposures have received less attention in research on the increased risk of psychosis among ethnic minorities. We aimed to investigate the impact of migrant integration policies and area-level social deprivation on higher incidence rates among ethnic minorities.

Methods: This study, conducted between 2010 and 2015, analysed incidence data from five countries from the EUropean network of national schizophrenia networks studying Gene-Environment Interactions [EU-GEI]. The total population was multiplied by the duration of case-ascertainment to estimate person-years. Cases with a non-organic psychotic disorder were included. Exposures included population group (based on self/parental region of origin/self-ascribed ethnicity) and area-level exposures including country-level migrant integration policies and regional-level proxies of social deprivation (percentages of unemployment, low education, owner-occupied houses, single person-households). Negative binomial mixed-effects regression models were fitted to calculate the association between individual and area-level exposures and incidence of psychotic disorders.

Results: The study included 1933 individuals. Supportive migrant policies (IRR: 0.71; 95 % CI 0.68-0.73) and higher percentages of owner-occupied houses (IRR: 0.97; 95 % CI 0.96-0.97) were associated with lower incidence of psychosis. Higher percentages of unemployment (IRR: 1.08; 95 % CI 1.07-1.09) and single person-households (IRR: 1.10; 95 % CI 1.05-1.14) were associated with higher incidence of psychosis. Accounting for policies and area-level social deprivation markers reduced risk estimates among all migrant/ethnic minority groups, compared to the majority population.

Conclusions: This is the first study on the impact of migrant integration policies on psychosis incidence. Migrant integration policies and area-level social deprivation influenced psychosis risk in the overall and minority populations. These findings can inform policies and social epidemiological approaches to studying multi-level exposures in psychosis.

1. Background

An elevated incidence of psychotic disorders has long been reported for some migrant and ethnic minority populations (Radua et al., 2018). Incidence rates seem to be particularly high for racialized (non-White) minorities, and for individuals who have migrated from the Global South to Northern Europe, as is the case for Moroccan and Surinamese in the Netherlands (Selten et al., 2001), and for Black African and Black Caribbean populations in the UK (Tortelli et al., 2015). Known social determinants of psychosis such as parental separation, social disadvantage, discrimination and marginalization are experienced more frequently by some migrant and ethnic minority populations, and may partially explain their higher psychosis risk (Jongsma et al., 2021; Nielsen and Krasnik, 2010; Pearce et al., 2019).

The absolute and relative incidence of psychosis within migrant and ethnic minority populations have been shown to vary considerably across countries (Selten et al., 2020). These findings have been corroborated by the EUropean Network of National Schizophrenia Networks Studying Gene-Environment Interactions (EU-GEI) study conducted in five European countries (UK, Netherlands, Italy, Spain, France) (Termorshuizen et al., 2022). The study found a particularly high incidence of psychosis for minorities of sub-Saharan African heritage across most study sites, for those of North African heritage in the Netherlands, and Black-Caribbean heritage in the UK. Furthermore, absolute risk for the whole population, and relative risk for psychosis among migrants and ethnic minorities were lower in Spain and Italy than in the UK, France and the Netherlands. These findings imply that there may be inter-country variation in rates of psychotic disorders, notably among minority populations. These may be explained, at least partially, by meso- and macro-level environmental factors.

Social factors pertaining to the meso- and macro-level of societies, such as area-level social deprivation, are known to impact mental health, above and beyond their influence through individual-level determinants (Berkman, 2014; Brink et al., 2024; Macintyre et al., 2002). Most previous studies on area-level social factors in relation to minority populations have focused on the potentially protective impact of ethnic density (i.e., living in areas where one's ethnic group comprises a high proportion of the population) (Baker et al., 2021). Area-level social deprivation has been previously associated with higher psychosis risk (Brink et al., 2024; Jongsma et al., 2018; O'Donoghue et al., 2016), and minorities have been historically segregated into socially deprived areas (Anglin et al., 2021). However, the impact of area-level deprivation has yet to be explored among specific population groups. Additionally, macro-level factors, such as policies to support migrants, known to have a profound impact on their well-being and perceived health (Bilgili, 2015; Callens, 2015; de Freitas et al., 2018; Jeffery et al., 2024; Juárez et al., 2019), have not yet been studied for their effect on incidence of psychosis among ethnic minorities.

2. Aims

We aimed to investigate the extent to which migrant integration policies, and proxies of area-level social deprivation explain variation in incidence of psychosis among ethnic minority populations. We hypothesized that less supportive migrant policies and higher levels of social deprivation would be correlated between them and associated with higher incidence of psychosis among ethnic minority populations, via separate and compounding effects. Based on previous studies using EU-GEI data, we expected that ethnic minority population groups would have higher incidence of psychosis than the majority population (Jongsma et al., 2018) with variations across ethnic minority groups (Termorshuizen et al., 2022), but that these variations would at least be partially explained by migrant integration policy scores and proxies of area-level social deprivation.

3. Methods

3.1. Study design and settings

We analysed incidence data from the large multicentre EU-GEI study conducted between 2010 and 2015. The EU-GEI study settings include a range of rural and urban catchment areas, with two sites in the UK (Cambridgeshire, Peterborough and Southeast London), two sites in the Netherlands (Amsterdam and Gouda&Voorhout), six sites in Spain (Madrid, Barcelona, Valencia, Oviedo, Santiago and Cuenca), three sites in France (Paris, Val-de-Marne and Puy de Dôme) and three sites in Italy (Palermo, Bologna and Veneto region). Although the original incidence study also included data from Brazil, we had to exclude it as data for most area-level exposures were only available for Europe.

3.2. Participants

All individuals aged 18-64 years old presenting to specialized mental health services with a first episode of psychosis in one of the European catchment areas of the EU-GEI study were included. Exclusion criteria included a history of previous treatment with antipsychotics, or a secondary psychosis diagnosis. Cases were determined by the presence of a psychotic disorder as per ICD-10 criteria (WHO, 2004). Ethics approval was sought from relevant bodies in each catchment area, allowing for the extraction of basic demographic and clinical data from patient charts.

3.3. Outcome

The researched outcome was an ICD-10 diagnosis of a psychotic disorder (F20-F33), determined by the Operational Criteria Checklist (OPCRIT), applied to semi-structured interviews or clinical case notes (Quattrone et al., 2019). The OPCRIT has shown high reliability in previous studies (Craddock et al., 1996) and the EU-GEI study ($\kappa = 0.7$). Clinical diagnoses were used for cases where the use of OPCRIT was not possible (13.2%). Different interview schedules were used across sites, depending on local expertise. The Schedule for Clinical Assessment in Neuropsychiatry (WHO, 1992) was used in Italy and the UK, the Comprehensive Assessment of Symptoms and History (Andreasen et al., 1992a) in the Netherlands, and the Diagnostic Interview for Genetic Studies (Nurnberger et al., 1994b) in France. All researchers involved in case ascertainment received similar training and regularly received supervision. This study focuses on a broad outcome instead of several specific diagnoses of psychotic disorders in alignment with recent paradigms in psychosis research, that acknowledges the dimensional and evolving nature of psychotic disorders (Reininghaus et al., 2013).

3.4. Population at risk

Following previously published EU-GEI studies (Gayer-Anderson et al., 2020), the population at risk was estimated based on local demographic data available, stratified by age (starting at 18-25 years-old, then 5-year bands until 64 years-old), sex and population group (majority population and minority populations, as defined by local categorizations) (supplementary table 1). To estimate person-years, total population was multiplied by the duration of case-ascertainment in years. Since in France, Spain and Italy, information on parental country of birth is not routinely collected by statistical bureaus, second-generation migrants (at least one parent born abroad) were included in the majority population group. Because this information is available in the Netherlands, first- and second-generation migrants from this country were included within minority population groups. In the UK individuals were classified as belonging to the majority or minority population groups based on self-ascribed ethnicity and country of birth.

3.5. Exposures

Data on age group (stratification used for population at risk), sex, date of assessment in study, personal and parental country of birth and self-ascribed ethnicity were collected from the MRC Sociodemographic schedule (Mallett, 1997), which was completed for all participants at baseline. Building from a previous EU-GEI incidence study (Termorshuizen et al., 2022), based on census classifications in the countries that were part of this study, we divided the minority population group into several sub-groups, based on self/parental region of origin or self-ascribed ethnicity: 1) Western countries (Europe, USA, Canada, Australia, New Zealand and countries of the former Soviet Union with a predominant Christian religion); 2) Middle East (including Turkey, Iran, Iraq, Israel and Egypt); 3) the Maghreb (North-African countries, except Egypt); 4) sub-Saharan Africa; 5) Asia (including states of the former Soviet Union with a predominant Islamic population); 6) Latin America; 7) The Caribbean islands (including Martinique and Guadeloupe, the Netherlands Antilles, Jamaica, Barbados, Trinidad and Tobago), Suriname, Guyana, French Guyana, and other French overseas departments.

Country-level migrant integration policy scores were extracted from mipex.eu. These scores (0-100) are calculated by averaging the scores on over 100 indicators regarding the rights, responsibilities and opportunities of migrants in the host country, across eight policy areas: labour market mobility, health, anti-discrimination, education, naturalisation, permanent residence, family reunification and political participation. The score attributed to each question indicates to what extent a country promoted the integration of migrants compared with the highest standards, as established by scholars/institutions in the field of comparative migrant integration policies. Higher scores indicate more supportive policies for migrants. Since its creation, four methodologically similar editions of the MIPEX [Migrant Integration Policy Index] have been published between 2007 and 2020, with intervening intervals of three to five years. We considered MIPEX 2011 (between 2007 and 2010) and 2015 (between 2011 and 2014) to cover the recruitment timeframe of the EU-GEI study. Health policy scores were not measured for these two editions. Values corresponding to total MIPEX scores were coded based on country and date of assessment of participants in this study (which ranged from 2010 to 2014). When no information was available regarding the date of assessment (22% of participants), the scores pertaining to the 2011 MIPEX edition were used.

Regional-level (Nomenclature of Territorial Units for Statistics/NUTS-2/3 – provincial level) (Eurostat, 2024) data was extracted from the Eurostat Database (www.ec.europa.eu) for percentage of: single person households; owner-occupied houses; unemployment; and of individuals attaining less than primary, primary and lower secondary education [ISCED levels 0-2]. For the latter two variables, we were able to code individual observations by sex and population group [Majority population/Minority from an EU country/Minority from a non-EU country]), as well as by date of enrolment, matching the timeframe coding considered for MIPEX scores.

3.6. Statistical analysis

All analysis were performed using R (4.0.5). Descriptive statistics were used to characterize catchment areas and population groups with respect to the study exposures. Comparisons between groups were performed using Wilcoxon Mann-Whitney tests for continuous variables and Chi-square tests for categorical variables, and Spearman correlations were used to assess relationships between continuous exposure variables. Negative binomial mixed-effects regression models were fitted to calculate incidence rate ratios for different population groups and to estimate the effects of country-level MIPEX and of regional-level variables on incidence of psychosis. All variables of interest were entered in a full multivariable model. The order by which variables were added was based on the study hypothesis and the strength of their association with incidence in univariable analyses. Based on this study's hypothesis, an interaction term between population group and MIPEX was added to the full model. A final multivariable model was chosen using likelihood criteria (assessed via Bayesian Information Criterion). Catchment areas nested in countries were included in all models as a random effect (intercept-level), to account for the hierarchical structure of the data. Age group and sex (and their interaction) were treated as *a priori* confounders.

4. Results

4.1. Descriptive statistics

The total sample included 1,933 individuals, from an original sample of 2,209 individuals who enrolled in EU-GEI across all five European sites (87.5%). Participants from Puy-de-dome (N=42) and Madrid (N=89) were excluded due to a high percentage of missing information on population group (60% and 34%, respectively). Likewise, we excluded participants from Verona (N=104) due to missing denominator information for minority population groups. An additional 41 individuals from the remaining sites were excluded for missing information on age, sex or population group, or due to the impossibility of linking a given case to a denominator, based on available data from local census. In the study sample, most were men (57.5%); nearly half (42.9%) belonged to minority populations, and the median age was 31.5 years (IQR = 18-64) (tables 1 and 2).

We observed the lowest MIPEX scores in France (median = 52.5; IQR = 51-54) and the UK (median = 56.5; IQR = 56-57), and the highest in the Netherlands (median = 64.5; IQR = 61-68), Spain (median = 62.5; IQR = 61-63) and Italy (median = 59.5; IQR = 58-61). Catchment areas across Spain and Italy had the highest regional percentage of owner-occupied houses, but also the highest percentages of low education and unemployment. Catchment areas in France and the Netherlands had the highest regional percentage of single person households. Across nearly all catchment-areas, regional percentages of unemployment and low education were higher among minority populations (table 3).

4.2. Effects of area-level variables and relative risk estimates by population group (unadjusted and adjusted models)

Higher MIPEX scores (IRR: 0.71; 95 % CI 0.68-0.73) and higher percentages of owner-occupied houses (IRR: 0.97; 95 % CI 0.96-0.97) were associated with lower incidence of psychosis for the overall study population. This indicates that a one standard-deviation increase in the MIPEX score and in the rate of owner-occupied houses is estimated to be associated with a decrease in risk of approximately 29% and 3%, respectively. Conversely, higher percentages of unemployment (IRR: 1.08; 95 % CI 1.07-1.09) and of single person-households (IRR: 1.10; 95 % CI 1.05-1.14) were associated with higher incidence of psychosis. Similarly, this indicates that a one-standard deviation increase in rates of unemployment and single person-households would be associated with an increase in risk of psychosis of approximately 8% and 10%, respectively. We did not find an association between low levels of education and incidence of psychosis (IRR 1.00; 95% CI 0.99-1.00). Overall, these estimates held in a multivariable model, accounting for all individual-level and area-level variables (MIPEX scores, and percentages of unemployment, low education and single person households) (table 4). We were unable to include the percentage of owner-occupied houses in the multivariable model due to high collinearity with percentage of single person households (supplementary table 2). We decided to retain the latter variable since this model showed a better fit.

The incidence of psychosis was higher for all minority groups compared with the majority population. This varied by population group, being higher for Sub-Saharan African (IRR: 2.72; 95 % CI 2.26-3.28), North African (IRR: 2.30; 95 % CI 1.83-2.88), Caribbean (IRR: 2.44; 95 % CI 1.99-2.98), Latin American (IRR: 2.44; 95 % CI 1.80-3.29) and Middle Eastern (IRR: 2.63; 95 % CI 1.81-3.81) minorities. Incidence rates were also elevated, although less pronounced, for minorities from Asia (IRR: 1.44; 95 % CI 1.17-1.78) and Western countries (IRR: 1.25; 95 % CI 1.06-1.48). In the multivariable model IRRs attenuated, although modestly, for Sub-Saharan African (IRR: 2.10; 95% CI 1.57-2.80), North African (IRR: 1.76 95% CI 1.27-2.46), Caribbean (IRR: 1.83; 95% CI 1.32-2.52), Latin American (IRR: 1.68; 95% CI 1.12-2.52), and Middle Eastern populations (IRR: 1.67; 95% CI 1.02-2.72). In this model, risk estimates for Asian minorities (IRR: 0.74; 95% CI 0.71-0.78) were significantly lower and were no longer significantly higher for Western minorities (IRR: 0.85; 95% CI 0.66-1.10), compared to the majority population. Risk attenuation among minority populations was mostly accounted for by percentage of unemployment (supplementary table 3). Residual variance in incidence between catchment areas was greatly reduced in the adjusted model including individual-level variables, MIPEX scores, unemployment (%), low educational level (%) and single-person households (%) ($\sigma = 0.01$; $p < 0.001$), as compared with a null model, fitted with random effects ($\sigma = 0.21$; $p < 0.001$), and a model including individual-level variables (age, sex [and their interaction] and population group) ($\sigma = 0.12$; $p < 0.001$) (supplementary figures 1 and 2).

Finally, we tested the effect of an interaction term between population group and MIPEX scores and found that higher MIPEX scores were associated with additional risk reduction among Middle Eastern (IRR: 0.57; 95 % CI 0.45-0.73), Latin American (IRR: 0.64; 95 % CI 0.48-0.84) and Asian minorities (IRR: 0.70; 95 % CI 0.60-0.83), but not for the remaining minority populations, although we were unable to reject the null hypothesis for most interaction term estimates. The association between MIPEX and psychosis risk in the model including the interaction term remained significant (IRR: 0.73; 95 % CI 0.70-0.78), suggesting a protective effect is also present for the majority population (supplementary table 3).

Similar results in terms of the overall effects of area-level variables and the attenuation of estimates for minority groups were obtained when analysis was conducted including the group classified as "Other minorities" (excluded from main analysis whose results are described above), using a dichotomous classification of population group (majority population/minority population) instead of specific minority groups. In this model, adding an interaction term between population group (majority population/minority population) and MIPEX showed that higher MIPEX scores were associated with higher risk reduction for minority, compared to majority groups (supplementary table 4).

5. Discussion

We found that country-level migrant integration policies were associated with the incidence of psychotic disorders, with more stringent migration policies being associated with higher incidence. We also found that adjustment for policies and area-level markers of social deprivation attenuated psychosis relative risk estimates in all migrant and ethnic minority groups (between 11% and 25%), compared to the majority population.

The role of migrant supporting policies

Our study is aligned with previous reports indicating that immigrants in countries with restrictive migrant integration policies report lower health and (mental) well-being (Jeffery et al., 2024; Juárez et al., 2019), and higher levels of psychological symptoms in response to discrimination (de Freitas et al., 2018). Previous studies have found associations between the increased risk of psychosis among minority groups, marginalization/acculturation (Choy et al., 2021) and cultural distance from the host culture (Jongsma et al., 2021). While in line with these findings, our results support the argument that aspects of acculturation that play a role in the mental health of minority populations should be seen not only from the perspective of individuals, but also from that of their social, cultural and political environment. Country-level policies implemented to facilitate or regulate the integration of immigrants are likely to have a profound impact on the day-to-day realities of minority populations, as these policies set the extent to which these individuals share similar rights, responsibilities and opportunities as the general population. This may affect whether and how migrants are able to establish themselves (and their children and families) and integrate in a new country. Furthermore, policies to support migrants are shaped by local cultures, value systems, historical and socio-political contexts, and reflect a particular positioning from host countries regarding migrant and ethnic minority populations. For instance, generous migrant integration policies have been associated with positive attitudes towards migrants, namely, by increasing intergroup contact and thereby reducing the majority's perception of threat posed by immigrants (Bilgili, 2015). While the totality of the migrant experience is difficult to grasp quantitatively because of its complexity, country-level migration policies constitute a readily measurable aspect of migrants' reality because they define the legal and political framework within which migrants acculturate. Interestingly, we observed that living in countries with less restrictive migrant integration policies was associated with decreased incidence of psychosis for both majority and minority populations, even if this effect was more pronounced among some minority populations. One possible explanation is that larger-scale social phenomena are also at place in societies where more generous migrant integration policies are implemented. For instance, higher generalized trust, higher political stability, more investment in welfare and higher levels of community security are more frequent in countries with less restrictive migrant integration policies (Bilgili, 2015; Maksimović and Milosavljević, 2022; Tatarko and Jurcik, 2021).

Our findings are also consistent with previous studies reporting increased incidence of psychosis in geographical areas with higher levels of social deprivation/fragmentation (Brink et al., 2024; Jongsma et al., 2018; O'Donoghue et al., 2016). The present study adds an important nuance to previous evidence, by assessing the impact of these factors across population groups. Our results demonstrate that *proxies* of social deprivation and social fragmentation are not only associated with incidence of psychosis in the overall population, but also explain (partially) a previously reported excess incidence of psychosis among different minority populations. These results extend previous studies of the impact of social disadvantage and social defeat from the individual level to the general population (Jongsma et al., 2018; Morgan et al., 2008; Selten and Cantor-Graae, 2005; Stilo et al., 2017) and minority populations (Jongsma et al., 2021; Tarricone et al., 2021).

Among the different variables tested, percentage of unemployment was the regional factor with greatest explanatory power regarding relative risk for psychosis among minority populations. Indeed, unemployment (at the individual level) has been associated with higher incidence of psychosis and is known to be more prevalent among minority populations (Boydell et al., 2013; Mallett et al., 2002; U. A. Reininghaus et al., 2008). Importantly, however, we coded percentage of unemployment and low education not only by catchment area but also by sex, population group (majority population/minority EU/minority non-EU) and timeframe (matching the MIPEX editions considered in the study). This allowed us to have a more accurate estimate of the impact of these two *proxies* of social disadvantage on the incidence of psychosis. Notably, the use of this coding procedure (instead of considering only one single value per catchment area) produced different results compared with a previous report that had also used the EU-GEI incidence sample, where no significant effect was observed for percentage of unemployment

(Jongsma et al., 2018). This indicates that in attempts to address the socioeconomic determinants of mental health, it would not suffice simply, for example, to boost employment levels in a given region without focusing on ensuring that the benefits accrue equitably to all groups, especially ones known to be disadvantaged.

Regarding the variables for which we did not have access to stratified data, we replicated the results from a previous EU-GEI incidence study (Jongsma et al., 2018) and showed that the incidence of psychosis was associated with both the percentages of owner-occupied houses and single person-households. The percentage of owner-occupied houses is a proxy of socioeconomic status or affluence and an indicator of greater cohesiveness and stability in many societies. This is also borne out by its strongly negative correlation with the percentage of single-person households, which is a proxy for social fragmentation (Jongsma et al., 2018).

5.1. Strengths and limitations

To our knowledge, this is the first study looking at the impact of macro-level factors on the incidence of psychosis among ethnic minority populations. It answers previous calls to extend research on individual-level social disadvantage to larger socio-environmental contexts in understanding the risk for psychosis. By shifting the focus from individual to societal factors in accounting for the risk of psychosis, our research has the potential to inform macro-level health, immigration and social policy. We used data from a large, international incidence study, the EU-GEI, and the Eurostat and the MIPEX, two publicly available databases containing high-quality social statistics.

The EU-GEI is a treated incidence study with a first contact design. Such studies have been reported to underestimate incidence rates, as compared to population-based studies.

Additionally, selection bias may vary across population groups, namely due to different pathways to care (Hogerzeil and Susser, 2017). Finally, despite efforts to homogenize case detection and ascertainment across catchment areas and the fact that services followed similar guidelines, some differences existed between the way services were organized. This may have affected the ability to detect new cases and diagnosis procedures. These potential discrepancies were minimized by the implementation of joint epidemiological training and interrater reliability protocols, the development of leakage studies and the use of semi-structured interview schedules to generate standardized diagnoses (Gayer-Anderson et al., 2020; Jongsma et al., 2018).

The criteria by which persons were categorized as being from a migrant/ethnic minority group were not uniform across sites. All jurisdictions considered individuals' and/or their parents' place of birth in determining minority status, to which the UK, notably, added self-ascribed ethnicity. However, previously published results using EU-GEI incidence data and an overlapping categorization of population group did not suggest that this coding procedure caused significant bias, as risk estimates in the UK were not identified as outliers (Termorshuizen et al., 2022). Secondly, second-generation immigrants had to be categorized as belonging to the majority population in France, Spain and Italy as is done in those jurisdictions. While this source of bias is probably minimal for Spain and Italy, where immigration waves are more recent, this might have contributed to an underestimation of incidence of psychosis among minority populations in France. Third, categorization by population group is inherently limited, as it groups together individuals with very different social, cultural and historical backgrounds. Specifically, we acknowledge that grouping together individuals from an entire continent and labelling one of the groups as "Western minorities" (which notably also includes minorities from Eastern Europe) is reductive and an important limitation of this paper. We kept this classification, however, in order to ensure consistency with labels used in previous EU-GEI papers on incidence across minority groups. Additionally, although flawed, it could be argued that these categorizations represent the ways in which statistical agencies group individuals and communities together. This in turn may reflect meaningful social constructions, that are likely to be associated with concrete consequences for the everyday lives of minoritized populations including social exclusion, discrimination and disadvantage.

Area-level variables were not collected specifically for this study but extracted from publicly available data sources. Data stratified by sex, population group and timeframe were not available for all regional variables, and these were extracted at the NUTS-2/3 level (depending on availability), which correspond to provincial territorial units that were generally larger than the study catchment areas. We were unable to include in our models several known risk factors for psychosis (migration history, drug use, parental history of psychosis, traumatic experiences) as well as markers of social disadvantage at the individual level, since these measures were not available for the incidence study. Some of these factors, whose impact has been further explored in previous EU-GEI studies using case control data, are likely to operate as intervening variables in the pathway between area-level exposures and the incidence of psychosis (Berkman, 2014; Blakely and Subramanian, 2006; Macintyre et al., 2002).

With respect to the MIPEX, some limitations should be noted. First, partly due to the tight timeframe of the EU-GEI study and the inclusion of only 5 countries, we were not able to account for changes in migrant policies over time or a wider range in variance, which would have helped better investigate the effect of policy on the risk of psychosis across population groups. This also means that we were unable to disentangle the effect of MIPEX from case ascertainment bias associated with differences between recruitment sites. Second, although the

MIPEX score includes several indicators across policy areas, it probably does not grasp many other aspects that influence immigrants' lives in their host country. Furthermore, although the focus of MIPEX was on policies, these may not necessarily translate into concrete supports for minoritized communities. Third, whilst operating under the same policies, the geographic regions in this study may not be representative of the values (and social and political positionings) of their countries, particularly large urban centres that may have more open attitudes towards migration. Finally, as detailed data on migrant generation status was only available for a small percentage of study participants, we were unable to examine the differential impacts of migrant policies for first- and second/future-generation immigrants. The effects of migrant policies may be more pronounced for first-generation immigrants. Still, they may also influence second-/future-generation immigrants through their impacts on their parents' and grandparents' lives and therefore their upbringing. For both groups, migrant policies may influence how individuals perceive their community to be seen and supported by their host countries.

Further limitations should be noted regarding our methodology. Even though we considered several variables, we cannot exclude the possibility of residual confounding by other upstream social and political factors that could impact psychosis risk, migrant integration policies and regional-level social deprivation. Furthermore, ecological variables usually present low variability, tend to be highly correlated, and the ways in which they interact and impact psychosis are complex (Diez Roux, 2004).

6. Conclusion

In this study, we observed that country-level migrant integration policies and regional markers of social deprivation were associated with the overall incidence of psychosis and partially explained the excess incidence of psychosis among minority populations. Our results highlight the relevance of looking at social factors beyond the individual, constitute a step forward in multi-level ecological approaches in social epidemiology of psychosis and have the potential to inform policies at a wide scale.

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Table 1. Sample size and demographic characteristics of the incidence sample

Setting	**Majority population, N (%)**	**Minority populations, N (%)**	**Male, N (%)**	**Female, N (%)**	**Age, median (IQR)**	**Total, N**
London	64 (24.4)	198 (75.6)	140 (53.4)	122 (46.6)	32.0 (18-64)	262
Cambridge	149 (58.4)	106 (41.6)	145 (56.9)	110 (43.1)	28.0 (18-64)	255
Amsterdam	75 (26.9)	204 (73.1)	178 (63.8)	101 (63.8)	32.0 (18-64)	279
Gouda & Voorhout	125 (75.8)	40 (24.2)	100 (60.6)	65 (39.4)	29.0 (18-61)	165
Barcelona	80 (75.5)	26 (24.5)	62 (58.5)	44 (41.5)	29.0 (18-64)	106
Valencia	47 (83.9)	9 (16.1)	31 (55.4)	25 (44.6)	29.0 (18-60)	56
Oviedo	59 (79.7)	15 (20.3)	37 (50.0)	37 (50.0)	33.5 (18-63)	74
Santiago	35 (97.2)	1 (2.8)	21 (58.3)	15 (41.7)	33.0 (18-56)	36
Cuenca	20 (74.1)	7 (25.9)	21 (77.8)	6 (22.2)	26.0 (18-51)	27
Paris	66 (55.0)	54 (45.0)	83 (69.2)	37 (30.8)	30.5 (18-64)	120
Val - de -Marne	129 (61.7)	80 (38.3)	107 (51.2)	102 (48.8)	30.0 (18-64)	209
Bologna	116 (70.3)	49 (29.7)	86 (52.1)	79 (47.9)	30.0 (18-59)	164
Palermo	157 (88.3)	22 (12.3)	100 (55.9)	79 (44.1)	31.0 (18-63)	179
Total	1103 (57.1)	830 (42.9)	1111 (57.5)	822 (42.5)	30.0 (18-64)	1932
χ^2 (df)	405.07 (12); p < 0.001		25.627 (12); p = 0.01		31.45 (12); p = 0.002	

Table 2: Sample size and percentages by population group (based on [self/parental] region of origin or self-ascribed ethnicity)

Setting	**Western Minorities[a], N (%)**	**Middle East[b], N (%)**	**North Africa, N (%)**	**Sub-Saharan Africa, N (%)**	**Asia, N (%)**	**The Caribbean, N (%)**	**Latin America, N (%)**	**Other minorities, N (%)**
London	30 (11.5)	10 (3.8)		64 (24.4)	21 (8.0)	44 (16.8)		29 (11.8)
Cambridge	51 (20)	3 (1.2)		13 (5.1)	26 (10.2)	7 (2.8)		6 (2.4)
Amsterdam	37 (13.3)	14 (5.0)	31 (11.1)	27 (9.7)	19 (6.8)	65 (23.3)	11 (4.0)	
Gouda & Voorhout	8 (4.9)	2 (1.2)	18 (10.9)	3 (1.8)	4 (2.4)	1 (0.6)	4 (2.4)	
Barcelona	8 (7.6)		4 (3.8)	2 (1.9)	3 (2.8)		9 (8.5)	
Valencia	1 (1.8)		1 (1.8)	1 (1.8)			6 (10.7)	
Oviedo	4 (5.4)		2 (2.7)		1 (1.35)		8 (10.8)	
Santiago	1 (2.8)							
Cuenca	2 (7.4)		2 (7.4)				3 (11.1)	
Paris	5 (4.2)		10 (8.3)	14 (11.7)		4 (3.3)		33 (27.5)
Val-de-Marne	1 (0.5)		11 (5.3)	11 (5.3)		8 (3.8)		49 (23.4)
Bologna	15 (9.1)	1 (0.6)	8 (4.9)	4 (2.4)	17 (10.3)		4 (2.4)	
Palermo	4 (2.2)		1 (0.6)	8 (4.5)	7 (3.9)		2 (1.1)	
Total	174 (9.0)	30 (1.6)	88 (4.6)	147 (7.6)	100 (5.2)	130 (6.7)	47 (2.4)	114 (5.9)

[a] Paris and Val-de-Marne: minorities from Europe or Turkey; London and Cambridge: minorities self-identified as White Irish, Other White or Travellers; all other settings: minorities from Europe, North America, Australia and New Zealand. [b] London and Cambridge: self-identified as Arab; all other settings: incl. Turkey, Israel, Egypt, Iran, Iraq and other countries in the Middle East region.

Table 3: Distribution of area-level variables by catchment area for ethnic minority and majority groups

Setting	**% Low educ. level[a] median (IQR)**			**% Unemployment[a] median (IQR)**			**% Owner occupied houses[b]**	**% Single person households**	**MIPEX score[d] median (IQR)**
	Total	Majority population	Minority population	Total	Majority population	Minority population			
UK									56.5 (56-57)
London	18.7 (9.7-23.8)	19.6 (17.3-23.8)	18.7 (9.7-23.4)	8.9 (5.9-10.6)	7.9 (7.1-8.3)	8.9 (5.9-10.6)	35.0	35.9	
Cambridge	17.5 (15.3-30.6)	24.7 (22.4-30.6)	17.5 (15.3-30.2)	5.9 (4.9-14.8)	5.5 (4.9-6.5)	10.4 (5.1-14.8)	67.0	28.7	
The Netherlands									64.5 (61-68)
Amsterdam	34.5 (17.5-37.7)	26.5 (25.3-28.1)	34.5 (17.5-37.7)	9.8 (3.1-12.0)	4.7 (3.1-5.6)	9.8 (5.8-12.0)	46.3	41.5	
Gouda & Voorhout	38.5 (20.5-44.4)	30.3 (28.4-33.2)	38.5 (20.5-44.4)	11.1 (3.4-15.9)	5.1 (3.4-6.3)	11.1 (8.5-15.9)	58.7	33.3	
Spain									62.5 (61-63)
Barcelona	54.5 (20.3-61.3)	44.6 (39.3-47.8)	54.5 (20.3-61.3)	23.9 (9.9-38.2)	13.7 (9.9-17.5)	23.9 (11.3-38.2)	74.3	23.3	
Valencia	42.6 (32.4-56.1)	52.1 (46.9-56.1)	38.7 (32.4-43.1)	24.8 (12.6-38.0)	18.9 (12.9-24.2)	24.8 (12.6-38.0)	82.7	24.1	
Oviedo	55.1 (37.8-58.7)	43.9 (37.8-47.3)	55.1 (40.7-58.7)	24.2 (9.9-41.9)	16.1 (9.9-19.5)	30.6 (15.6-41.9)	79.9	27.2	
Santiago	49.9 (45.0-55.0)	50.3 (45.0-53.8)	49.6 (48.0-55.0)	18.8 (9.4-33.1)	15.5 (9.4-19.4)	20.9 (11.6-33.1)	77.9	22.3	
Cuenca	49.6 (37.7-61.7)	57.0 (50.6-61.7)	47.3 (37.7-51.3)	27.4 (11.0-42.5)	19.6 (11.0-29.2)	32.7 (23.7-42.5)	81.9	21.6	
France									52.5 (51-54)
Paris	42.4 (21.4-56.8)	34.1 (21.4-47.2)	42.4 (23.2-56.8)	13.1 (4.1-15.4)	7.1 (6.1-8.2)	13.5 (4.1-15.4)	47.6	35.8	
Val-de-Marne	42.4 (21.4-56.8)	34.1 (21.4-47.2)	42.4 (23.2-56.8)	13.1 (4.1-15.4)	7.1 (6.1-8.2)	13.5 (4.1-15.4)	47.6	35.8	
Italy									59.5 (58-61)
Bologna	45.2 (26.5-56.0)	39.9 (34.7-44.0)	45.2 (26.5-56.0)	11.5 (2.9-18.7)	4.8 (2.9-6.6)	11.5 (6.8-18.7)	71.4	34.4	
Palermo	56.0 (51.1-66.3)	53.9 (51.1-56.0)	56.2 (51.8-66.3)	15.3 (9.2-24.1)	17.9 (12.3-21.9)	15.3 (9.2-24.1)	70.2	28.5	
WMW[d]		*726012**			*464976**				
KW[d] χ^2(df)	*2933.2(12)**			*2572.8(12)**			*3969(12)**	*3969(12)**	*2997.3(4)**

*$p < 0.05$; WMN : Wilcoxon Mann-Whitney; KW : Kruskall Wallis; IQR: interquartile range

Table 4. The association between minority group, country- and area-level variables, and the incidence of psychosis in crude and adjusted models [a]

Independent variables [b]	**Crude univariable models IRR (95 % CI)**	**p value**	**Adjusted multivariable model**[c] **IRR (95 % CI)**	**p value**
Minorities Western countries	1.25 (1.06-1.48)	0.01	0.85 (0.66-1.10)	0.22
Minorities Middle East	2.63 (1.81-3.81)	<0.001	1.67 (1.02-2.72)	0.04
Minorities North Africa	2.30 (1.83-2.88)	<0.001	1.76 (1.27-2.46)	0.00
Minorities Sub-Saharan Africa	2.72 (2.26-3.28)	<0.001	2.10 (1.57-2.80)	<0.001
Minorities Asia	1.44 (1.17-1.78)	0.001	0.92 (0.67-1.26)	0.60
Minorities the Caribbean	2.44 (1.99-2.98)	<0.001	1.83 (1.32-2.52)	<0.001
Minorities Latin America	2.44 (1.80-3.29)	<0.001	1.68 (1.12-2.52)	0.01
MIPEX total score	0.71 (0.68-0.73)	<0.001	0.74 (0.71-0.78)	<0.001
Unemployment (%)	1.08 (1.07-1.09)	<0.001	1.04 (1.02-1.06)	<0.001
Low educational level (%)	1.00 (0.99-1.00)	0.32	0.99 (0.98-1.00)	0.06
Owner-occupied housing (%)	0.97 (0.96-0.97)	<0.001		
Single person households (%)	1.10 (1.05-1.14)	<0.001	1.11 (1.08-1.15)	<0.001

[a] Dependent variable: Any diagnosis of a psychotic disorder; Random-effect intercept: catchment-areas nested in countries; Offset: person-years; [b] Continuous variables were mean centered before being entered in basic and full models; [c] Multivariable model adjusting for sex, age and their interaction, MIPEX total score, unemployment (%), low educational level (%), and single-person households (%); [d] Incidence variance by catchment-area (σ)= 0.01, p<0.001. IRR: Incidence rate ratio; NOTE: This analysis (Total N = 1850) did not include individuals belonging to "Other minorities" (N=105).

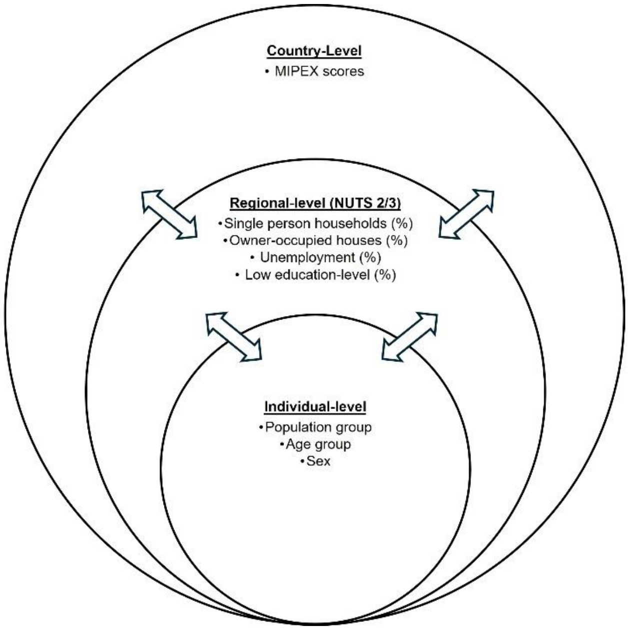

Figure 1: Exposures at the country-, regional- , and individual-level. MIPEX scores coded by country and timeframe, as per date of assessment [2007 – 2010/ 2011 – 2014]; Unemployment (%) and Low education level (%) coded by region [NUTS 2/3], timeframe, as per date of assessment [2007 – 2010/ 2011 – 2014], Sex and Population group [Majority population/Minority EU /Minority non-EU]; Single person households (%) and Owner-occupied houses (%) coded by region [NUTS 2/3]. NUTS [Nomenclature of Territorial Units for Statistics] – provincial level (Eurostat, 2024).

Bridge 2

Despite the recognized relevance of first-person experiences and perspectives in mental health research, few studies looking at the impact of the social environment in the development of psychosis among ethno-racialized minorities have taken a lived experience approach. Indeed, in our critical discourse analysis on the proposed explanations for findings about the higher rates of psychosis among minoritized groups (Manuscript I), we noted that the voices of persons with psychosis belonging to minoritized communities were largely missing from the discussion. More broadly, it has been asserted that qualitative studies could bring great nuance to current knowledge in the field, as they have the potential to provide a fine-grained understanding of everyday social experiences prior to illness manifestation and the ways in which social contexts might have shaped the lives, well-being and illness development of individuals from diverse ethnic, racial and immigrant backgrounds. More specifically, participatory action research studies have the potential to bring lived experience knowledge to the forefront, to empower study participants and place focus on social change.

The following studies (Manuscript III and IV) present the results of a qualitative study looking at the perspectives and contextualized experiences of young people with different ethno-racial and migrant backgrounds, who received a recent diagnosis of psychosis. Recruited participants were receiving services in several early intervention services for psychosis in the metropolitan area of Montréal, Canada, and were invited to participate in one in-depth interview and an arts-based (cellphilming workshop), with the aim of exploring life events, subjective experiences and contexts before psychosis onset, as well as their views on what could contribute to psychosis development, based on their own experience. All recruited individuals agreed to participate in the interviews (N=24) and only approximately half (N=11) proceeded to the second component of the study (cellphilming workshop). We decided to present the data in two separate manuscripts. Manuscript III focuses solely on findings from the in-depth interviews, and Manuscript IV on findings regarding the participants who accepted to do the interview and the cellphilming workshop. This division allowed for a more in-depth exploration of participants' experiences and perspectives as elicited by the interviews in manuscript III, while manuscript IV focused mostly on the cellphilms and cellphilming group discussions, under a participatory action research approach.

Overall, these two studies highlight the potential of and need for studies exploring contexts in greater depth, as these can be invaluable in adding nuance to previous findings, generating new insights and ideas and inspiring grounded, locally informed interventions. By being framed under particular contexts and narratives, participants' accounts and artistic contributions allowed for a fine-grained description of the social experiences of a group of youth with diverse socio-cultural backgrounds. Participants' contributions underline the need to advocate for spaces (in the community and within healthcare services) that foster equity, tolerance and mutual support, healing and well-being. Participants' experiential accounts also defy strict time or categorical delimitations (e.g.: regarding different diagnosis or forms of psychological suffering and phases of illness) when asking the question of how the environment may impact life and mental health. Rather, under a life narrative perspective, these issues are not compartmentalized but intertwined. The findings of these two studies may inform research, clinical work and public health intervention in the field, namely, by emphasizing interdisciplinarity, plurality of perspectives, lived experience and person-centered approaches.

The Quebec context

The following two papers pertain to a qualitative research project was implemented in several early intervention services for psychosis in Montréal, Quebec. As such, here we provide a brief description of the Canadian and (more specifically) the Quebec context, as a preface to Manuscripts III and IV.

Per the 2021 census, more than one in five Canadians was foreign-born and approximately two in five Canadian children were either born outside the country or had one foreign-born parent (Canada, 2021a). Canada's model of multiculturalism is one that reflects its colonial past, as a settler multinational society with a great influx of immigrants over centuries, from many origins (Canada, 2021b). This model is one that contrasts with assimilation, by recognizing and supporting the rights of ethnocultural groups within a nation that is intrinsically diverse and not insisting on subsuming immigrants' identities into a singular national culture or identity (Kymlicka, 2020). Canada has a greater number of policies to support immigrants, compared to many other countries of the Global North accepting immigrants (Solano & Huddleston, 2020). However, it is important to note that the state-imposed pre-requisites to migrate to Canada in the first place are particularly strict, in terms of language proficiency, labour skills and baseline health, among other aspects (Knowles, 2016). Indeed, these aspects have been previously suggested as possible explanations for the so-called healthy immigrant effect in Canada, whereby immigrants have better overall health in the first few years after immigration, compared to the host population. This effect is apparently lost after this initial stage, as immigrants' health status later deteriorates, and becomes similar to the health of the majority population (Vang et al., 2015).

Canada has two official languages, English and French. Quebec is the only Canadian province whose sole official language is French. Historically, the French-Canadian struggle to keep an identity as a founding ethnocultural group (Bibeau, 1995) has had numerous political, economic and social ramifications. Most healthcare institutions in Quebec operate in French, except those in catchment areas with sufficiently large Anglophone populations that have been authorized to offer services in English. Since the Quiet Revolution (McRoberts, 1988), Quebec has firmly positioned itself and its public institutions (hospitals, schools, etc.) as secular spaces. These historical antecedents have periodically contributed to discourse on the limits of "reasonable accommodation for the other" (Bouchard & Taylor, 2008), resulting in the government-appointed Bouchard-Taylor commission endorsing interculturalism as a framework for Quebec (rather than multiculturalism). Interculturalism was defined as "a policy or model that advocates harmonious relations between cultures based on intensive exchanges centred on an integration process that does not seek to eliminate differences while fostering the development of a common identity". Quebec's passage of Bill 21, An Act respecting the Laicity of the State, in 2019, was accompanied by intensive debate on the balance to be struck between individual freedom of conscience and religion versus the state's need to project neutrality and secularism. Altogether, the milieu may discourage expressions of ethnocultural identities and expectations that diversity be acknowledged (Wong, 2011).

The following two manuscripts were published in Frontiers in Psychiatry and Arts and Health, respectively.

Chapter 4: Manuscript III

Experiences and socio-environmental contexts in the lead-up to psychosis: a qualitative analysis of the narratives of persons with psychosis from different ethnic, racial and immigrant backgrounds.

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Frontiers in Psychiatry

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Abstract

Introduction: Previous research, predominantly quantitative, has attributed the excess risk for psychosis among immigrants and ethnic minorities to social adversity, discrimination and structural inequities. Although calls have acknowledged their potential for yielding nuanced insights, qualitative methods focused on first-person narratives have not been used in research into the social determinants of the development of psychosis.

Methods: We explored the experiences and socio-environmental contexts of individuals with psychosis from diverse ethno-racial and immigrant backgrounds. We also gathered their perspectives on the causality of psychosis. We conducted in-depth interviews with 24 participants at early intervention services for psychosis in Montréal, Canada.

Results: Through thematic analysis, we identified five themes: “Spaces and societies of oppression”; “Nothing to hold on to”; “Mistreated, invisible or seen in the wrong light”; “Places of freedom, connection and safety”; and “Healing and well-being”. Spaces described as oppressive fomented experiences of precarity, isolation and mistreatment. Spaces of freedom, connection and inclusivity enabled healing and well-being. Experiences of precarity, mistreatment and exclusion were more frequent for minoritized individuals. Participants attributed psychosis to multiple factors, many pertaining to social contexts.

Discussion: Our findings shed light on the processes through which social contexts shape the lives and illness development of individuals from diverse backgrounds. By framing them within particular life stories and places, we gain a fuller, more fine-grained understanding of the social-structural determinants that have been identified in quantitative studies. Our work highlights the

need to attend closely to patients' social contexts and narratives and advocate for inclusivity, equity, and connection at the societal level.

1. Background

It has long been reported that some immigrant and ethnic minority populations face higher risk for psychosis than majority groups (1). This finding has been replicated in different parts of the world, with risk persisting for further generations, and being higher for racialized minorities and immigrants moving from the Global South to the Global North. There is however considerable variation in risk depending on the ethnic/immigrant group and country of residence (2-4). A critical factor for the higher risk of psychotic disorders in immigrant and ethnic minority populations is greater exposure to social adversities that are known social determinants of mental disorders (5) and of psychotic disorders (6). Exposures contributing to higher psychosis risk include determinants at the micro (individual, familial), meso (neighborhoods, communities), and macro (countries, societies) levels. At the individual level, some adverse experiences including family separation, social disadvantage (e.g., housing, financial, educational and employment instability), discrimination, marginalization, and social exclusion have been found to partially explain the higher risk of psychosis among immigrants and ethnic minorities (7, 8). Beyond individual-level social determinants, macro- and meso-level social factors pertaining to large geographical areas and neighborhoods are known to impact on psychosis risk and may also help explain risk differences between population groups. Growing up in areas of high social deprivation is associated with higher psychosis risk for the general population (9). Immigrants and ethnic minorities are more likely to live in deprived and secluded areas (10), and social deprivation may have a more pronounced impact among these populations (11). Conversely, studies on ethnic density have shown that living in areas where one's own ethnic group comprises a high percentage of the population, along with a positive group identification, may protect from psychosis risk among ethnic minority populations, arguably by mitigating the effects of discrimination, exclusion and isolation (12). The ways in which aspects of structural disadvantage intersect and disproportionately impact ethno-racially minoritized population groups reflect issues of systemic inequity in terms of the distribution of resources, rights and opportunities and exposure to social stressors (10).

Although previous research has privileged the examination of social determinants of psychosis via quantitative approaches, in-depth qualitative studies have the potential to unravel the intricate social mechanisms involved in the development of psychosis. Being ideal for the exploration of complex social dynamics and contexts, qualitative studies allow for the generation of innovative, rich and nuanced understandings about a given phenomenon (13). Qualitative studies have already brought invaluable insights to the field of psychosis research regarding the exploration of prodromal manifestations of psychosis, the description of pathways to care and the investigation of aspects contributing to recovery (14, 15). However, very few of these studies have considered the experiences of psychosis of individuals belonging to immigrant and ethnic minority communities. When they did, important experiential differences came up, in comparison to the majority population (16-20). For instance, a study exploring pathways to care for African-, Caribbean- and European- Canadians (16) reported that feelings of guilt for not meeting family expectations, and fear of community rejection were only described by participants of African and Caribbean origin. These aspects in turn delayed care seeking. Another Canadian study reported that religious practices were described as a facilitator for recovery among Caribbean-Canadian but not European-Canadian participants (20). In a British study involving White-British and Black-Caribbean service users with psychosis, experiences of disempowerment and mistrust were particularly salient to Black-Caribbeans' journeys through mental healthcare services (18). Aspects of stigma, lifelong social disadvantage and the absence of community support were brought up in a British study exploring perspectives on the causality of psychosis among Black African and Black Caribbean individuals with psychosis (19).

To our knowledge, no previous studies have qualitatively investigated the life experiences of individuals with psychosis from diverse ethnic, immigrant and racial backgrounds, with a focus on social contexts and, more specifically, social determinants of psychosis. This could provide a more nuanced understanding about everyday social experiences prior to the manifestation of the illness and the ways in which social contexts might have shaped the lives, well-being and development of the illness of these individuals.

2. Aims

This study aimed to explore the narratives, experiences, socio-cultural contexts and perspectives on the causality of psychosis of service users from diverse ethnic, racial and immigrant backgrounds in urban early intervention services for psychosis in Montréal, Canada. Our research questions were: 1) How do service users from different ethno-racial and immigrant backgrounds describe their lives before they were diagnosed with psychosis; 2) How do their experiences prior to diagnosis intersect with aspects of their social contexts; and 3) What do participants believe caused their psychosis?

3. Materials and methods

3.1 Paradigm

This study was designed from a contextualist paradigm which, by "sitting in between the two poles of essentialism and constructivism" (21), assumes an ontological stance of critical realism (22), and an epistemological position of subjectivism (23). It assumes the existence of a reality, which however may only be partially grasped, while acknowledging that meaning is co-constructed by the interpreter and the phenomenon under observation, both of which are fundamentally shaped by their social, cultural, historical and political contexts. In other words, we acknowledged that interviewed individuals' life accounts are approximations of their everyday realities, whose interpretation and meaning is highly dependent on contexts and is co-constructed during the interview and analysis.

3.2 Setting and participants

Because we aimed to retrospectively assess the experiences and overarching socio-environmental contexts before the illness, we included individuals with a recent diagnosis of psychosis who were likelier to have had clearer memories of their pre-illness experiences. We recruited individuals from four early interventions services for psychosis in Montréal, Canada. These publicly funded programs have an open referral system and provide specialized assessment and treatment services for individuals with recent-onset psychosis. Together, these programs cover a vast area of Montreal, a bilingual metropolis of approximately four million inhabitants in Quebec, the only French speaking province of mostly anglophone Canada. Montréal is home to a large percentage of immigrants (about 41%), both first (25.6%) and second generation (16.2%). Most Montrealers are francophone (63%); 11% are Anglophone and 22.5% allophone (those whose first language is neither English nor French) (24).

In all programs, a multidisciplinary team provides patients a well-defined recovery-oriented treatment package for up to five years, that includes assertive case management, evidence-based psychosocial interventions and low-dose antipsychotic medication. Following internationally accepted early psychosis guidelines, these programs enroll 18-35-year-olds (excepting one program that also accepts 14-18-year-olds) experiencing a first episode of psychosis (defined as no or previous treatment with antipsychotics of no more than a specified duration of one month for three of the programs and one year for one program); and who have no diagnosis of an organic brain disorder. The present study's inclusion and exclusion criteria were the same as those of the programs we recruited from. An additional criterion was that participants should consider themselves able to communicate in French or English.

To grasp a diversity of experiences of individuals followed in Montreal early psychosis services, a purposive sampling strategy was used. We aimed for a broad representation of genders, immigrant status, ethnic backgrounds and mother tongues (anglophones, francophones and allophones). We did not target a specific number of participants. However, with purposive sampling and our greater aim of conducting an in-depth analysis of first-person experiences in mind, we expected to interview at least 20 individuals (25). Recruitment ended when the emerging themes were considered by authors as expressing a wide range of experiences that fit the study aims, thus providing a rich and nuanced basis for in-depth analysis (26). Recruitment procedures included liaising with local research and clinical teams and displaying recruitment posters in participating programs.

3.3 Procedure

SX conducted in-depth interviews with participants in English or French depending on their preference (27), following a pilot-tested interview topic guide developed to address the study goals and research questions. The guide comprised broad open-ended questions and prompts for clarification and elaboration. Interviews lasted approximately one hour and were conducted in person, at the clinic (n=15) or online (n=9), depending on participants' preferences.

The interview started with a broad exploration of participants' life narratives throughout time until they started being followed at the early psychosis service. Interviews further explored how specific aspects pertaining to social environments (social networks, institutions, physical and social spaces) impacted (positively or negatively) participants' lives. Finally, participants were asked about their perspective on the causality of psychosis (based on their own experience) and their opinion of previous scientific findings regarding the social determinants of psychosis risk. Basic demographics (including age, gender, self-ascribed ethnicity, and place of birth) were collected from all participants.

3.4 Reflexivity and Positionality

The authors are women living in Canada and the Netherlands with different ethnic, immigrant, and linguistic backgrounds, working as academics in different fields (public health, epidemiology, psychology, psychiatry) and with expertise in qualitative and quantitative methodologies. The interviewer and first author of this paper (SX) is a Portuguese woman, a psychiatrist and an international doctoral student in Montreal. Some of the authors are/were clinicians (AAB and SI) and researchers (SI, AAB and MF) based at the study sites. Throughout the study design, implementation and analysis, we strived to apply a reflexive approach that considered the different identities of all researchers involved and how these influenced the study at different junctures. While the team's diversity allowed for different perspectives regarding the interpretations of participants' accounts, we acknowledge that the researchers (and particularly SX, as the interviewer) may have been seen by participants as closer to the treatment team and (for those who were ethno-racially minoritized) to the White majority population. Although this may have impacted participants' sharing, SX's proximity in age to the participants, and her status in Canada as an international allophone student may have helped dissipate these differences/distance.

3.5 Analysis

Interviews were transcribed and subjected to a hybrid thematic analysis (28) using mostly an inductive approach (21). Two researchers (SX and AB) read and discussed the interview transcripts and field notes and generated initial inductive codes that were merged with super-ordinate deductive codes (generated based on the study goals and interview guide questions). An initial list of codes was grouped into categories, themes and sub-themes that comprised a preliminary codebook. The codebook was tested against all transcripts and further refined through several iterations of readings and coding. Field notes taken by SX were consulted throughout the analysis. Final themes and sub-themes were analyzed for meaning, nuances, divergences and convergences across individual participants' narratives and between demographic groups.

Several strategies were used to enhance the study's rigor (29), including triangulation between different data sources (interview transcripts, field notes), two different coders (SX and AB), regular debriefing between coders during the project's implementation and data analysis, frequent consultations with project supervisors (SI, MF, EV, ILJ, NB) and member-checking activities (scientific meetings and meetings with clinicians and service users to share preliminary results).

3.6 Ethics

Before any research was conducted, approval was obtained from the local Ethics Committee, and informed consent was obtained from all participants. An honorarium worth $40 to compensate for time spent was provided to all participants.

4. Results

Twenty-four participants were recruited. 12 participants were men, 11 self-identified as an ethnic minority, 18 belonged to a linguistic minority (not francophone), and 15 were first-generation immigrants (five had refugee status or were asylum seekers). Among first- and second-generation immigrants, most were of Sub-Saharan African (n=5) and Caribbean heritage (n=5) (Table 1).

We identified five intertwined themes, that reflected the self-described social circumstances and experiences of participants, at different moments of their life course. The themes were: 1) Spaces and societies of oppression; 2) Nothing to hold on to (precarity, instability and isolation); 3) Mistreated, invisible or seen in the wrong light; 4) Places of freedom, connection and safety; and 5) Healing and well-being (Figure 1). During the interviews, participants made links between their life experiences and circumstances and the causality of psychosis. Of note, most participants described experiences or shared perspectives that could be included under most (and in many cases nearly all) the themes and sub-themes. In the results section, we will describe each theme and sub-theme, along with illustrative quotations. Basic demographic information (gender, self-ascribed ethnicity, country of birth, immigrant status, language group, in that order) is provided for each participant [P] along with the quotations.

Some participants had lived in different places (besides Montreal) throughout their lives, which is mentioned when relevant.

4.1 Theme 1: Spaces and societies of oppression

Some participants described having lived in spaces that were experienced as suffocating, crowded, small or lacking personal space, particularly within the city. P13 (woman, Black, Caribbean, first-generation immigrant, Anglophone) describes how changing living spaces from the Caribbean to Montreal as a teenager impacted her freedom and well-being, partly because of the physical constraints of her new home,

> *Being in an urban environment, especially in an environment where there are winters being claustrophobic and being stuck in the house and having nothing to do, other than just, like, watching TV, it really did affect my mental health a lot. And I felt that sadness growing up. I felt that loss when I came to an urban area, and just looking at all the concrete. It was like a miracle when spring came every time, you know?*

This notion of being "stuck" was also conveyed by participants' references to limited mobility or limited access to different areas of the city, which for P3 (man, Black, Canada, second-generation immigrant, Anglophone) was a consequence of living in a deprived area of Montréal,

> *Well, it's like, um, it's kind of like the ghetto of Montréal. So, it's like, it's just low-income housing and all of that stuff. So, you didn't have [means to] commute (...) If you wanted to go to a pool, you couldn't go. (...) It was just a low-income area. And because of that*

> *there was just like crime, you'd see glass on the streets, broken bottles, construction all the time.*

Other participants too referred to such aspects of unsafety as limiting their mobility and freedom in the city. P5 (woman, Black, Canada, second-generation immigrant, Francophone) describes how living in a secluded and deprived area made her feel unsafe,

> *We moved to the north part of the city. It was an apartment block, and it wasn't very good either. There I felt even more... Less safe. There weren't many shops in the area. We stayed in the block, so I'd say it was isolated. (...) Never seen but heard [about violence], heard stories from my neighbors. They would tell me to be careful.*
>
> *(Translated from French)*

Some participants described spaces and structures that they had come in contact with as oppressive, due to the interplay of dynamics of inequity and exclusion. Below, P11 (woman, Black, Canada, 2nd generation immigrant, Francophone) describes feeling excluded after moving with her family from Montréal to a suburban area,

> *So, in [Montréal neighborhood], there was a community, an immigrant community, and I had a lot of friends and everything. Then when I moved, like, I started from scratch, and there weren't many immigrants in the suburbs. They're more native Quebecers, so it's harder to adapt. (...) It's very traumatic for a child to try to be included in a school where there's just her and her sister as immigrants, and then everything else is, like, a single community that's really closed up.*
>
> *(Translated from French)*

Issues of inequity and injustice were mostly mentioned indirectly by participants, referring to having fewer resources, opportunities and rights than others, experiences that were often linked to being from a minoritized group and/or to a lower socio-economic stratum. In this quotation, P7 (man, Black, USA, 1st generation immigrant, Anglophone) explains how the dynamics of inequity in his neighborhood in the USA (where he also often experienced racial harassment) impacted his mental health growing up,

> *Knowing, seeing things about other people, having, seeing how other people are having fun. It affects it, it affects the brain. And it really, I can relate to that because I didn't have all new things coming out. New shoes, new clothes, and seeing people with those things just makes you want it. And when you want something and you can't get it is like, it's sad. It creates a sad feeling inside.*

Some participants also mentioned experiences of repressiveness, as they described the impact of societal limitations/restrictions on their lives. This was particularly blatant for first-generation immigrants (especially asylum seekers) or those who immigrated at a young age. They reported feeling powerless and wary about their future because of limitations associated with their (or their parents') status and lack of work or education opportunities. Beyond issues of societal limitations or restrictions, many participants shared that they felt pressured to behave in specific ways, or to shape themselves and their lives according to societal norms. Among those born in or who grew up in Montréal, descriptions of feeling pressured to overachieve, overwork and be independent from others (including family and friends) were ubiquitous. Participants from minoritized communities described feeling these pressures more intensely because they felt they had to make extra efforts to overcome social disadvantage and structural racism. As mentioned by P3 (man, Black, Canada, second-generation immigrant, Anglophone), “It's like you have to do double to prove yourself or something.”

4.2 Theme 2: Nothing to hold on to (precarity, isolation and instability)

Experiences of instability, precarity and isolation, mentioned by many study participants as part of their lives, were described as being enabled by oppressive contexts. Altogether, these experiences contributed to a feeling of having nothing or little to hold on to, particularly in times of need. Even if not exclusive to minoritized participants, these experiences accumulated and seemed more pervasive (more frequent and happening at different life stages) for them.

4.2.1 Disadvantage (precarity)

Many described experiences of school/educational challenges, and work, financial and housing instability. In the case of P3 (man, Black, Canada, second-generation immigrant, Anglophone), the struggle to find stability cut across different stages of his life, through contacts with several institutions,

> *Well, after that, it's just a mix of me going to like school, dropping outta school, going to start trying to work, getting fired, um, things like that. (...) Uh, well I dropped outta school ‘cause I, it was just, I didn't see the point of going into it anymore. (...) I remember meeting up with this guidance counsellor and she pretty much told me, you're never gonna be able to get into university. (...) Usually, like with most jobs, I get fired or laid off. Rarely do I get to leave.*

Experiences of homelessness, living in shelters and of contact with prison and judicial systems were mostly described by participants in the context of concomitant drug or alcohol (ab)use, often at a time when symptoms of psychosis had already started manifesting. For these participants, experiences of displacement, trauma (e.g., abandonment, abuse), racial and social discrimination, financial and housing instability had been present before. This was the case for P7 (man, Black, USA, 1st generation immigrant, Anglophone), who described at different moments of his interview how childhood experiences of racial discrimination and harassment, social inequity, and his mother's deportation from the USA to the Caribbean (and the consequent move of the remaining family to Canada) affected his adult life, linking these experiences to his mental health struggles,

> *We were discriminated because we're African. That's the first thing that pops into their head. And then they just make jokes about it. And then getting into school, living with my appearance. (...) And that kept, that made me depressed. (...) I was just upset most of the time. And then that upsetness, bringing that upsetness with me here in Canada, it caused me to fall into depression.*

4.2.2 Disrupted structure (instability)

Several participants mentioned moments in time when sudden changes took place in their lives. Though not necessarily associated with a negative impact, when things took an unexpected turn and when control was felt as beyond one's power, transitions were experienced as contributing to instability. With respect to changes in environment (e.g., moving across or between countries), the experience of unfamiliarity and lack of references were mentioned as destabilizing, particularly in moments of distress, and in the absence of other sources of connection and meaning. As P15 (Woman, White, Canada, Francophone) describes her move from another Canadian province,

> *To have changed places, to have changed jobs, to have changed institutions, to have changed my friends' circle. It was really, like, a big change all of a sudden. And I think there's quite a few things that have changed and clicked in my brain and made things different from what they used to be… You can't really hold on to things as they were before, as you got used to them. So, you have to find new points of reference and quickly get attached to things.*
>
> *(Translated from French)*

Another aspect related to the disruption of structures that came across in several interviews was the experience of interpersonal conflict, separation or loss of relevant social connections. For P16 (man, South Asian, Sub-Saharan Africa, 1st generation immigrant, Francophone), the separation from his fellow students at school was identified as a moment when his foundations were compromised, causing him to feel progressively isolated,

> *When I was bullied at school, when I moved up to the next class, they told me that they were going to change people around. So, I wasn't with the same gang at all and that meant that I found myself socially isolated, actually, at that time, which is to say that if I had stayed with them, maybe it could have changed things.*

Some participants related a general feeling of instability with personal traits of sensitivity and vulnerability, when asked specifically about their perspectives on the causality of psychosis. When they did, these issues were conflated with other biomedical explanations for psychosis (genetics, "chemical imbalances", cannabis consumption, etc.). Importantly, for those focusing on individual-level explanations as the sole contributor to psychosis (of which cannabis consumption was a paramount example), feelings of blame, guilt, and shame also came across.

However, when these aspects arose, they were usually mentioned among a myriad of other factors which could have contributed to psychosis, including socio-environmental issues,

> *Well, I think the stress from relocation is a big part, stress from the war that had started, and stress from not wise kind of smoking, so all together. And I think, overall, I'm easy to disturb, I am sensitive. (...) Well, I had depressive episodes, and I had a grandmother's sister who was diagnosed with [psychotic disorder]. So, there is, we can say, some genetic vulnerability maybe.*
>
> (P10, woman, White, Eastern Europe, first-generation immigrant, Allophone)

4.2.3 Disconnected (isolation)

Several participants across demographic groups mentioned the feeling of being isolated or disconnected. For some, this was connected to the experience of feeling different from others, not fitting in or not belonging to a given group, community or environment,

> *Well, when I was younger, I was often like… I don't know how to say this but, you know, ignored by others, like, I was often in my bubble, as I said, I saw myself as apart from the world, like I don't know why, but I had the impression that I wasn't like other people.*
>
> *(Translated from French)*
>
> (P14, man, White, Canada, Francophone)

Few participants linked disconnection with personality traits (a tendency to isolate or to keep to oneself), or to having been through experiences that were hard to explain to/share with others. More commonly, isolation was associated with experiences of neglect, exclusion, and marginalization. Once more, albeit not exclusive to minoritized groups, isolation in these contexts was more frequent for them.

4.3 Theme 3: Mistreated, invisible or seen in the wrong light

Described experiences of mistreatment ranged from clearcut episodes of physical or emotional violence/abuse (experienced or witnessed) and harassment and neglect/rejection, to everyday hostile, negative or derogatory interactions and an overall feeling of being seen by others in negative light. These experiences were often connected to experiences of precarity, isolation and instability, and described as being enabled by socio-environmental circumstances of oppressiveness.

4.3.1 Abuse, Harassment, Neglect

Across all demographic groups, the experience of being bullied was one of the paramount examples of harassment. In the case of P13 (woman, Black, Caribbean, first-generation immigrant, Anglophone), her description of bullying at school was also linked to racial and linguistic discrimination,

> *I was behind in school a lot and I was bullied quite a lot because I was, I had a really thick like, English accent when I spoke in French. And the teacher would always force me to read aloud in class because I guess he wanted me to improve, but it would just be like picking on me and then the kids would make fun of me. (…) And I would be walking down the stairs, and they would trip me, and they would like touch my hair when I was walking in the hallway and say like, oh you look like Minnie mouse. (…) They would ask me to do*

> *their homework or copy from the homework that I did, and I would say no a lot of the time, but then they would do things like leave trash near my locker and stuff.*

4.3.2 Discrimination, Labelling and Othering

Several participants from minoritized groups described a range of often intersecting experiences of discrimination (racial, linguistic, gender, sexual). These were often mentioned as being at the root of experiences of harassment, exclusion and precariousness and as a source of accumulating stress and great emotional burden. In the following quotation, P3 (man, Black, Canada, second-generation immigrant, Anglophone) highlights how racial discrimination impacted his everyday life,

> *Like, I mean, I'm constantly feeling like I'm ridiculed, outside. I feel like when I go outside rather than be a human being, it's like I'm this monster of a person or something. So, I think it has a lot to do with race, sometimes, but it's something that you're just very used to after a while. So, you kind of build up a bit of a shield towards it. So, I think after a certain amount of time it builds up and you just can't take it anymore.*

Experiences of discrimination were not always described as blatant, but as something happening in the background of everyday life, impacting different life spheres such as work, education, romantic relationships, contacts with services and everyday interactions with friends and strangers. P5 (woman, Black, Canada, second-generation immigrant, Francophone) notes how she always wondered whether racial discrimination affected her romantic relationships,

> *Over the years when I couldn't find stability, maybe that happened because I was denied things because of my color, I don't know... It wouldn't be blatant. But maybe it would*

> *have been easier if I had been white, maybe. (...) For example, I've always struggled to have good romantic relationships. And then some people told me it was... Like, my friends, they didn't say it in a mean way, but they told me maybe it was because of my skin color. (...) That I was rejected because of that.*
>
> *(Translated from French)*

4.4 Theme 4: Places of freedom, connection and safety

At different junctures during the interviews, participants mentioned the benefits of living in communities where people nurtured positive connections as a group and in places offering opportunities to engage in leisure activities and spend time outdoors and in contact with nature. Such spaces were described as being conducive to freedom, healing, well-being and safety. Similarly, social spaces that fostered inclusivity and were welcoming or accepting towards difference, were described positively,

> *Because I went to [High School in Ontario], I had friends of different races, and I really enjoyed that. (...) It was a very relaxed environment, and I also felt a bit safer, hanging out with people who are also of different cultural backgrounds, just 'cause it was easier to get along with people.*
>
> (P4, man, South Asian, Canada, second-generation immigrant, Anglophone)

Those belonging to minoritized communities experienced being surrounded by a community where they felt represented in their identity while growing up as positive,

> *As I said it can be a shock to arrive here and find everything so different, but I was lucky anyway. Sure, I wasn't among my direct community, but the Haitian community is similar in some ways to the African community in general, and I think it helped me a lot to feel represented.*
>
> *(Translated from French)*
>
> (P18, man, Black, Sub-Saharan Africa, first-generation immigrant, Francophone)

However, some participants pointed out that feeling part of a community entails great nuance, and sharing some commonalities (physical traits, ethnicity, culture, religion, country of origin, etc.) with others may not be enough to feel represented. Moreover, as P3 (man, Black, Canada, second-generation immigrant, Anglophone) explained, individuals may still wish to integrate in other communities in their environment, while finding it hard to fit anywhere at all,

> *Yeah, 'cause it's like you have to join [Black communities] and then you have to, not just, not that the joining part is hard, but it's, like, integrating is really hard and just because you're part of the same ethnic group doesn't necessarily mean you're going to get along. And the same applies to like anywhere else. Let's say I wanted to go and become something else. It's weird because you're kind of like the only minority there sometimes.*

For some who immigrated under adverse circumstances (e.g., refugees), keeping in contact with others from their home country was at times avoided, due to a will to start anew or as an attempt to deflect reminders of a difficult past.

4.5 Theme 5: Healing and well-being

Across interviews, many participants referred to sources of strength, resilience, structure and meaning in life that could be mobilized at challenging times. At times, these were mentioned as circumstances that were not present throughout life but that had to be actively sought, as part of the healing process after the onset of psychosis. These experiences were facilitated by spaces and societies characterized by freedom, connection, safety and inclusivity. In general, minoritized groups found that sources of well-being and mental health were harder to access and required greater effort to sustain, because they needed to overcome multiple and accumulating structural obstacles, often in the absence of a solid and stable support network.

4.5.1 Renewal (expansion, resilience and tranquility)

Many mentioned the possibility of starting anew as being connected to feelings of hope and freedom. Interestingly, for several immigrants (especially those migrating as adults), the move to Canada itself represented this possibility. This was particularly the case for those who had encountered a community in the host country where they felt they belonged, either because it resonated with a particular aspect of their identity (gender, sexual, ethnic, cultural), or because their new community was described as hyper-diverse or generally inclusive and welcoming of difference. For some, the move to Montreal was also an opportunity to escape previous social circumstances of adversity and trauma.

Renewal was linked to the possibility of pausing, having a break and just being present, and with an overall notion of expanding one’s world. Expanding horizons was often associated with establishing connections and exploring new things in life or engaging creatively with the world (e.g., through arts, sports, leisure activities, etc.). Often mentioned in relation to expansion were notions of self-expression, authenticity (being true to oneself) and self-acceptance. For some, coming to terms with the experiences of being different from others and of having gone through adversity was a crucial step towards self-acceptance and renewed strength,

> *I am very happy to be Black and I do love my experience as a Black person. I do love the richness that comes from that. I love the thinking out of the box way of living. (...) We tend to put aside what is different, but I think the fact that I am different makes me who I am. Of course, we have hardships, life will always be hard. I'm a product of hardships, but I don't think we should let that define who we are as people, as human beings in general. (...) I say as if racism was not a thing, if sexism was not a thing, if homophobia, like if all that wasn't there, it wouldn't have contributed to who I am or my mental state or how I came about.*
>
> *(Translated from French)*
>
> (P17, woman, Black, Caribbean, Francophone)

4.5.2 Structure and meaning

Another aspect that many mentioned as crucial for well-being and emotional stability was the possibility of accessing sources of structure and meaning. This was often described as being possible through the connection to supportive networks such as family, friends, and communities,

> *I've been in contact with a group of cinephiles for more than 10 years now, and we're still a group, even if we're fewer now, but we've been around for a long time, and we know each other well. (...) I'd say it's mostly their absence that was a problem. So, the*

> *online group disappeared in 20XX and it only reappeared in 20XX. (...) And I felt like this void inside, because I did not have this connection anymore. And to have them back in 20XX, which happened after my first psychosis, was very beneficial for me.*
>
> *(Translated from French)*
>
> (P16, man, South Asian, Sub-Saharan Africa, first-generation immigrant, Francophone)

When asked about possible aspects that could prevent psychosis or mitigate its negative consequences, participants mentioned community interventions, including mental health awareness, easier access to services, informal community mental health support structures and creation of safe spaces to connect with others,

> *I think that if I had known that there were like workshops in my neighborhood, to meet other people, to work on oneself, things like that... Because I was anxious. If I had known that I had organizations in my neighborhood that dealt with this, I think I might not have had psychosis. So, I think that to reduce it, maybe there could be more programs, more exhibitions, so that people are aware that this exists. And they are not alone. Because when you're left on your own, that's what can happen, you can develop psychosis.*
>
> *(Translated from French)*
>
> (P5, woman, Black, Canada, second-generation immigrant, Francophone)

5. Discussion

This study's aim was to explore the experiences and social contexts of individuals with psychosis from diverse ethnic and immigrant backgrounds, along with their perspectives on the causality of psychosis. Many aspects of participants' lives resonated with previous literature on the social determinants of psychosis, such as experiences of trauma (abuse, neglect, bullying), family separation, displacement, social disadvantage (work, housing, educational and financial instability), racial discrimination, segregation and social exclusion (7, 8, 30, 31). But, by framing them within particular life stories and places, our work yields a fuller understanding of the processes through which social contexts and social-structural determinants shape the lives and illness development of individuals from diverse backgrounds.

Physical and societal spaces described as oppressive were seen by participants as fomenting mistreatment and marginalization, as well as precarity, instability and isolation. On the other hand, spaces that fostered freedom, inclusivity and connection were described as contributing to safety, meaning, well-being and healing. Although not exclusive to minoritized groups, experiences of precarity, mistreatment and discrimination were more frequently described by and seemed more pervasive to participants belonging to minoritized groups. They were also more likely to be subjected to oppressive societal circumstances and face greater barriers to accessing sources of well-being and structure. Disconnection, alienation and isolation, whilst reported by all demographic groups, seemed more poignant among minoritized participants. This is understandable, given that experiences of displacement, othering, and marginalization, that are all more common among minoritized communities, were described by many participants as being at the root of exclusion and isolation.

Participants' accounts of factors that possibly contributed to or attenuated the risk of psychosis cut across all themes of our analysis. Seldom was a single aspect mentioned as causal. Rather, participants endorsed a myriad of contributing factors, many of which pertained to social contexts. When not mentioned directly in relation to psychosis, socio-environmental contexts were considered at the very least as contributing to altered emotional states or other forms of psychological suffering.

Participants' contributions also added nuance to previous predominantly quantitative findings. For instance, experiences of discrimination were not always described as blatant but rather as existing in the background, or as micro-aggressions (32), affecting everyday life beyond work-related opportunities and occasional contacts involving strangers, such as close friendships and romantic relationships. Importantly too, belonging to ethno-racially minoritized groups was not always associated with feeling marginalized, particularly by those who had come from places where they had experienced even greater inequity and segregation or who had migrated in the wake of social adversity or trauma. As reported previously, participants referred to the benefits of growing up in a community with which they shared a common cultural heritage or ethnic background (12). However, our findings also highlighted the potential benefits of populational hyper-diversity (33), when it is a valued aspect of society. There is a need to further explore the local circumstances that enable feelings of belonging and safety within culturally diverse communities. Our results also suggest that processes of identification and acculturation will always be contingent on aspects that go beyond the individual to how others define one's identity, how one's own group is perceived, and whether and how a society's policies and structures integrate diversity (34).

Living in close-knit communities or in contact with nature were mentioned as positive and conducive to wellbeing. This was associated with the propensity of these areas to increased social connection and a sense of space, safety and freedom, which may be difficult to attain in dense, crowded, impersonal and isolating spaces where privacy, tranquility, leisure and safety may be challenged (35). Importantly, the experience of living spaces depended on where in the city people lived, at which stage in their lives and in which socio-economic circumstances, and on the availability of a local social network. It also depended on the multiple intersecting aspects of identity (gender, preferred language, migration history, self-ascribed ethnicity, etc.) and how they played out in a given societal context, namely, through the institutions that participants had contact with (10). This is a reminder that, in examining the role of contexts, the physical and social aspects of space ought not to be studied in isolation from one another. Relatedly, large-scale societal issues were found to greatly impact life trajectories. Across different demographic groups, societal spaces were experienced as oppressive and burdensome when they limited and restricted freedom, fostered inequity or injustice and/or exerted pressure towards a given normativity (with a focus on individuality and productivity). These findings are aligned with previous research on the impact of inequity on mental health (36), and with research that problematizes individualism and productivity in neoliberal societies (37). Moreover, our findings resonate with previous studies that highlight the relevance of intersecting systems of unfavorable social circumstances and oppression and how they disproportionately impact on those who do not hail from dominant groups (38, 39).

5.1 Limitations

The choice of recruiting participants from services may have resulted in a less diverse picture with respect to both types of experiences and perspectives. This excluded those who may not have been able to access services, did not find services appropriate for themselves and/or found alternative sources of healing. Their social experiences and views of causality may have been substantially different from those of the recruited participants. For example, our recruitment strategy could have resulted in a preponderance of participants favoring biomedical and psychological models of suffering and illness. Few participants described aspects of spirituality and religiosity either as explanations for psychosis or as aspects contributing to well-being and healing, even though these have been reported in previous studies (40, 41). That our participants were served at publicly funded clinics and interviewed by a White European researcher may have made them likelier to align with Quebec's militantly secularist worldview, that banishes religion from public spaces and relegates it to the private sphere, and hesitant to discuss the role of religion in their experience of psychosis (42, 43). That we included only persons who could speak English or French may have excluded first-generation immigrants who felt closer to the culture of their country of origin, who might have had different experiences and explanatory models. Further, this study and the applied methods and tools (e.g.: interview topic guide) were built in the backdrop of Eurocentric ways of knowing and doing, which in turn are based on very specific notions of personhood, society, health and illness (44, 45). All these aspects are likely to have molded participants' explanations about their illness to fit a Eurocentric perspective. Still, our questions were open-ended and worded without reference to any clinical or medical language, which mitigates this concern.

Although we aimed to recruit individuals from diverse backgrounds, many participants belonging to minoritized groups were of African or Caribbean origins. Interestingly, these are also the groups that have been reported to be at higher risk for psychosis and of facing harsher pathways to care in different geographic locations, including in Canada (46, 47). Nonetheless, our study included individuals who were considerably diverse in terms of gender, language, migration and ethnic minority background. This resulted in rich and diverse accounts in terms of narratives and social experiences. Whether our findings appertain particularly to the lead-up to psychosis among immigrants and ethnically diverse individuals or more generally to the very experience of immigration or ethnic minority status is unclear. The recommendations that stem from them, however, are no less relevant for this uncertainty. Another important limitation is that participants have not been involved in the reviewing or writing of this manuscript. However, the preliminary results of this study were shared with people with lived experience of psychosis, and their comments and inputs were considered in the interpretation and discussion of results.

5.2 Implications

Our findings highlight the potential of and need for future studies focused on different environmental exposures, informed by theories of eco-social and structural intersectionality (38). They also call for further qualitative work that explores specific findings in greater detail, e.g., how ethnic density influences risk for and experiences in psychosis.

From a clinical practice and services' perspective, our findings underline the need for service providers to acknowledge and actively address issues of power and structural inequities, to pay closer attention to social contexts and narratives of their patients, and to establish closer connections with community bodies and resources. Great improvements could come from a commitment to a context-informed, person-centered and patient-perspective approach, based on respectful curiosity and humility, and stemming primarily from the perspective and preferences of patients (48). Broadening the focus of clinical interventions, including the intake interview, could create space for different illness explanations to emerge that account for the role played by the larger contexts of individuals' lives. The resulting narratives may better reflect the complex interplay of individual, social, cultural and contextual factors, be less blaming of the individual (or their flawed chemistry or personality) and therefore easier for service users to integrate into their life narrative. These various steps are relevant for establishing trust in therapeutic relationships. Importantly, they can help the field shift away from a dominant culture of inequity and structural disadvantage that particularly impacts minoritized communities and seems to pervade mental healthcare services, as evinced by the harsher pathways to care, higher disengagement and worse outcomes that some minoritized populations suffer (47, 49, 50).

On a larger scale, our findings highlight the continued need to focus on social determinants of (mental)health at the macro- and meso-level, which have great potential to inform public health interventions (51). Moreover, our results should also be seen as an encouragement to dismantle walls between healthcare and community spaces and services, and to advocate for spaces that foster healing, well-being and mental health within and outside healthcare services. In general, societies should work harder at the macro- and meso-level to create better life conditions for their communities, promote inclusivity, tolerance and equity of resources and opportunities for all citizens, and create spaces and structures that counter isolation and promote socialization, creativity, dialogue and mutual support. These efforts could build on existing recommendations, that draw on knowledge of public health interventions that address the social determinants of (mental) health (5). Such changes would contribute to greater societal equity and positively impact on the well-being and mental health of everyone, not only those at risk for psychosis.

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Table 1. Participants' demographics

	N
Gender	
Man	12
Woman	11
Non-binary	1
Age group	
18-26	13
27-35	11
Immigrant Status	
Yes	15
No	9
Region origin	
USA	2
Europe	3
Caribbean	5
South Asia	1
North Africa	1
Sub-Saharan Africa	5
Central and South America	1
Canada	6
Refugee status/Asylum seeker	
Yes	5
No	19
Ethnic minority status	
Yes	11
No	13
Language	
Anglophone	6
Francophone	14
Allophone*	4
Occupation	
Unemployed	6
Student	6
Employed or Job training	12
Socio-economic situation	
Comfortable	7
Meet needs with little left	13
Meet basic needs	4
Educational level	
University education	8
College-level education	5
High School	6
Less than high school	5

* Those whose first language is neither French nor English

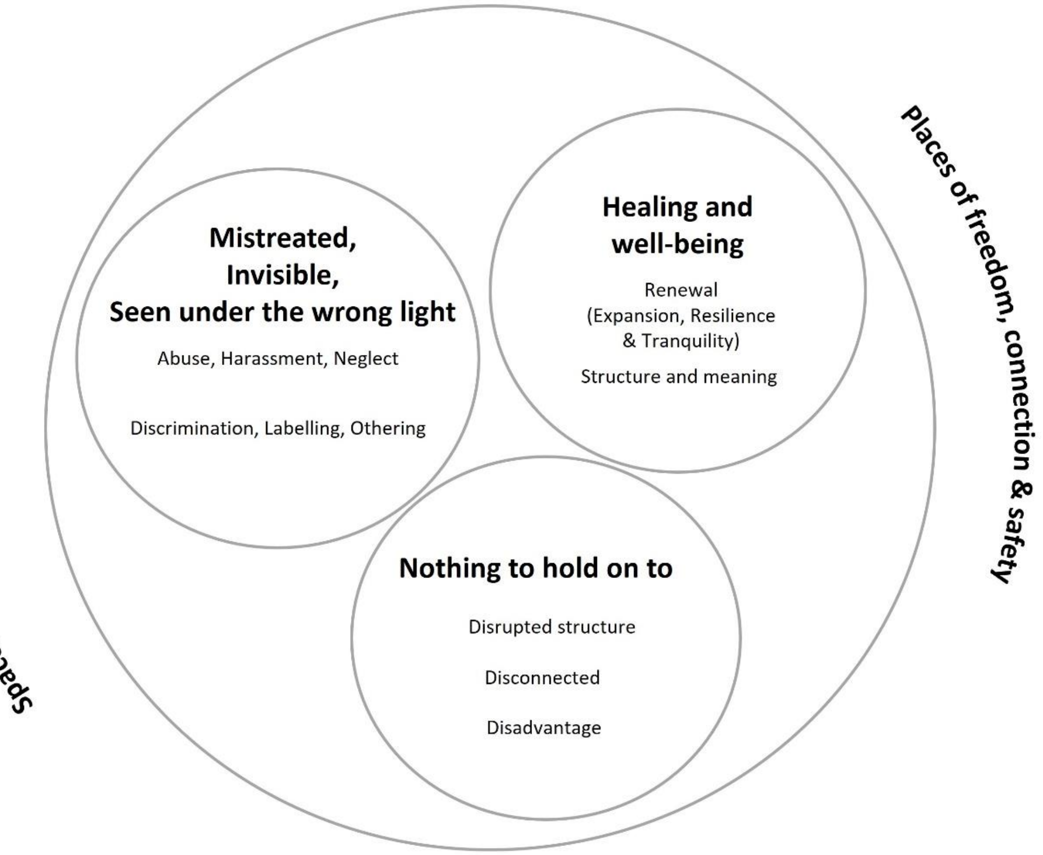

Figure 1. Themes and sub-themes (thematic analysis)

Chapter 5: Manuscript IV

Narratives in context: a cellphilm study of the social experiences of persons with psychosis from different ethnic, racial and migrant backgrounds.

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Abstract

A higher risk of psychosis among migrants and ethnic minorities, due to intersecting exposure to social disadvantage, exclusion and discrimination, has been reported. However, first-person experiences and perspectives regarding these topics have rarely been sought. We aimed to explore the contexts, experiences, and perspectives of individuals with psychosis from diverse ethno-racial and migrant backgrounds through a qualitative study involving an in-depth interview and an arts-based component (cellphilming). Four themes were generated through thematic analysis: Facing adversity; Apart from the world; (Re)building structure; and meaning; and Cellphilming as possibility and connection. Themes portray the role of place and society in the lives and development of psychosis of participants. Findings resonate with previous research on the impacts of social and structural disadvantage, particularly for minoritized populations. By framing these under particular contexts and life stories, our findings allow for contextualization and nuance, and a focus on what mattered the most for participants: hope, meaning, renewal and healing.

Background

Previous epidemiological studies have reported a higher risk for psychosis[a] among some immigrant and ethnic minority groups, across different geographies[1]. These studies focused on the impact of the social environment on risk for psychosis. Mounting evidence suggests that different experiences of social adversity such as parental separation, childhood trauma, discrimination, social exclusion, and social disadvantage (e.g., unemployment, housing instability, low educational level), that intersect for some minoritized populations, contribute to the development of psychosis[2]. Furthermore, psychosis risk is largely influenced by ecological contexts. Living in dense urban areas with reduced access to green spaces and neighborhoods with high material and social deprivation has been associated with elevated psychosis risk[3,4]. Conversely, specifically for ethno-racially minoritized groups, living in neighborhoods where one's own group comprises a significant proportion of the population may protect against the risk of psychosis[5]. The social circumstances that increase psychosis risk and disproportionately affect minoritized groups have also been found to impact pathways to care, service engagement, and long-term outcomes[6].

Previous studies on the relevance of socio-environmental contexts in psychosis have mostly applied quantitative methods and focused on academics' hypotheses and explanatory theories [7]. In contrast, first-person experiences and perspectives of people with psychosis belonging to minoritized communities have rarely been sought[8]. Qualitative studies could provide a nuanced understanding of the everyday social experiences and contexts of these individuals and of the ways in which their surroundings shaped their lives, well-being and the development of psychosis. Moreover, by shifting the focus to knowledge stemming from lived experience, studies have the potential to empower and meaningfully involve patients, and enhance the appropriateness of clinical and public health interventions[9].

Within qualitative methodologies, participatory action research studies are especially pertinent with marginalized research participants whose voices are rarely heard[10], and for whom different aspects of disadvantage intersect[11]. Studies that incorporate elements beyond textual data, generated by arts-based methods, can provide rich information on socially embedded phenomena, while giving participants means for manifesting nuanced experiences and beliefs. Visual research methods may reach wider audiences and may be particularly powerful for knowledge translation and dissemination, thus carrying a heightened potential for social mobilization and change[12-14].

Cellphilms are short films made with cellphones[15] that engage research participants in the co-creation of knowledge and seek to highlight first-person experiences or perspectives in relation to a research topic, in response to a prompt. This knowledge, represented visually through cellphilms, may thereafter be critically appreciated by the individuals that produced them, and disseminated to wider audiences[12]. Cellphilms have an inherently narrative, reflexive and intimate character, placing the viewer in the perspective of the storyteller as they engage with the world. They enable individuals to re-tell their stories and regain authorship of their narratives, placing themselves simultaneously between observer and observed[16]. Within visual methodologies, cellphilming has the additional convenience of relying upon simple, culturally embedded instruments (cellphones/other mobile devices) and technology. Using a tool that is nearly ubiquitous in the community may contribute to lowering power differences between researchers and participants[15]. Considering its reliance on relatively new technology, the use of cellphilming in public health research is only recently emerging[17,18]. To our knowledge, unlike other visual participatory methods such as digital storytelling[19], or photovoice[20], cellphilming has not yet been applied in psychosis research involving ethno-racialized minorities.

Research approach and methodology

We aimed to explore salient life events and life narratives, along with their related social contexts, among youth with different ethno-racial and migrant backgrounds, with a recent diagnosis of psychosis. Additionally, we aimed to explore participants' perspectives on factors contributing to psychosis, based on their experience.

Setting and participants

Participants, capable of expressing themselves in French or English, were recruited over 12 months, from four early intervention services for psychosis based in university hospitals in Montréal, Canada. These programs cover a vast area within Montreal, a bilingual metropolis characterized by its ethno-cultural diversity, located in Quebec, the only officially *French*-speaking province of Canada[21]. All these outpatient programs apply similar inclusion criteria, enrolling individuals between 18-35-years-old, with first-episode psychosis. Exclusion criteria include more than one year of treatment with antipsychotics and a diagnosis of a psychotic disorder due to medical conditions.

A purposive sampling strategy was used, with the goal of recruiting a wide range of individuals living in Montreal. Accordingly, we informed local research and clinical teams in the participating programs that we aimed for a broad representation of genders, mother tongues [French-speaking, English-speaking and allophone (those whose first language is neither French nor English)], migrant status, and ethnic backgrounds (including those belonging to the majority population). Recruitment posters were displayed at clinics and regular contact was established with research teams and clinical staff, who would briefly explain the project and connect interested participants to SX. Participants could contact SX directly or give their consent to be contacted.

Protocol

This study received approval from Douglas Hospital Research Center’s ethics board(#2023-858). Written informed consent was obtained from all participants at the beginning of the study, who received compensation for their time (e-voucher), as per the established median hourly wage in Quebec (30 USD). Study goals were shared with participants during recruitment/consent.

This project included one in-depth interview (1h), following an interview topic guide based on the study goals (see supplemental material), focusing on the contexts and experiences of participants before receiving a diagnosis of psychosis, and their perspectives on previous findings in the field about social determinants and psychosis risk. This was followed by a two-session cellphilming workshop (2h). The aim of the interview was to gather data on participants' contexts and experiences, by providing space for them to explore in depth their life paths and social circumstances. It also helped participants to feel more comfortable in the presence of the interviewer and set the scene for the cellphilming component (this paper's primary focus), which in turn allowed participants to focus on what mattered the most to them in relation to the study goals. Depending on participants' preferences, the interviews and cellphilming workshop were conducted either in French or English, online or in-person where participants received clinical services.

The planning of the workshop sessions was inspired by cellphilming studies in public health[17,18], and the digital storytelling tradition[19]. Both sessions of the cellphilming workshop were facilitated by SX. SX received training in digital storytelling (Online Certificate Program, StoryCenter ©, USA) and cellphilming (Cellphilm Workshop, Participatory Cultures Lab, McGill University, Canada) and was supervised by researchers with extensive experience in arts-based methodologies. The first session included one-on-one brief training on the principles, steps and technical aspects of cellphilming. This included guidance on how to develop a storyboard and how to use simple filming and editing techniques. The training also included a discussion on ethics in cellphilming (privacy, anonymity and consent). Participants were informed that cellphilms were their property and would not be shared without their permission. Examples of publicly available cellphilms were displayed. Participants were asked to think about a topic for a cellphilm lasting approximately 1-5 minutes, as an answer to two research prompts: a) *What is a story in your life that shows how your surroundings impacted your life and mental health?*; or b) *Which things may contribute to psychosis, based on your experience?* After this session, participants worked individually on their cellphilms (using their cellphones), with one-on-one help and support by the researcher whenever participants wanted to discuss cellphilm ideas or be supported in video-editing.

The second session took place at least one week after the first session, to screen and discuss the cellphilms made by participants. Participants (n=11) met with the researcher online, individually (n=3) or in groups of four (n=2). When group meetings took place, efforts were made to create safe spaces (e.g., by forming same-language groups). During this session, participants were invited to briefly describe their cellphilms, and the process they undertook for designing and producing them. Other participants were encouraged to comment and ask questions. Towards the end, participants discussed key messages (for each cellphilm and across cellphilms), similarities and differences between cellphilms, possible future audiences for their productions and solutions for the social problematics identified in the cellphilms.

The interview and the second session of the workshop were audio-recorded, using an audio-recorder (when in-person) or the online platform's recording feature.

Analysis

The in-depth interviews and the second session of the workshop were transcribed and analyzed, along with cellphilms (visual content, subtitles, narration) and field notes, using a hybrid thematic analysis[22], framed within a contextualist paradigm[23]. Focus was placed on the data and it was assumed that cellphilm depictions, narratives and related discussions were based on concrete social realities[24]. It was also acknowledged that experiences are shaped by context, and their interpretation influenced by the subjectivities of the study participants and researchers. While the analysis was undertaken using the original transcripts, chosen quotations were translated from French to English by SX, who is fluent in both languages.

Considering that the cellphilming methodology builds from a tradition of participatory action research that recognizes power imbalances and the need to move towards participatory democracy, we sought to orient our analysis towards the topics on which participants focused for their cellphilms[10]. Accordingly, SX first analyzed cellphilms' content and the transcripts of cellphilm discussions, and built a preliminary thematic tree based on these data, through an inductive procedure. At this stage, codes from the interview transcripts were inductively generated by SX and AB and incorporated into the preliminary thematic tree. SX and SI met regularly to screen and reflect on the cellphilms (and workshop sessions) and discuss generated codes and themes. Throughout, data analysis included several iterative steps, including open coding, multiple readings, checking codes against texts and cellphilms, grouping codes under themes and sub-themes, and finding convergences and divergences between contributions and across themes and sub-themes[23].

Rigor was enhanced by triangulating data (visual, written) and methods (interview, cellphilming), keeping an analytical journal throughout (for notes/general impressions after interviews and workshop sessions), consulting with specialists in visual arts-based methodologies, including co-author (MF), and the use of analytical Software (NVivo). Their contributions shaped study design and analysis, notably by emphasizing the description of the visual material and its links to textual data. Preliminary results were shared at different stages with all co-authors, and at conferences within and outside Montréal, attended by researchers, clinicians and persons with lived experience of psychosis. Inputs received shaped data analysis, particularly around interpretation. COREQ guidelines (see supplemental material) were consulted to inform the reported information in this manuscript[25].

All authors were committed to a reflexive approach, by considering how their identities and different standpoints influenced this study at different junctures (design, implementation, analysis) and how these may have shaped our results. SX is a woman, a European psychiatrist and an international student in Montreal. She may have been seen by participants as closer to the treatment team and the White majority population. However, SX's age (close to the participants' age range), and her status as an international allophone student could have contributed to mitigating distance. The remaining co-authors are all women, with different ethnic backgrounds, living in two Western countries. Most of them are academics in psychiatry and/or social sciences, and some have experience offering clinical services for psychosis. One of the study co-authors (SS) is a visual artist and has lived experience of psychosis. She provided feedback on the interview topic guide during the pilot phase and contributed to the manuscript. All co-authors share a commitment to equity, diversity and inclusion. This shaped the study design and, most likely, data analysis and interpretation. Our study goals, which stem from a background of studies focusing (mostly) on social determinants, could have molded the participants' contributions towards negative aspects of their lives. However, aligned with the chosen method, participants were often reminded that we were interested in their perspectives and priorities.

Results

Eleven individuals aged 18-36 years (most between 23-30 years) participated in this study, including three women and eight men. Three participants identified as belonging to the majority population, and eight self-identified as ethnic minority. Out of the latter, six were first-generation immigrants, and seven identified as linguistic minority (two allophones and five English-speaking). Those who identified as an ethnic minority had African-Caribbean (n=3), Sub-Saharan African (n=3), South American (n=1) and South Asian (n=1) backgrounds. We report on themes that relate to the content in cellphilms, to honor the interests and concerns of participants. All quotations included in the results stem from the cellphilms and the workshop discussions. Occasional references to experiential and narrative accounts coming from the interviews were included to contextualize participants' contributions.

We identified four themes in our analysis: 1) Facing adversity; 2) Being apart from the world; 3) (Re)building structure and meaning; and 4) Cellphilming as possibility and connection. Additionally, we identified two sub-themes under the third theme: a) Healing: an everyday practice; and b) A new beginning. While the last theme refers to participants' reflections on the cellphilming process itself, the remaining themes touch upon experiences that portray the impact of socio-environmental contexts in participants' lives, mental health, psychosis development, and healing processes. Below, we describe each theme and sub-theme and give examples using quotations from the workshop discussions and/or specific elements of the cellphilms. Quotations translated from French into English are indicated with an asterisk.

Facing Adversity

Experiences of adversity were portrayed in some cellphilms and discussed by participants during workshop discussions. While, in some cases, these experiences referred to a specific period (e.g., before, during, or after psychosis), often they were not associated with a specific time point, and instead reflected prolonged or lifelong experiences. Aspects of social adversity shared during cellphilming workshops included the absence of resources and opportunities; instability in work, education, housing and finances; work exploitation; trauma; the experience of being othered, discriminated or stigmatized; and the absence of a strong, supportive network/community. As an example, in K.'s (man, African-American, first-generation immigrant, English-speaking) cellphilm, we see at first a sequence of presentation slides retrieved from the internet where a definition of psychosis is presented, followed by a description of aspects that may help dealing with trauma. Among these, participant K. emphasizes time and persistence. Finally, an image of a high building in which a mountain is reflected (Figure 1) can be seen in the background, along with the following narration,

> *Psychosis in my opinion can be caused by constant stress. Meaning, daily you're affected by immense trauma during your early stages of life. That plants "seeds" in your brain and when you're feeling stressed those seeds get watered and reactivate later in life when you go through another traumatic phase. The only way through it is to talk. You really have to talk about it. (…) Having a strong support system can be calming. I didn't talk. I kept everything inside of me and the fear/depression changed into anger. All these emotions passed. There is no easy way, but with time you will get out of it.*

The experience of being constantly under stress and experiencing traumatic events throughout life, along with feelings of sadness, anger, disempowerment and the need to keep surmounting multiple obstacles came across in K's cellphilm. During his interview, he described not only multiple experiences of bullying, racial discrimination and financial precarity growing up, and experiences of drug use and homelessness as a young adult, but also his will at the present time to turn over a new leaf, by focusing on family and self-discipline.

Another example of a cellphilm portraying adversity experiences is that produced by participant N. (man, African, first-generation immigrant, Allophone), whose life path was characterized by moves across countries at a young age, family separation and the feeling of having little to no support or decision-making power when it came to navigating major life changes. In his cellphilm (Figure 2), he shows several photographs of himself alone in different areas of Montreal, with the following narration in the background,

> *This is a story of once upon a time when I did not have anything, I had to start all over. I left my country and my friends and my family once, and it happened a second time. I had to leave my friends and family and move to another country alone. I had to learn different things. It was not easy, living alone. With no friends and family. Nobody to talk to. No support. Not having anything. Having to work a nine-to-five job to support myself. No relationships with anybody. I have problems communicating with others and my family and friends do not understand me anymore. Losing myself, having to learn how to be in the real world again. It was not easy, but… With hard work and pushing myself every day, today I'm in a better place.*

One important aspect in this cellphilm was N's feelings of loneliness due to experiences of adversity, with which many participants identified during the discussion. Reacting to participant N's cellphilm, participant A. (man, South-Asian, second-generation immigrant, English-speaking) described feeling especially lonely after having gone through psychosis, as he felt others would not understand him and what he had gone through. Moreover, this participant mentioned feeling insecure and fearing being stigmatized by others if ever his mental health problems would come to light,

> *I will just constantly feel alone. (...) I've even spoken to people about having health issues, but the second it gets to mental health issues, when it comes to issues of the mind, you can tell that people are weird. If it's physical health issues, they're like, oh, this person couldn't do anything about it. (...) But once it comes to issues of the mind, people change their opinions of people (...).*

Apart from the world

Issues of isolation came across in some cellphilms and workshop discussions, greatly resonating with all participants. This was related to but not limited to the feeling of loneliness in the aftermath of social adversity, as described in the previous theme. The overall feeling of being apart from the world or of simply not belonging was associated with a myriad of circumstances. Sometimes it was moving to a different place, and dealing with an unfamiliar reality, far away from loved ones and points of reference. At other times, this feeling was conveyed through experiences of adversity, exclusion, marginalization, of being othered or neglected. In her cellphilm, entitled "I am invisible", participant G. (woman, Caribbean-Canadian, second-generation immigrant, French-speaking) shows several short videos of Black men living alone in the streets of a busy city, while everyone else carries on their lives without noticing them. Subtitles bring the viewer close to the message portrayed by the cellphilm: “Are they invisible? Or were they simply forgotten? (…) Despite everything there is always hope. The hope of becoming visible”*. While during her interview, participant G. described having encountered very few episodes of blatant racial discrimination, she described having felt isolated and at times rejected from others throughout her life. This had made her wonder whether it happened because she was perceived as different, due to her background or skin colour. When commenting on her cellphilm she mentioned that, while she did not believe that her skin colour caused her psychosis, when she found out that visible minorities are at higher risk of developing psychosis, she knew she wanted to talk about that. Participant J.’s (man, African, second-generation immigrant, French-speaking) cellphilm also gravitated towards issues of isolation and loneliness. These aspects also came up during his interview, where he described feeling isolated from a young age. From his perspective, this happened partly because he was different from others (shy, prone to daydreaming), but mostly because he was bullied at school, an experience he saw as stemming from a culture of teasing and humiliation in his country of origin (French overseas territory). In his cellphilm, dedicated to his deceased cat, he conveyed aspects of progressive isolation, emotional shock, loss and grief, by showing several photos of his cat, along with the music “Sandman” (by Pat Ballard). As per the synopsis he provided, he wished to show an array of personal emotions through the image of his cat, “Yaya, or how to express through a musical slideshow composed of archival images that we can go from one extreme to the other, using the same reference as a basis.”* (Figure 3). As the music progresses, the colors of the photos progressively fade away and the music shifts to a progressively somber tone. Commenting on his choice for the cellphilm, participant J. added that losing his cat, knowing he had very few meaningful connections in Montreal, precipitated one of his psychotic episodes.

(Re)building structure and meaning

Many participants chose to produce cellphilms focusing on aspects that helped them regain structure and find meaning in life after having gone through psychosis. Accordingly, workshop discussions were mostly centered around these issues and associated concepts of hope, optimism, renewal and healing. This was the case even when the main focus of the cellphilm was experiences of isolation or social adversity, as participants often chose to end their cellphilms on a hopeful note, focusing on the present and how they reappraised their past experiences through a positive lens.

Healing: an everyday practice

Different activities associated with healing and well-being were discussed during workshop sessions, such as spending time in nature and outdoors, doing physical activities (walking, sports), listening to music, travelling and trying new things or simply enjoying everyday life pleasures. Besides mentioning these activities, participants stressed that healing happens slowly, much being found in rituals, routines, and connections with significant others. Finding balance between different things in life (work, leisure, relaxation) and choosing to spend time with loved ones and outdoors in nature was mentioned as crucial for her healing by participant D. (woman, Caribbean, first-generation immigrant, English-speaking). Her cellphilm shows her taking a long walk holding hands with her boyfriend, looking down at their feet, in a public garden in Montreal. The cellphilm then shifts to images of D’s own garden and ends with a footage of butterflies flying over blooming flowers (Figure 4). During the cellphilm, images switch by sliding laterally, following the rhythm of uplifting disco music. Mary Oliver's poem "Summer Day" is shown in lateral subtitles, as this is one of her favorite poems, *My cellphilm represents all the things I needed to do to feel better after my psychosis. I needed to spend less time absorbed by the computer, buildings and stressful events in life. Spending time in nature really helped my progress and enabled me to recover much faster. My film is a reminder to myself to spend time in nature and surround myself with green bright things.*

When describing how she felt after watching her movie, D. mentioned feeling "freed" and that she wished she had done all things shown in the cellphilm more often, before having psychosis. Her cellphilm synopsis comes in stark contrast with the experiences described during her interview, of feeling stuck in an apartment during most of her teenage years after moving to Montreal, having to wait a whole year before she could go to school, and going through prolonged experiences of bullying, racial and linguistic discrimination at school.

New beginnings

Another aspect emerging across cellphilms and associated discussions was the notion of starting something entirely new after going through difficult times. This aspect of renewal was brought up by some participants with respect to life after experiencing psychosis, as they tried to make sense of what happened to them without letting it define their whole selves. The cellphilm by participant H. (man, South American, first-generation immigrant, allophone), entitled "Mania", is an example of this. On screen, we watch the road as front passengers inside the car, and the image is modified giving the impression of having been filmed sometime in the past and played using a VHS player (Figure 5). A hip-hop loop plays on the background, while the narrator describes two separate and "rare" episodes in his life,

> *Road trips. You know, it’s not something I usually do. Not something I'll put in my bio, so to speak. But I did go on one last New Year's, and it was pretty cool. So last year I met this guy, let's call him Lee. And Lee was a TA [Teaching Assistant] with me for a course during a semester. We became pretty good friends, and our friends became friends. And then, fast forward, Lee is driving five people to Toronto, including me. I don’t need to go on about how nice it is to see new places with familiar faces. So let me tell you something else I don't do that often. I don't often send 50 emails to people I've known throughout my life, apologizing for things I didn't do. Or… Call the police because I think I'm being persecuted. I also don't usually send rap songs via WhatsApp (that I made) to my friends, but… This one's kind of funny. I guess my whole point is… I think I'll try to go on more road trips from now on.*

When explaining his choice for the topic of his cellphilm, H. mentioned that his “belief is that neither two [life episodes] define me as a person (although I do like road trips!)".

Several participants identified themselves with this cellphilm, namely, with the underlying notion of possibility and hope despite adversity. As participant M. (man, White-Canadian, French-speaking) mentioned,

> *I'd say yes, precisely, the fact that circumstances change and that it's not always the same in everyday life, from one month to the next, things can change. And during psychosis, you get the impression that things may never change. And that's what makes you a bit pessimistic.**

Cellphilming as possibility and connection

During the workshop discussion sessions, participants shared their experiences of participating in this study. Most participants mentioned that the possibility of knowing or connecting with other people having gone through similar experiences (either through group discussions or by watching each other's cellphilms) was the most valued aspect coming from their participation. Participants spoke about how this conveyed to them the sense of not being alone and spoke of being inspired and feeling represented through others' cellphilms. All these aspects conveyed to participants feelings of hope and possibility. As participant A. (man, South Asian, second-generation immigrant, English-speaking) puts it,

> *And yeah, it's also nice. It's nice to see people that, the way they speak, they feel that they're capable, and it happened to them. I don't want to be in a scenario where… That was my biggest fear, "Because this happened to me, I'm no longer capable anymore." (…) It feels like these are all capable people and we're having similar experiences and that's nice.*

Other aspects that were mentioned by participants as related to cellphilming were the possibility of engaging in a new, creative and structured activity, different from everyday life, and of connecting to larger audiences (e.g., people who may not know about psychosis or who are struggling to overcome it). The process was referred to as "liberating", allowing participants to re-appreciate difficult life moments through a different lens, linking past, present and future with a sense of possibility and freedom.

Discussion

Aligned with our aims, the identified themes contain participants' accounts of interactions with their surroundings and reflect their perspectives on how socio-environmental contexts impacted their lives, well-being and mental health. A last theme reflects participants' experiences of the cellphilming workshop as a way to connect with others with similar experiences and imagine a better and hopeful future for themselves and others. Aspects of social adversity mentioned by participants have been previously reported in the literature on social determinants of psychosis, notably, among minoritized populations. These include family separation, work, financial and housing instability, trauma, exclusion and discrimination[2]. Our findings suggest that, for some people (particularly those belonging to minoritized groups), these experiences intersect and linger over time and could be pictured as an ever-growing mountain that needs constant efforts to be surmounted. Loneliness and isolation were described as paramount across participants' experiential accounts, notably because of experiences of exclusion and social adversity before, during and after psychosis. This aligns with previous studies focusing on isolation and loneliness as central to the development and prognosis of psychosis[26]. The absence of a social network throughout life or at pivotal life stages (childhood, adolescence) was described by participants as a central contributor to and perpetuator of isolation, another factor that could arise as a result of social adversity and make it harder to surpass life obstacles.

Having access to a support network in which family and close friends play a central role; opportunities; stable life conditions (in terms of housing, work and financial stability); and spending time in nature and open spaces were mentioned as crucial for overall well-being, mental health and the rebuilding of structure and meaning after psychosis. These aspects support a relational and eco-social conceptualization of recovery, that acknowledges the relevance of social circumstances, structures and physical spaces and being in nature in supporting well-being and healing[27]. Other aspects contributing to healing included the possibility of renewal and exploration, persistence, acceptance and the (re)establishment of rituals and routines. Altogether, these resonate with the pursuit of different dimensions of recovery: hope, agency, connectedness, finding meaning, reappreciation and re-authoring one's narrative[28]. Many of these aspects were identified by participants not only as important for recovery but also when going through difficult times before psychosis. Moreover, it was mentioned that had they been present before, they may have prevented intense suffering. This highlights the need to look at life trajectories and narratives as a whole in research and clinical practice. Participants did not make strict separations between a time before, during or after psychosis when characterizing the impact of socio-environmental contexts. Thus, aspects that have been identified as protective with respect to the development of psychosis (e.g., connection, green spaces, opportunities and freedom from discrimination, etc.) may be implemented as part of clinical and community interventions that favor recovery for persons with psychosis, and vice versa[29].

Participants mentioned different benefits of participating in cellphilming, as in previous studies using visual participatory methodologies[19]. Feelings of well-being and connection with other participants were mentioned, as well as aspects of life- and self-reappreciation. These may relate to the narrative nature of cellphilming, as participants go through a process of remembering, reliving and re-telling their stories. Participants mentioned that watching other peoples' cellphilms gave them a sense of hope and made them feel less lonely. Most participants identified with each other's cellphilms, and most stories were future-oriented and optimistic in their tone. These findings echo previous reports on the benefits of peer support in psychosis given its focus on mutuality, reciprocity and hope[30] and highlight the potential of arts-based approaches in enhancing empowerment and reducing stigma[18]. Future studies could build from this knowledge to research the potential of integrating arts and peer support in early intervention for psychosis.

Notwithstanding the method's potential, recruitment for this project was challenging. Engaging in creative arts projects is not something everyone may be comfortable with, especially if it involves developing an art product that will be showcased. Although cellphones and digital technology are part of everyday life among youth, technology mastery should not be assumed amongst all. Individuals may have different motivations when engaging in different types of research, and arts-based methodologies can be demanding (both technically and emotionally), albeit rewarding[31]. Furthermore, the use of visual methodologies in research has ethical implications that have been extensively discussed, including the danger of inadvertently increasing stigma and vulnerability among those who engage in such projects, due to public exposure[32]. We therefore strived to preserve participants' confidentiality and information was provided regarding the ethical implications of cellphilming. Still, participants' productions are their own property and have a life of their own, with their potential impact being beyond researchers' control.

Encouraging participants to preserve their privacy as much as possible may have also limited participants' choices on what was shown. Cellphilms are short productions, typically focused on one single message, which may have limited the number of stories shared by each participant. Cellphilms were also produced for screening (if consented), in the context of a larger culture that privileges positive emotions[33]. This could have molded participants' contributions towards stories that focus on a happy outcome, which might not be the most complete reflections of their experiences and circumstances. The issue of erasure of negative stories in previous arts-based and lived-experience research has been raised before[34]. By focusing on happy outcomes, there is the danger of drifting away from the focus on social justice that characterizes participatory research[10]. However, participants' choices likely relate to what they wish their lives to be focused on today and how they wish others to see them as people with many facets searching their own way for a good and satisfying life, despite obstacles and challenges. As such, after having described many aspects of disadvantage, isolation and trauma in their interviews, when they then moved to their cellphilms' production, participants mostly chose to display a narrative that did not focus on aspects of vulnerability or disability but on a nuanced version of themselves and the possibilities that the future might entail.

Interestingly, despite having identified several social problematics in their cellphilms, and during interviews, no suggestions were made towards societal change during workshop discussions. It may be difficult for participants to imagine systemic changes, as they likely feel powerless in the face of an oppressive system that subjects individuals to inequity, marginalization and disadvantage. Furthermore, societies and institutions do endorse discourses on mental health focusing on self-management and individuality, which may be internalized by individuals, making it challenging for them to envision societal change[35]. Future public health and clinical initiatives would benefit from investing in a paradigm shift that empowers individuals to identify problems and suggest changes at the systemic level that can promote better mental healthcare and quality of life for all, particularly those who are most impacted by structural systems of inequity[36]. Mental health professionals and academics should advocate for societal and structural changes aiming for equity and engage in anti-oppression practices founded on structural competence[37], in the hope of preventing and improving the outcomes of health problems like psychosis.

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Figure 1: No title

Figure 2: No title

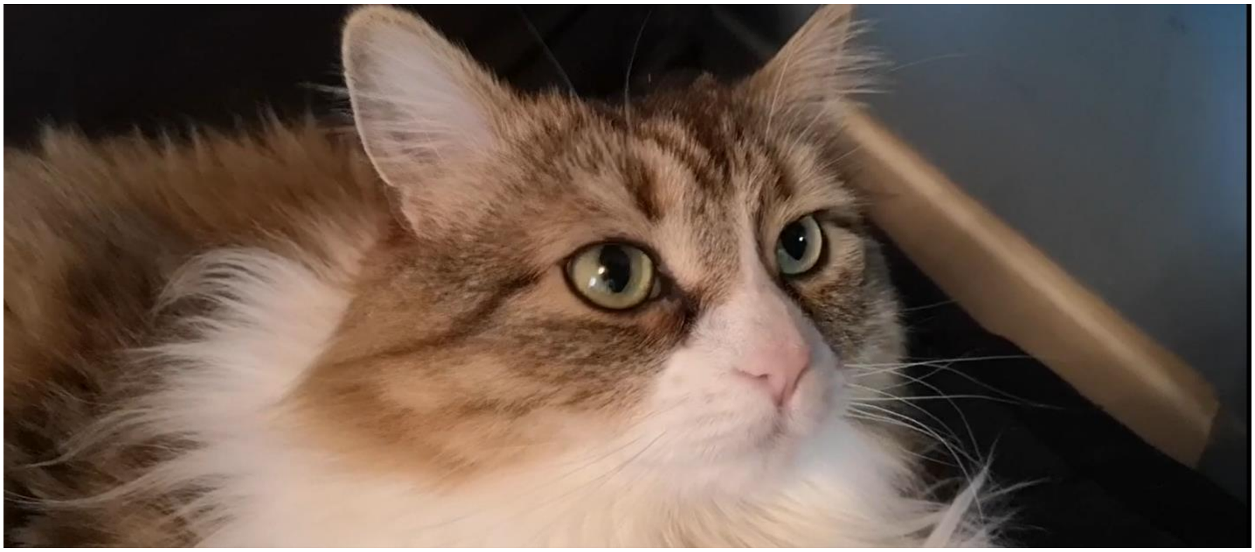

Figure 3: Yaya

Figure 4: No title

Figure 5: “Mania”

Chapter 6. Discussion

6.1 Overview of objectives and results

The overarching goal of **Manuscript I** was to critically analyze scholars' explanations on the main finding of interest for this thesis, the higher rates of psychosis among some ethno-racially minoritized communities (immigrants and ethnic minorities). Within this larger goal, we were interested in unpacking interpretative repertoires and related discourses, along with their underlying social, historical and political contexts. Specifically, we sought to better understand how these findings had been conceptualized, explained and instrumentalized by scholars, acknowledging the power of their discourses in shaping knowledge and practices in psychiatry. As such, we conducted a critical discourse analysis of editorials, letters and commentaries where these issues had been publicly discussed by academics. The three discursive themes that emerged from this study (institutional racism in psychiatry; psychiatry as a scientific discipline that sees and treats all patients equally; and the social locus of high rates) map onto two main intersecting and evolving schools of thought in psychiatry that give precedence to either constructivism and relativism or objectivism and universalism. Concretely, within psychiatry, while some conceptualize psychiatric disorders as constructs akin to universal essences, others understand them as socially and culturally crafted. This stance goes beyond nosology and expands to the ways in which scholars think about psychiatry, either as a scientific discipline close to the natural sciences (which would be a perspective closer to the medical model) or as an Eurocentric project that is shaped by culture and societal power dynamics, a perspective more aligned with the social sciences. For those endorsing an objectivist view, a measurable higher risk of psychosis among ethno-racially minoritized populations has been identified, for which more concrete causes should be investigated. For those favouring a constructivist approach these findings stemmed (at least partially) from misdiagnosis and the erroneous application of Eurocentric diagnosis to minoritized groups, born of institutional racism. The third theme emerging from our analysis ("the social locus of high rates") could be considered a later discourse serving as an attempt to conciliate both perspectives mentioned above, by seeking to focus on society at large as the main issue contributing to higher rates of psychosis among minorities. However, the discursive constructions under this theme were less prone to problematize racism in psychiatric institutions and kept an individual-level focus when assessing risk for psychosis among minoritized communities. Moreover, they carried an emphasis on biology as a crucial (and primordial) level at which evidence in psychiatry should be understood. This indicates that primacy was still placed on objectivist theories, following contemporary trends in psychiatry, with the danger of leaving unaddressed important issues of racism in institutions and eschewing critical views that consider the social and cultural embeddedness of knowledge and practices in psychiatry. Although this may be changing in recent years, with more studies looking at structural determinants of psychosis among ethno-racially minoritized individuals (Anglin, 2023; Anglin et al., 2021), we concluded that studies investigating the impact of societal level factors are still lacking, despite their potential for the development of public health and clinical interventions. Moreover, one of the conclusions of our study was that there were barely any suggestions regarding interventions tackling social determinants in the analyzed texts. Not only could this be caused by the individual-level lens applied in previous studies, but it could also have happened due to unresolved conflicts of opinion amongst scholars. Perhaps even more importantly, the perspective of persons with lived experience was absent from the analyzed documents and its relevance was rarely mentioned by scholars. Their input would be invaluable in both better understanding previous findings and planning appropriate interventions. These issues have been identified as important knowledge gaps or blind spots in the field, which we aimed to explore in the following studies of this thesis.

Manuscript II presents the results of a study where we sought to investigate psychosis risk among immigrants and ethnic minorities from a multilevel perspective, focusing particularly on societal-level variables. We aimed to investigate the impact of policies supporting immigrants and local proxies of social deprivation and fragmentation on risk of psychosis among individuals minoritized by ethnic group or immigrant status. We hypothesized that supportive immigration policies would lower risk (particularly among immigrants and ethnic minorities) and that local social deprivation and fragmentation amongst specific population groups (e.g.: rates of unemployment among immigrants) would heighten their risk of psychosis. To investigate these hypotheses, we conducted a multilevel (mixed-effects) regression study using the incidence database from the EU-GEI study, including over 1,900 individuals across 13 settings within five European countries (United Kingdom, the Netherlands, France, Spain and Italy). Study exposures (besides sex, age and population group/ethnicity, which were part of the original database) were the total score on MIPEX (Migrant Integration Policy Index), with higher scores indicating more supportive policies for immigrants at the country level; and regional proxies of social deprivation/affluency and social fragmentation (percentages of unemployment; low education; owner-occupied houses; and single-person households). When possible (for percentages of unemployment and education), we stratified exposures by population groups defined by age, sex and immigration status. We found an association between a lower incidence of psychosis and higher MIPEX scores and high levels of affluence (measured by the regional percentage of owner-occupied houses). Conversely, a higher incidence of psychosis was associated with markers of deprivation and fragmentation, namely, a higher regional percentage of unemployment (stratified by population group) and single-person households. Additionally, adjusting for these variables (altogether and individually) attenuated (by 11-25%) relative risk estimates for all minority groups considered.

Building from a focus on eco-social contexts and their connection to social-structural determinants of psychosis, as well as from an overall concern with nuance and depth when characterizing the social environment, in **Manuscript III,** we describe a study aiming to qualitatively explore the contextualized experiences and perspectives of a group of youth with psychosis, followed in early intervention services in Montréal, Canada. We emphasized retrospective accounts of participants' experiences and their relationship to mental health, as we were trying to gather detailed and grounded information on social/-structural determinants, overall life events and social contexts before the development of psychosis. Although we were particularly interested in understanding how these aspects unravelled for those belonging to ethno-racially minoritized groups, we also recruited individuals from the majority population, in order to explore whether experiences and perspectives converged and differed between groups. The results of the analysis of 24 in-depth interviews highlight how the physical and social spaces inhabited by individuals condition their experiences, and how the same places can be described differently by people, depending on who they are, where they come from, what they look like and their overall life story. In their description of their environment, participants reported how spaces could be conducive to feelings of oppression, due to concrete aspects of the built environment (lack of space and mobility, seclusion, poverty) and the ways in which the social environment was perceived (as unsafe, hostile, exclusionary, unequal and repressive). This overall oppressiveness translated into concrete (and at times) lifelong and accumulating experiences of social disadvantage and precarity at different levels (education, work, housing, relationships), or even experiences of clearcut mistreatment (abuse, trauma, discrimination, othering). Relatedly, participants described feelings of disconnection and loneliness, and many felt powerless when navigating such environments. This was described as particularly hard during challenging life events/moments of sudden (and unwarranted) change, especially in the absence of a solid support structure. None of these aspects were exclusive to individuals minoritized by race, ethnic group or immigrant status. However, what distinguished this group was that it was common that not one but many (or nearly all) the mentioned negative structural and interpersonal issues and experiences of social adversity were present in their life stories. In addition, even if most factors described as a consequence of inhabiting oppressive places would be difficult for anyone to live with, they were more frequent and accumulated for minoritized participants. Moreover, some aspects (such as the pressure to succeed and overachieve and related issues of normativity) seemed to be an even greater challenge for minoritized participants, as they felt like they did not have equal social resources and opportunities to start with. Additionally, they would also often face harsher obstacles, having to make additional efforts to achieve what others take for granted (e.g.: financial autonomy, a stable job and housing situation, etc.). Intersecting experiences of discrimination were described by all participants from minoritized groups. These pervaded different life spheres (work, education, close relationships) and had different intensities. Moreover, they seemed to be more marked for racialized minorities, particularly when other aspects of disadvantage (e.g.: being also a linguistic minority and/or of a lower socio-economic status) were present. Being surrounded by those sharing a similar background was described as helpful by some but was not seen as necessarily positive when it acted as a reminder of a difficult past (e.g.: for those who were refugees) or when it was experienced as limiting one's ability to embrace a complex identity, with multiple affiliations. Throughout their lives, most participants also had experiences of spaces in which they felt safe, free, seen and welcome. This included small communities where people knew, acknowledged and respected each other; groups characterized by diversity and inclusivity; peaceful places, with easy access to nature; and places that fostered conviviality and creativity (e.g.: by facilitating access to culture and space for creative expression). All these were described as sources of structure, meaning, hope and resilience and were understandably identified as places that enabled healing and growth. For many, particularly for minoritized individuals, these aspects could not be taken for granted and had to be actively sought or forged in the wake of great hardship. Interestingly, some participants also linked well-being and healing with aspects of self-appreciation and acceptance, processes by which they had succeeded in seeing themselves as persons with many facets. Relatedly, these aspects and processes also helped them to think about themselves in a positive way not only despite but also because of their experiences arising from intersecting disadvantage. This could be contrasted with feelings of sadness, guilt, shame and self-stigma, which were too often associated with past experiences of othering, exclusion and discrimination. Throughout, participants linked social adversity experiences with the development of ill-mental health, even if the link was not always made in relation to psychosis specifically, but rather other experiences of suffering (feeling sad, anxious) that often preceded the first episode of psychosis. Their perspectives on causality were also (more often than not) complex and nuanced, in that they would not attribute a sole cause to what happened to them. Importantly, references to individual vulnerability (in relation to one's biology, genetics or personality) and behavior (e.g.: smoking cannabis or engaging in morally condemnable activities) were also made by some participants. Participants who thought of these issues as the sole cause for psychosis reported feelings of shame and guilt, as well as a sense of lack of control/powerlessness.

In **Manuscript IV**, we addressed similar goals to the ones described for Manuscript III. In both papers, the overall aims were to explore retrospectively the contextualized experiences of participants, and their perspectives on the causality of psychosis. However, in Manuscript IV, the analysis was guided by a participatory action research framework, in accordance with the chosen method, cellphilming. The main focus was on participants' artistic contributions and discussions around the produced visual materials (cellphilms). As such, despite some similarities, findings extended and complemented the ones from Manuscript III. Due to the chosen framework, we were able to follow more closely participants' lead on what they chose to share and thus identify the issues that mattered most to them at the time of our study. Because we used a visual arts-based method, we were able to elicit responses that transcended words and provided an additional layer to our findings, as well as knowledge dissemination materials that were able to reach audiences more directly than conventional academic productions (such as papers and oral presentations). Having been asked about their surroundings and how this impacted their lives and mental health, most participants emphasized the good over the bad. Contributions were mostly focused on the present day and on how participants managed to mobilize resources throughout their lives when facing adversity. This came in sharp contrast with the findings from the analysis of the interviews alone, where mentions of recovery and protective factors were not as salient and detailed as mentions of overall adversity experiences. Healing was described as a day-to-day process, made of simple things, routines and rituals (e.g.: walks in nature, gardening, cooking, listening to music, etc.), where loved ones (family, friends, pets) play a crucial role. Trying something new or a change of scenery were also mentioned as ways to feel hopeful about the future. Moreover, healing was also seen as connected to the possibility of being again many different things and not only a person with psychosis. The relevance of nurturing self-complexity, allowing oneself to be many, was one of the most salient aspects coming out of this study. This was described as a way to find meaning and connection between past and present, particularly after going through very challenging times. Importantly though, even if typically wrapping up on a positive note, cellphilms too depicted stories of adversity (e.g.: forced displacement, sudden changes, trauma), and images also conveyed feelings of disempowerment and loneliness. Relatedly, the overall idea of being isolated, not belonging and being apart from the world for different reasons, at different times, notably due to issues of social disadvantage, discrimination and exclusion, seemed to resonate with all participants. This seemed to pervade even their mentioned strategies to pursue well-being, that were often limited to inner resources or, to a lesser extent, the development of closer ties to family members. Although spending time in nature was mentioned, other references to societal spaces and overall structural resources promoting well-being and mental health were scarce and so were mentions of possible interventions/changes at the systemic level.

6.2 Overarching themes across studies

Three main themes cut across the four manuscripts of this thesis, mapping broadly onto societal circumstances of adversity implicated in psychosis risk: a) Power imbalances in society, research and clinical practice; b) Multiple, cumulative and intersecting levels of social disadvantage; and c) The many roads leading to isolation. In this section, I will connect these themes to the findings of the manuscripts included in this thesis and to the broader literature in the field.

a) Power imbalances in society, research and clinical practice

An important dimension of social adversity cutting across all four manuscripts of this thesis pertains to aspects of inequity, stemming from broader societal power imbalances that pervade research and clinical practice.

In Manuscript I, we discuss how imbalances of power have shaped research in the topics of interest of this thesis. Specifically, issues of epistemic injustice were raised, as most academic discourse in this field (as in many others) is shaped by a few actors living in a few Western countries (Bhakuni & Abimbola, 2021). Additionally, discourses stemming from a standpoint focused on neurobiology have been given primacy by scholars in psychiatry over the past decades, leaving issues of socio-cultural contexts in the background (Gómez-Carrillo et al., 2023; Jarvis, 2007; Misra et al., 2021; Read et al., 2009). This compromises the depth and complexity of research assessing risk factors for psychosis and the applicability of research results to real-world practices. Moreover, it risks adding to the stigma associated with psychiatric disorders, as a rhetoric focused on neurobiology and genetics reinforces a fallacious process of reification of psychiatric disorders (Angermeyer et al., 2011; Kvaale et al., 2013; Loughman & Haslam, 2018). We also discussed that the voices of those most impacted by findings of higher psychosis rates and worse pathways to care among minoritized populations have been for the most part disregarded and were absent from the discussion on these topics. This relates, once more, to issues of epistemic injustice and the ways in which people with lived experience and marginalized groups have been excluded from conversations surrounding issues of knowledge creation and meaning making, notably in the field of mental health (Fricker, 2017; Okoroji et al., 2023).

Aspects pertaining to inequity and power imbalances in clinical practice were particularly emphasized, in Manuscript I, under the theme "Institutional racism in psychiatry". Several aspects by which minoritized populations are unequally treated within psychiatric institutions were exposed and criticized. This includes facing harsher pathways to care, worse quality of care and biased diagnostic practices, aspects that have been extensively reported and problematized in previous literature (Adeponle et al., 2012; Anderson, Flora, et al., 2015; Ferrari et al., 2015; Flora et al., 2017; Fordham et al., 2023; Halvorsrud et al., 2018; Jones et al., 2021; Knight et al., 2022; Knight et al., 2023; Maguire et al., 2020).. Moreover, this discursive construction carried the argument that aspects of power imbalances that privilege Eurocentric ways of knowing and doing crystallize patterns of inequality that put minoritized groups perpetually in disadvantage (Jarvis & Kirmayer, 2021).

Social structural determinants of health, reflecting broad inequitable social systems (Heller et al., 2024), disproportionally impact the mental health of ethno-racialized groups and their likelihood of developing symptoms across the psychosis continuum (Anglin et al., 2021). Issues of broader societal inequity and their impact on psychosis risk among immigrants and ethnic minorities were tackled in Manuscript II by documenting how relative risk for these populations was attenuated when accounting for regional percentages of unemployment among immigrants, an effect that was not found when simply looking at regional unemployment for the whole population. In addition, by documenting the impact of MIPEX in lowering psychosis risk for immigrants and ethnic minorities, an argument could be made that mitigating inequity and power imbalances are intermediary effects of policies that fight discrimination, establish the rights and create better life conditions and opportunities for immigrants. Findings from the qualitative studies included in this thesis (Manuscripts III and IV) highlight how structural inequities impacted some participants, particularly those belonging to ethno-racially minoritized groups, in different life spheres (e.g.: school, work, legal system, etc.). In relation to having fewer opportunities, possibilities and rights, participants reported feelings ranging from anger, frustration and disempowerment to low self-esteem, sadness and withdrawal. Some of these experiences (with emphasis on disempowerment) have been proposed as crucial to explain why inequality is, in a broader sense, connected to ill-health (Marmot, 2004, 2005, 2015; Marmot et al., 2012; Marmot & Wilkinson, 2005; Pickett et al., 2006; Tibber et al., 2022).

b) Multiple, cumulative and intersecting levels of social disadvantage

The results from the different manuscripts of this thesis tap into issues of unfairness and inequality in the form of social disadvantage, operating at several environmental levels and contributing to worse mental health and, ultimately, to the higher incidence of psychosis amongst minoritized groups. In Manuscript I, under the theme "the social locus of high rates", different aspects of social disadvantage and adversity and their potential to contribute to psychosis development were described, mostly at an individual-level, whereby different kinds of social experiences (othering, exclusion and disempowerment) were emphasized by different discursive constructions. Issues of structural racism were also described under the theme "Institutional racism in psychiatry", even if mostly approached with a specific focus on psychiatric institutions and practices. In manuscript II, we reported the impact of regional level social deprivation and fragmentation in increasing psychosis risk amongst minoritized groups and, conversely, the effect of policies that focus on integration, acceptance and better life conditions for immigrants in lowering psychosis risk among these populations. All these exposures contributed to risk of psychosis through distinct and compounding effects. Finally, in Manuscripts III and IV, participants described having to deal with a myriad of intersecting social disadvantage experiences (e.g.: low socioeconomic status or financial, housing, employment, educational instability, absence of close relationships or of a support network), which were often experienced as stemming from societal oppression. This was especially true amongst minoritized groups, for whom different forms of discrimination (e.g.: racial, linguistic, gender, sexual orientation) intersected. Altogether, these results speak to issues of eco-social structural intersectionality (Homan et al., 2021), i.e., the ways in which different forms of societal oppression accumulate, intersect and reinforce each other, acting at different levels, from the macro- (societal) to the meso- (neighborhoods, communities, families) and micro- (interpersonal and individual) levels, hindering overall well-being and (mental) health.

Participants related issues of social disadvantage, oppression, injustice and unfairness with their well-being and mental health, as they described a huge emotional burden and tension, building up throughout their life course, which for many culminated with an overall sense of lack of meaning and structure and feelings of guilt and shame. Some of the experiences described by participants in relation to oppression and inequity map into aspects previously identified as potentially playing a role in psychosis development among minoritized groups, in relation to social disadvantage (Alameda et al., 2019). This includes aspects of disempowerment, exclusion, threat, and related emotions and feelings of fear, mistrust, sadness and worthlessness. Relatedly, previous studies have reported the manifestation of non-psychotic symptoms and common mental disorders earlier in life in persons who eventually develop psychosis, notably among minoritized communities (Anderson et al., 2022; Iyer et al., 2008; Norman et al., 2005; Yung & McGorry, 1996). Our results suggest that the subjective experiences of lack of meaning and structure, anger, frustration, alienation, psychological tension, shame and guilt should be given additional consideration as potential psychological mechanisms linking accumulating and intersecting social adversity to psychosis risk among ethno-racially minoritized groups.

c) The many roads leading to isolation

Loneliness as a result of social isolation has been identified as both a risk factor and a consequence of psychosis (Lim et al., 2018), being also one of the aspects that is believed to contribute to greater risk of psychosis among ethno-racially minoritized groups (Reininghaus et al., 2008). Furthermore, social isolation has also been associated with greater delays in accessing care as well as with poorer engagement (Badcock et al., 2020; Mascayano et al., 2021). The results of our research also highlight the central role of loneliness in the lives of individuals with psychosis, particularly those who belong to minoritized groups. In Manuscript I, one of the discursive themes emerging from our analysis ("Institutional racism in psychiatry") contained a critique of psychiatric practice, in that those belonging to minoritized groups received poorer healthcare due to issues of racism and prejudice and the fact that services disregarded cultural diversity in their structure and practices. Additionally, theories of vulnerability concerning minoritized groups (for instance, by labelling them as "weak" or susceptible to mental illness), which risked being supported by data on higher psychosis risk among ethnic minorities and immigrants, were considered as yet another process of labelling and discriminating those belonging to minoritized groups. It was also posited that this could further compound processes of othering, marginalization and segregation, contributing to the isolation of individuals from these populations. Indeed, those belonging to ethno-racially minoritized groups may avoid using services due to fear of being labelled or stigmatized or fear of receiving inappropriate care (Lawrence et al., 2021a, 2021b; Thomson et al., 2015; Whitley et al., 2006). Interestingly, this preoccupation with isolation was also present in discursive constructions opposing these arguments, as some scholars feared that a great focus on institutional racism in psychiatry could alienate those who were at higher risk of psychosis from rightful services.

In manuscript II, aspects potentially contributing to isolation were tackled at a higher level, through the investigation of the impact of regional social fragmentation (measured as the percentage of single person households) and restrictive migration policies as per lower MIPEX scores (which include indicators pertaining to family reunion, political participation and anti-discrimination policies). Aspects pertaining to social deprivation (regional unemployment and low education) among minoritized groups were also included as exposures, and these may also contribute indirectly to isolation, as issues of social disadvantage contribute to marginalization and segregation (Anglin et al., 2021).

Finally, the results from manuscripts III and IV conveyed a more complex picture of how isolation may develop and be felt in many ways. Isolation may be the result of segregation and marginalization in the first place, which is often closely related to issues of discrimination, labelling and othering as well as to aspects of social disadvantage (incl. lower socioeconomic status, housing instability, unemployment, lower educational level, etc.) vis-à-vis others. It may be the result of being in a strange/unfamiliar environment, in a place where things lack meaning or where/when there is no one around to rely upon or trust, as it may happen the context of migration. As per our results, isolation was often accompanied with feelings of loneliness, fear, and an overall sense of vulnerability, instability and low self-esteem. Moreover, for some it was associated with guilt, for not fitting in or not belonging due to being considered (or feeling) different. Finally, isolation was also reported as a state that could be reinforced in the context of psychosis, notably due to the experience of different forms of stigma (including self-stigma), or as a consequence of the manifestation of symptoms stemming from psychosis (including prodromal, positive and negative symptoms), depression and anxiety.

6.3. Implications

The broad contributions of this thesis include: a) a critical gaze at the explanations scholars have put forward with respect to epidemiological findings of heightened risk of psychosis among groups minoritized by race, ethnic group and immigrant status; b) a detailed description of the experiences and social contexts of individuals belonging to these populations, as well as their own perspectives on psychosis causality; and c) a more fine-grained account on the potential processes underlying the social causation of psychosis, with greater emphasis on structures and systems. The resulting knowledge has implications for public health and mental health practice and contributes to the existing knowledge on social determinants of psychosis and risk of psychosis in general, and specifically amongst populations minoritized by race, ethnic group or immigrant status.

As previously discussed, Manuscript I depicts a conflict of opinions amongst academics regarding the findings of interest of this thesis and suggests these divergences might have been one important factor hindering action and the implementation of policies addressing social determinants and thereby lowering psychosis risk among minoritized communities. This disagreement, along with the complexity of the issues at stake and the need to involve multiple actors for meaningful changes, make it a complicated issue, or what has been termed as a wicked policy problem (Rittel & Webber, 1973). This problem could be nonetheless mitigated by greater efforts in embracing interdisciplinarity and a plurality of perspectives of different actors, in a process that would warrant the participation of service users and community members belonging to ethno-racially minoritized groups (Dykxhoorn & Kirkbride, 2019; Mooney et al., 2023).

Previous studies have provided abundant evidence linking individual-level aspects of social disadvantage and adversity and psychosis risk amongst immigrants and ethnic minorities. However, one critique with respect to these findings is that there has been a lack of emphasis on higher societal-level factors contributing to higher risk of psychosis, which are likely to be pertinent targets when tackling this problem at the population level. Applying changes at the societal level in many instances may be more accurate (i.e., by acting on the causes of causes) and more likely to produce change at a broader scale (Macintyre et al., 2002). Moreover, it serves the very important purpose of social justice and is attuned with an eco-social perspective in epidemiology, by looking at multilevel exposures and seeking higher-level accountability when examining the causes of inequality in patterns of health (Krieger, 2001). For instance, much has been theorized and investigated around the impact of interpersonal discrimination, acculturation, marginalization, housing and work instability among minoritized communities. However, very few studies looked at societal characteristics that create the conditions or circumstances in which the mentioned experiences take place. Acting at the proximal level may produce limited change compared to the application of country-wide policies to create better conditions for the impacted communities. Our results from Manuscript II provide an important contribution to this, in that they identify broad modifiable risk factors that could be directly targeted by policies, such as levels of unemployment amongst immigrants and ethnic minorities and overall policies supporting immigrants. While there are limitations to the fact that we investigated the impact of an overall score (instead of a single policy) across a relatively limited timespan, our results may have glimpsed at something fundamental, the overall posture of a country towards those who are conceptualized as “others” or “foreigners”. This may have very important repercussions for how a given place is experienced by immigrant and ethnic minority communities, as well as for public opinion and other non-measurable aspects that make up for the experiential atmosphere in which everyday life is embedded. The fact that MIPEX scores also impacted psychosis risk for the majority population suggests that broader societal aspects may be grasped by this construct, such as trust, safety and social equity, that are beneficial for everyone's wellbeing. Addressing these risk factors would probably address more than one problem, and this is supported by findings associating MIPEX scores with well-being and overall health among immigrants (Juárez et al., 2019). The MIPEX score is public and available in great detail (in terms of the scores for each policy area and indicators within these) for many countries, making it possible to easily identify areas that need improvement in a given country.

Beyond intervening in the areas identified by the MIPEX as indicators of supportive policies, particular attention should be given to local contexts and first-person perspectives when assessing social problems and potential policy solutions to achieve meaningful change. Manuscripts III and IV make the important contribution of bringing the voices of persons with psychosis to the forefront of the discussion on social determinants and their impact on shaping risk of psychosis among ethno-racially minoritized groups. Study participants made substantive and meaningful contributions, and although they are particularly relevant to the context of Quebec, they provide clues for intervention which are likely to be pertinent in other settings sharing some similarities with ours, such as other settler multinational societies (Kymlicka, 2020).

Participants' contributions suggested that navigating places where hyper-diversity is cherished could convey feelings of safety and relaxation, linked to a sense of being welcomed, accepted and appreciated. Some participants highlighted the need of communal spaces where neighbors could spend time together, either formally (e.g.: support groups for specific mental health issues) or informally, and all participants recognized the positive impact of having easy mobility, accessible services and access to nature (gardens, parks) and culture. These spaces stood in contrast to oppressive spaces and circumstances, that promoted exclusion, marginalization and inequality in society. Creating spaces and circumstances by which people with diverse backgrounds can get together, spend time outside in contact with nature and engage in leisurable activities could be of invaluable help to counter isolation and loneliness and to foster trust, safety and mutual respect and cooperation in hyper diverse contexts. Moreover, community-based programs tackling social deprivation (namely in the form of financial, educational and housing instability) should be further developed. These are some examples of how our study results could inform public health interventions to improve well-being and mental health overall.

A comprehensive review on social determinants of mental health has been recently published, concluding that while further research is still needed (particularly with respect to interventions), acting upon social determinants is a pressing social justice issue (Kirkbride et al., 2024). In this review, general recommendations are provided, which include intervening in critical windows throughout the life course; prioritizing measures that impact multiple domains (physical, mental, social); poverty alleviation; and enhanced investment in primary (universal, selective and indicative) prevention. Within the realm of primary prevention, although studies are scarce, place-based public health interventions targeting loneliness and neighborhood deprivation (e.g.: development of community facilities, improving access to green spaces and better infrastructure/housing conditions) showed promising results in terms of acceptability and/or mental health improvement (Hsueh et al., 2022; South et al., 2018). These findings are aligned with previous publications suggesting that urban planning interventions aiming for better mental health in cities should focus on aspects of pro-sociability, safety, physical activity, and proximity to green areas (Hsueh et al., 2022). Interventions tackling poverty (and thereby, inequality) (Zaneva et al., 2022), and homelessness (Woodhall-Melnik & Dunn, 2016) have also been shown important mental health benefits, and previously collated evidence shows a clear benefit on social inequality and mental health from reforms in social security, towards broader eligibility and greater generosity (Simpson et al., 2021). Designing policies and shaping environments to be accessible, enjoyable and inclusive to people, irrespective of age, gender, population group, socioeconomic status, disability, etc. will likely benefit not only those with psychosis or vulnerability to psychosis but society as a whole.

Something important to mention, since it may be quite specific to the Quebec context, was the identification of linguistic discrimination as an important additional layer of discrimination. According to our results, this aspect of discrimination may be particularly salient within educational institutions. The fact that some schools were identified as hostile places for racially and linguistically minoritized individuals is an issue that could be specifically targeted by EDI interventions fostering the celebration of diversity (including in terms of language) in schools. This could be achieved through a broad commitment to apply more generally principles of anti-oppression in schools (Callaghan et al., 2023). Importantly, care should be taken so that, while taking diversity seriously, the complexity of one's identity is also acknowledged, allowing for individuals to feel proud about their many different roles and identities (Sen, 2007). Moreover, care should be taken so that such interventions do not work as a way of increasing stereotypes or singling out minoritized groups.

The emphasis on anti-oppressive practices, along with an overall commitment to take diversity seriously, should also be a core preoccupation for mental healthcare (in general) and early intervention services for psychosis in particular. Such practices should be based on structural and cultural competence, humility and safety, which have been proposed as part of a general person-centred approach to healthcare, one that is likely to improve service provision not only for minoritized communities but for all individuals (Kirmayer et al., 2016). Cultural competence pertains to a set of attitudes, skills and knowledge of systems or individuals (e.g.: healthcare organizations and service providers) that enable the provision of services that are accessible, appropriate and effective for culturally diverse communities (Sue, 2006). This approach implies a basic stance of cultural awareness, one that acknowledges the role of culture and the social context in shaping health beliefs and behaviours, illness development, experience and outcomes. Cultural safety, on the other hand, places emphasis on acknowledging and directly addressing the power disparities that pervade healthcare institutions and practices, aiming for an environment of truly collaborative care where different ways of being, knowing and doing are respected, considered valid, and integrated in care. Cultural safety is considered an outcome in itself and is to be determined by service users themselves (Brascoupé & Waters, 2009; Papps & Ramsden, 1996). Essential to the development of cultural safety is cultural humility which, building from self-knowledge and self-critique, gives space for the acknowledgment of dominant institutional practices as products of culture, with inherent strengths and limitations. Such positioning is essential to enable a critical assessment of biases, stereotypes and prejudices, and implicit imbalances of power (both structural and interpersonal), and their links to past and ongoing contexts of oppression, racism, trauma and colonization (Tervalon & Murray-Garcia, 1998). Finally, structurally competent practices seek to apply all the above concepts at the institutional/systemic level. Such practices pertain to the acknowledgement of and action upon known societal dynamics of oppression, repression and inequity that impact service users and pervade healthcare institutions. Under such practices, every member of the institution is considered a potential actor for structural change and is responsible for advocating for patients and being active in promoting change. Moreover, structural competence entails a close partnership with community members, notably to rethink and develop new interventions (inside and outside the clinic) for the served populations (Corneau & Stergiopoulos, 2012; Metzl & Hansen, 2014). The findings described in this thesis, particularly under manuscripts III and IV, strongly support the need to embrace these principles and practices in clinical care.

There have been critiques of early intervention services for psychosis regarding their excessive focus on risk management, homogeneity and protocolization (Stasiulis et al., 2020, 2022), potentially compromising their commitment to a person-centered approach. Such issues may also hinder the ability of these services to provide care that meets the needs of populations with diverse social and cultural backgrounds. Ethno-racially minoritized populations, immigrants and persons with low SES have been reported to be under-represented in early intervention services (Burke et al., 2022), and there is relatively limited literature and practical guidance on addressing social and cultural aspects of care in early intervention services (Xavier et al., 2021). Although the studies of this thesis did not set out to assess specifically the ability of early intervention services to cater to diverse communities, our results highlight the relevance of eliciting complex narratives that give space and time for people to provide context and meaning to their past and current experiences. Moreover, service users should feel understood, listened to, and safe in the clinical encounter, in that services do not replicate (and strive to mitigate) dynamics of power and oppression which too often pervade the lives of minoritized youth. More specifically, services should also be aware of and actively act upon social determinants (including aspects of deprivation, isolation and trauma) that may have contributed to their patients' illness, which could further hinder their recovery. Previous work on urban remediation as a recovery strategy, building from findings of higher risk of psychosis in urban areas and city avoidance among persons with psychosis, is a good example of how the concrete assessment of socio-environmental circumstances can inform individual interventions to improve patients' mental health in relation to their interactions with their environment (Baumann et al., 2020; Conus et al., 2019; Söderström et al., 2016; Söderström et al., 2017). Finally, our work also highlighted the potential of participatory and arts-based approaches as part of therapeutic interventions, notably in settings that promote forms of peer support.

6.4. Strengths and Limitations

The manuscripts that are part of this thesis have several strengths and limitations which have been discussed in their respective chapters. However, some aspects merit further discussion. As a general limitation pertaining to the whole dissertation, although we have highlighted (and criticized) the lack of studies in the field of risk of psychosis amongst ethno-racially minoritized populations outside Northern Europe (and to a lesser extent the USA), all our manuscripts still focus on WEIRD (Western, Educated, Industrialized, Rich, and Democratic) countries. However, two of this thesis' manuscripts refer to a study implemented in Quebec, Canada, where these topics have also been insufficiently researched.

In Manuscript I, we took a step back to critically appraise scholars' explanations for the findings of interest of this dissertation, acknowledging the power of discourses in shaping practices and research, along with their context-bound properties. While this is an innovative way to approach a topic of research, the ways in which the analysis and data interpretation were conducted for this manuscript, and the choices made in this and the following manuscripts of this thesis contributed to the emphasizing of some discourses vis-à-vis others, which reflect my own positionality as a researcher. As mentioned in the introduction of this dissertation, my research work builds from a specific interest in social and cultural psychiatry and a core commitment to principles of equity, diversity and inclusion. However, even if I approached previous evidence and the findings of this dissertation through such a lens, there is considerable breadth in terms of the background frameworks and paradigms used as a point of departure, which resulted in four studies using quite distinct methods and ways of looking at the issues of psychosis risk and minoritization by ethnic group, race and immigrant status. As another limitation, in Manuscript I, we conclude by highlighting the absence of first-person voices in the analyzed documents, even though our search strategy might have also contributed to this. Nevertheless, as discussed in the chapter of this manuscript, our choices were bound to the goal of grasping discourses from scholars, due to their power in shaping knowledge. Furthermore, we have also considered this gap in knowledge in the design of the study that is at the root of Manuscripts III and IV.

In Manuscript II, we decided to use previously collected data from a large multinational study because we aimed to assess the impact of large-scale exposures in populational risk for psychosis across different population groups. Because we did not design the study and collect the data ourselves, many choices in terms of our analysis were determined by availability of data within the EU-GEI study. Conducting a secondary analysis has some disadvantages, in terms of the difficulty in making causality assertions using retrospective data, the possibility that used data is outdated at the time of the study and the inevitable challenges in achieving a perfect match between the research question and the study design and data collection (Wickham, 2019). Furthermore, it makes it so that some sources of bias regarding this study, namely regarding case ascertainment and the categorization of population groups, could not be addressed presently. The issues regarding secondary data analysis are not restricted to the EU-GEI study and also extend to the use of our exposures of interest (the MIPEX and Eurostat variables of social deprivation/fragmentation). However, carrying out such a large study involves time, human and material resources that would be extremely hard to attain in the context of a doctorate. Moreover, we were able to test our research questions using a large database from a study conducted by a multinational team of experienced and renowned social epidemiologists spread out in several countries and backed up by large local teams, without research subjects incurring any additional burden.

Following the overall research questions of this dissertation, aligned with previous research gaps, I went on to develop a qualitative study to explore the contexts, experiences and perspectives of a group of persons with psychosis from diverse social, cultural, racial, ethnic and immigrant backgrounds. This study was conducted in several early intervention services for psychosis in Montréal, Canada, where my doctorate is based. Although it would have been interesting to explore these aspects in the countries where the EU-GEI study was developed, as a follow-up to that study, this would have entailed a great number of resources and an amount of time well beyond what is possible during a doctorate. However, by conducting this study in Canada, we were able to elicit the contributions of study participants from a different context, since most previous studies looking at psychosis risk among minoritized communities were conducted in Northern Europe. Furthermore, it has been suggested that Canada, due to its social, political and historical context, as well as its model of citizenship, may be more supportive of immigrants and minoritized groups in general (Vang et al., 2015). The evidence for a higher psychosis risk among ethno-racially minoritized populations has also been less replicated in this setting and, as previously mentioned, previous findings are altogether less conclusive. This makes it a particularly relevant context to assess the impact of social determinants (including risk and protective factors). Importantly too, although this has not been included in the context of this dissertation, the same study at the basis of Manuscript III and IV is currently also being implemented in the Netherlands, in collaboration with a local research team. Finally, qualitative studies by nature have context-specific relevance, which arguably limits the generalizability of both manuscripts III and IV, which should be read keeping the context of Quebec and Montreal in mind, along with the context of care in early intervention services for psychosis. However, as outlined before under the implications of these studies, our findings and study conclusions are likely to be pertinent across several contexts sharing contextual similarities with ours. A final limitation pertaining to manuscripts III and IV relates to the fact that choosing to grasp a great number of experiences along the life course and in relation to different aspects and levels of the social environment may have compromised our ability to explore in greater detail specific experiences and contexts (for instance, the specific exploration of issues of loneliness or ethnic density). The same could be said regarding our choice to stratify our sample to recruit broadly individuals from diverse backgrounds, which compromised the depth of information that we could assess, had we focused on a specific minoritized group. However, since environmental experiences intersect and interact throughout the life course, I would argue that singling out a single contextual aspect of the environment picked by the researchers would perhaps limit participants' contributions and could artificially compartmentalize experience, which is why we opted to keep a broader focus on the social environment. Likewise, focusing on a single minoritized group would compromise our goal of identifying both similarities and divergences across groups. A final limitation to note, regarding the study behind Manuscripts III and IV, is that we did not recruit individuals from the general population (with no psychiatric diagnosis), which would perhaps have allowed us to identify differences and similarities which could be of help to increase our understanding of both protective and risk factors amongst different population groups. It would have also helped us understand how life experiences and perceptions of experiences for minoritized participants with psychosis intersect with the development of their illness (including its prodromal phase), on the one hand, as well as reflect common aspects of being minoritized in Montréal, on the other hand.

6.5. Future directions

In general, future studies could extend the existing body of knowledge to which this thesis made an important contribution, particularly by addressing the enumerated limitations (and related research questions) of all four manuscripts included in this dissertation. In this last section of the general discussion, I will focus on suggestions for future research that were either not covered in the chapters dedicated to the four manuscripts under this thesis or warrant further elaboration.

First and foremost, the knowledge and views of persons with psychosis and persons in the community belonging to ethno-racially minoritized groups remain insufficiently assessed so far, including within the studies that are part of this thesis. First, analysing the extant discourse on the topics of interest of this thesis in different channels (media, gray literature, etc.), including first-person accounts, would provide a more comprehensive picture of the different explanations that have been proposed for the higher risk of psychosis among ethno-racially minoritized populations, the impact of social determinants and, more broadly, for the development of psychosis. Second, future studies would benefit immensely from involving patients and community members from the early stage of the research process, including the development of research questions and the overall study design and implementation, focusing on what matters the most for those most impacted by research results. Such studies could include different kinds of methodologies (both quantitative and qualitative), building from community-based and participatory action research frameworks (Freire, 2021; Wallerstein & Duran, 2006). Arts-based methodologies (such as cellphilming, digital storytelling, video-ethnography, photovoice, body-mapping, etc.) (Boydell et al., 2012) are powerful additions to studies with a keen social justice focus, building from the community and lived experience knowledge, and these are still scarce in the field of psychosis. Our work in Manuscript IV shows well how these methodologies can be relevant to empower and acknowledge participants' contributions, and the resulting products are excellent vehicles for knowledge dissemination.

While more qualitative studies in this field are warranted, focusing perhaps on specific areas of interest pertaining to the social environment and/or focusing on specific population groups, as mentioned before (e.g.: the experience of the urban environment and its links to the development of psychotic symptoms by Moroccan immigrants in the Netherlands), mixed-methods studies could also provide new important insights, in that such studies are particularly powerful in generating potentially generalizable findings through quantitative methods (which are more likely to be considered by policymakers), while allowing for contextualization of quantitative findings and greater nuance through the use of qualitative methods (Pluye et al., 2018). One example in relation to Manuscript II, of a mixed-methods study that we could have developed using a sequential explanatory design, would be the development of a qualitative study recruiting a subset of participants from the EU-GEI study belonging to the different minority population groups identified. Under this study we could, for instance, have explored participants' experiences with respect to different areas encompassed by the MIPEX score (political participation, residency, naturalisation, family reunification, labour market mobility, anti-discrimination, education, and health). Such a follow-up study could add important nuances to the quantitative findings from Manuscript II. Also building from Manuscript II, and specifically regarding quantitative methodologies, future epidemiological studies could be developed to further investigate modifiable, large-scale variables longitudinally, along with exposures at the individual, familial and neighborhood levels, as well as their respective interactions throughout time, thus more explicitly incorporating a structural intersectionality framework (Homan et al., 2021). Such studies could also be complemented with qualitative studies, through different mixed methods designs (Pluye et al., 2018). With respect to variables at the societal and structural level specifically, to the extent possible, these should focus on systemic characteristics of societies, rather than aggregate measures building from individual-level data (Macintyre et al., 2002). Finally, the application of analytical methods particularly suitable to quantifying intersectional inequities such as Multilevel analysis of individual heterogeneity and discriminatory accuracy (MAIHDA) could be particularly valuable when using large datasets (Evans et al., 2024; Merlo, 2018).

With respect to qualitative work, future studies aiming to further develop a theory of social causation in psychosis could benefit from applying a phenomenological methodology to explore lived experience, with an enhanced focus on the development of psychosis and its links to the social environment, along with the use of grounded theory to approach the generated data. While our work in Manuscripts III and IV touched upon several issues that provide clues to the social causation of psychosis, mostly by providing additional nuance to known risk and protective factors, our study design and instruments were not fitted to the purpose of generating new theory in this respect. Similarly, qualitative studies applying a deductive methodology, for instance, by approaching data using a specific framework which carries already a given theory with respect to causality (e.g.: structural intersectionality) would likely provide insightful new knowledge to the field and associated findings could potentially more directly be translated into pragmatic suggestions for social intervention.

A lot is still to be done in terms of interventions tackling what we already know about social determinants and their relation to higher psychosis risk among ethno-racially minoritized groups. Implementation studies tackling different known risk and protective factors could be targeted at the level of the general population and for specific groups at higher risk of developing psychosis or presenting sub-threshold symptoms, through universal, selective and indicative prevention strategies, respectively (Kirkbride et al., 2024). As previously mentioned, the implementation of such interventions should be based on local knowledge and lived experience as much as on previous evidence stemming from both quantitative and qualitative studies. In order to support knowledge dissemination of the work in this thesis, I worked with co-researchers, to successfully secure funding from the Canadian Institutes of Health Research to develop a full-day forum to 1) disseminate and discuss our findings on social determinants and their contribution to psychosis risk, notably amongst some minoritized groups to an audience of diverse stakeholders (clinicians, patients, family members, researchers, policymakers, youth in the general population and community workers); and 2) jointly discuss and generate recommendations (which will be used to develop a policy brief) aimed to implement change at the public health and services' levels. Our hope is that bringing together clinical, social, political and lived experience perspectives will generate novel and actionable insights about potential targets of intervention.

Conclusion

Previous research has shown that some ethno-racially minoritized groups are at a higher risk to develop psychosis, due to a higher likelihood of being exposed to experiences of social adversity and disadvantage, stemming from inequitable socio-structural environments. However, the interpretation of these findings has been disputed and previous research criticized, notably due to an insufficient focus on larger-scale systemic factors and the near absence of first-person perspectives. Altogether, the manuscripts that are part of this dissertation aimed to address these research gaps by critically analyzing the extant academic discourses on the topic of higher risk of psychosis among immigrants and ethnic minorities; assessing the impact of societal level variables on risk of psychosis in these populations; and exploring the experiences, contexts and views on psychosis causality among persons with psychosis with diverse ethnic, racial and immigrant backgrounds. The first goal was addressed in Manuscript I, which provided a detailed description of different (and at times competing) discursive constructions on the topics of psychosis risk, immigration and ethnicity. Although there seemed to be a general agreement that socio-structural contexts are crucial to understand risk of psychosis in populations minoritized by race, ethnic group and immigrant status, divergences regarding issues of agency and accountability (and therefore the main locus of intervention) seem to have hindered progress towards meaningful change in public health and clinical practices. Moreover, the overall discussion regarding these topics was largely uninformed by first-person perspectives and lived experience. In Manuscript II the second goal of this thesis was addressed, by documenting the impact of supportive policies for immigrants in lowering psychosis risk of psychosis among several ethnic minority groups, and the negative impact of local social deprivation (particularly unemployment rates for immigrants) among these populations. By using policies supporting immigrants (as measured by the MIPEX) as a variable, we were able to highlight the role of a societal-level/structural construct in influencing psychosis risk among minoritized populations. Additionally, in general, we used exposures that can be easily targeted to promote change at a population level. Finally, manuscripts III and IV provide a fine grained and nuanced description of the contexts, experiences and perspectives of a group of youth with psychosis stemming from diverse backgrounds, via verbal and artistic contributions, assessed through interviews and a participatory, arts-based method, cellphilming. The results of these studies show how socio-structural contexts shape experience, with oppressive places and atmospheres being linked to experiences of adversity, disadvantage and isolation throughout the life course. However, these findings also show that social spaces, broadly conceptualized, can promote healing, mental health and well-being, particularly when providing sources of meaning and structure, safety, inclusiveness, connection and freedom. For those belonging to minoritized groups, inhabited spaces over the life course were more often described as oppressive, and experiences of adversity and disadvantage intersected and accumulated more often, compared to the majority population. These findings have important implications for clinical practice, as they bring light to the centrality of social experiences in people's lives and mental health. Considering socio-structural determinants in treatment planning should be paramount in clinical interventions that claim adherence to person-centered approaches. More broadly, the results of this dissertation highlight the urgent need for place-based, policy and other interventions tackling social determinants at a wider scale, with an emphasis on the promotion of social connectedness, tolerance, inclusivity and equity of rights, opportunities and resources for all individuals.

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Appendices

<u>List of the appendices – Supplementary materials from Manuscripts II-IV</u>

1. Manuscript II: Supplementary table 1: Denominator by study site for majority population and for minority groups, overall and by region of origin
2. Manuscript II: Supplementary table 2: Total mean and standard deviation for continuous variables
3. Manuscript II: Supplementary table 3: Correlations between area-level variables and crude incidence
4. Manuscript II: Supplementary table 4: Incidence rate ratios indicating the association between minority group and incidence of psychosis
5. Manuscript II: Supplementary table 5. Basic and Full mixed-effects Negative Binomial regression models
6. Manuscript II: Figure 1: Incidence intercept estimates and 95% CI by catchment-area (null-model)
7. Manuscript II: Figure 2: Incidence intercept estimates and 95% CI by catchment-area (multivariable model)
8. Manuscript IV: Interview topic guide
9. Manuscript IV: COREQ checklist

Supplementary table 1: Denominator by study site for majority population and for minority groups, overall and by region of origin (retrieved from Termorshuizen et al., 2022).

	Majority population	**Minority populations**								**Other**
			Western countries[a]	**Middle East**[b]	**The Maghreb**[c]	**Sub-Saharan Africa**	**Asia**[d]	**The Caribbean**[e]	**Latin America**	
London	175,706	250,747	80,459	3,054		57,863	41,264	37,070		31,037
Cambridge	1,238,172	316,251	163,242	4,101		15,369	104,043	11,976		17,520
Amsterdam	295,587	330,084	87,219	24,786	29,049	32,628	46,752	97,167	12,483	
Gouda & Voorhout	651,786	114,984	44,418	8,526	22,395	4,899	23,784	8,310	2,652	
Barcelona	688,283	195,603	77,304		7,607	2,179	37,838	4,583	66,090	
Valencia	299,983	64,206	24,141		4,005	4,268	8,389	1,067	22,332	
Oviedo	428,483	34,141	13,524		2,073	2,522	1,349	383	14,288	
Santiago	556,191	18,724	7,062		1,375	582	931	198	8,573	
Cuenca	160,724	34,348	25,139		3,093	197	729	159	5,030	
Paris	179,220	89,143	16,859		29,531	20,232		5,292		17,227
Val de Marne	342,091	168,542	28,923		49,875	36,860		21,104		31,778
Bologna	727,700	172,224	77,354	4,505	14,880	10,191	56,311		8,973	
Palermo	1,493,856	100,863	30,793	751	11,404	17,069	35,560		5,274	

[a] Sites in Spain, Italy, Netherlands: Minorities from Europe, USA, Canada, Australia, New Zealand and countries of former Soviet Union; France: Minorities from Europe or Turkey; UK: self-identified Irish Whites or White Others; 2) Turkey, Israel, Egypt, Iran, Iraq and other countries in the region; UK: self-identified Arabs ; 3) North-African countries, except Egypt; 4) including states of the former Soviet Union with a predominantly Islamic population; 5) Caribbean islands, Surinam, Guyana, French Guyana and other French overseas departments

Supplementary table 2: Total mean and standard deviation for continuous variables

	MIPEX total	**% Low education**	**% Unemployment**	**% Owner-occupied houses**	**% Single person households**
Mean	60.21	41.73	17.05	65.51	30.02
SD	4.05	13.71	10.02	15.01	6.20

Supplementary table 3: Correlations between area-level variables and crude incidence (cases/person-years)

	MIPEX total	**% Low education**	**% Unemployment**	**% Owner-occupied houses**	**% Single person households**	**Crude incidence**
MIPEX total						
% Low education	0.32*					
% Unemployment	0.21*	0.50*				
% Owner-occupied houses	0.43*	0.52*	0.73*			
% Single person households	-0.39*	-0.54*	-0.74*	-0.89*		
Crude incidence	-0.24*	-0.22*	-0.21*	-0.26*	0.26*	

* $p < 0.05$

Supplementary table 4: Incidence rate ratios indicating the association between minority group and incidence of psychosis [a]

Independent variables [b]	**Model 0 IRR (95 % CI)**	**Model 1 IRR (95 % CI)**	**Model 1.2 IRR (95 % CI)**	**Model 2 IRR (95 % CI)**	**Model 3 IRR (95 % CI)**	**Model 4 IRR (95 % CI)**	**Model 5 IRR (95 % CI)**	**Model 6 IRR (95 % CI)**	**Model 7 IRR (95 % CI)**
Minorities western countries	1.15 (0.97-1.36)	1.07 (0.85-1.35)	1.15 (0.90-1.47)	0.72 (0.56-0.93)*	1.03 (0.82-1.29)	1.06 (0.84-1.32)	1.04 (0.83-1.31)	0.85 (0.66-1.10)	0.87 (0.66-1.16)
Minorities Middle East	2.33 (1.61-3.37)**	2.08 (1.30-3.34)*	1.82 (1.08-3.09)*	1.39 (0.87-2.21)*	2.31 (1.47-3.62)**	2.11 (1.35-3.31)*	2.04 (1.30-3.21)*	1.67 (1.02-2.72)*	1.44 (0.83-2.49)
Minorities North Africa	2.39 (1.91-2.99)**	2.31 (1.71-3.12)**	2.69 (1.96-3.68)**	1.35 (0.98-1.86)*	2.48 (1.86-3.32)**	2.24 (1.69-2.98)**	2.22 (1.66-2.95)**	1.76 (1.27-2.46)**	2.04 (1.44-2.90)**
Minorities Sub-Saharan Africa	2.70 (2.25-3.25)**	2.67 (2.05-3.48)**	3.24 (2.39-4.41)**	1.61 (1.22-2.15)*	2.68 (2.07-3.47)**	2.49 (1.93-3.22)**	2.51 (1.94-3.24)**	2.10 (1.57-2.80)**	2.53 (1.80-3.54)**
Minorities Asia	1.26 (1.02-1.55)*	1.17 (0.87-1.56)	1.16 (0.83-1.62)	0.76 (0.56-1.03)*	1.26 (0.95-1.68)	1.18 (0.89-1.57)	1.16 (0.87-1.54)	0.92 (0.67-1.26)	0.91 (0.63-1.30)
Minorities the Caribbean	2.40 (1.96-2.93)**	2.34 (1.73-3.16)**	2.56 (1.85-3.54)**	1.42 (1.04-1.94)*	2.38 (1.78-3.18)**	2.19 (1.64-2.92)**	2.19 (1.64-2.93)**	1.83 (1.32-2.52)**	1.96 (1.38--2.80)**
Minorities Latin America	2.10 (1.55-2.84)**	2.35 (1.64-3.36)**	2.88 (1.94-4.29)**	1.22 (0.81-1.82)	2.51 (1.76-3.57)**	2.29 (1.61-3.25)**	2.26 (1.59-3.21)**	1.68 (1.12-2.52)*	1.99 (1.26-3.13)*
MIPEX total score		0.72 (0.69-0.75)**	0.71 (0.67-0.74)*					0.74 (0.71-0.78)**	0.73 (0.70-0.78)**
Unemployment (%)				1.07 (1.05-1.09)**				1.04 (1.02-1.06)**	1.04 (1.02-1.06)**
Low educ. level (%)					0.98 (0.97-0.99)**			0.99 (0.98-1.00)	0.99 (0.98-1.00)
Owner-occupied houses (%)						0.97 (0.96-0.98)**			
Single person households (%)							1.08 (1.05-1.12)**	1.11 (1.08-1.15)**	1.11 (1.07-1.15)**
Minorities Western countries x MIPEX total score			0.73 (0.65-0.82)						0.73 (0.65-0.83)
Minorities Middle East x MIPEX total score			0.56 (0.44-0.71)*						0.57 (0.45-0.73)*
Minorities North Africa x MIPEX total score			0.77 (0.69-0.87)**						0.81 (0.72-0.90)*
Minorities Sub-Saharan Africa x MIPEX total score			0.76 (0.68-0.85)*						0.79 (0.70-0.88)*
Minorities Asia x MIPEX total score			0.68 (0.58-0.80)						0.70 (0.60-0.83)
Minorities the Caribbean x MIPEX total score			0.74 (0.66-0.83)						0.75 (0.67-0.85)
Minorities Latin America x MIPEX total score			0.60 (0.46-0.78)						0.64 (0.48-0.84)

Model 0: Population group (adjusted for age, sex and their interaction)
Model 1: Population group + MIPEX total score (adjusted for age, sex and their interaction)
Model 1.2: Population group + MIPEX total score (adjusted for age, sex and their interaction) + Interaction between MIPEX total score and Population group
Model 2: Population group + Unemployment (%) (adjusted for age, sex and their interaction)
Model 3: Population group + Low educational level (%) (adjusted for age, sex and their interaction)
Model 4: Population group + Owner-occupied houses (%) (adjusted for age, sex and their interaction)
Model 5: Population group + Single person households (%) (adjusted for age, sex and their interaction)
Model 6: Population group + MIPEX total score + Unemployment (%) + Low educational level (%) + Single person households (%)
Model 7: Population group + MIPEX total score + Unemployment (%) + Low educational level (%) + Single person households (%) + Interaction between MIPEX total score and Population group

[a] Dependent variable: Any diagnosis of a psychotic disorder; All models were adjusted to age, sex and their interaction; Random-effect intercept: catchment-areas nested in countries; Offset: person-years; [b] Continuous variables were mean-centered. * $p < 0.05$; ** $p < 0.001$; IRR: Incidence rate ratio. NOTE: Analysis did not include individuals belonging to “Other minorities” (N=105); Total N = 1850.

Supplementary table 4. Basic and Full mixed-effects Negative Binomial regression models (full sample; population group – dichotomic classification) [a]

Independent variables [b]	**Univariable models IRR (95 % CI)**	**p value**	**Adjusted multivariable model IRR (95 % CI)** [d]	**p value**
Minority population	1.99 (1.80-2.20)	<0.001	1.29 (1.04-1.61)	0.02
MIPEX total score	0.70 (0.67-0.72)	<0.001	0.74 (0.70-0.78)	<0.001
Unemployment (%)	1.09 (1.08-1.10)	<0.001	1.04 (1.02-1.06)	<0.001
Low educational level (%)	1.01 (1.01-1.02)	0.001	1.01 (1.00-1.02)	0.05
Owner-occupied houses (%)	0.96 (0.95-0.97)	<0.001		
Single person households (%)	1.11 (1.06-1.15)	<0.001	1.14 (1.10-1.18)	<0.001
Minority population * MIPEX total score			0.71 (0.65-0.78)	0.08

[a] Dependent variable: Any diagnosis of a psychotic disorder; [b] Continuous variables were mean-centered before being entered in basic and full models; [d] Adjusted model includes all listed variables, sex, age group and their interaction; [d] Incidence variance by catchment-area (σ)= 0.01.

IRR: Incidence rate ratio; Total N = 1933.

Figure 1: Incidence intercept estimates and 95% CI by catchment-area (Null model; Random effects intercept: country/catchment-area; σ = 0.21, p<0.001)

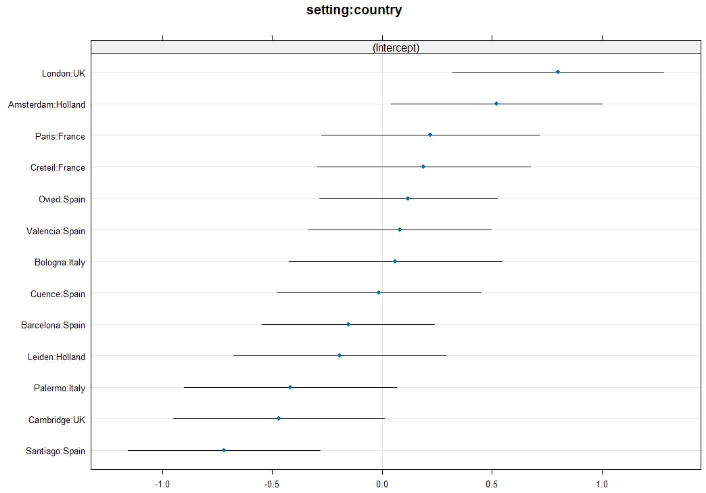
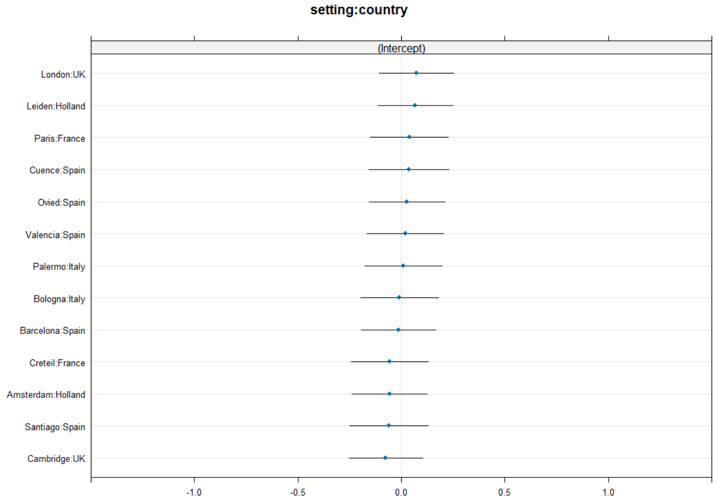


Figure 2: Incidence intercept estimates and 95% CI by catchment-area (Multivariable model, including all individual (sex, age group and their interaction and population group) and area-level variables (MIPEX total, % unemployment, % low education level and % owner-occupied houses); Random-effects intercept: country/catchment-area; σ = 0.07, p<0.001)



Interview Topic Guide

General presentation of the interviewer.

We are meeting today for an interview of about 45 minutes, where I will ask you some questions about your life journey. Speaking about these issues may be challenging and bring difficult memories. Let me know if ever you want to pause or stop the interview and feel free to skip any question if it makes you feel too uncomfortable. Please know that this interview is for research purposes and that your identity will remain confidential. Are there any questions you would like to ask me before we start?

As I said, this is an interview about your experiences and your story. This does not mean that you have to tell me everything that has ever happened to you. I would like for you to focus on key moments, events or life phases that were particularly meaningful to you, in a positive or negative way. I would like you to focus specifically on the time before being followed at this clinic. Please remember that there are no right or wrong answers to these questions.

1. Think about your life before coming to ______ (name of program), as if it was a story with several chapters. Tell me a little bit about each chapter and about the events connecting one chapter to the other. Please use a piece of paper if you would like to write or draw something to help tell your story [Drawing a timeline may be given as an example of a visual aid].

[Examples of prompts: Where were you living then? What was happening around you (e.g.: with your family, friends, in your neighborhood, city, country)? Which (other) major events (these could be both positive and negative) do you remember from that time? Which things helped you to deal with more difficult moments?]

2. Think about people, places and institutions that you have had contact with during your life. It may be helpful to picture important events in your life while answering to the following questions [some examples from the answer to the previous question may be used].

What role did other people (peers/friends/those of your age, family, communities) play in your life? And in your mental health?

What role did places you lived in (e.g.: houses, outdoor spaces, neighborhoods) play in your life? And in your mental health?

Can you tell us how physical aspects of this place (or these places) played a role in your mental health? [Examples of prompts: certain rooms, scenery, sounds, colors, smells, places in the neighborhood such as park or square]. Can you describe what these environments looked like?

What role did institutions you had contact with (e.g.: associations, social services, schools, hospitals) play in your life? And in your mental health?

3. Do you think that being a member of a minoritized community influenced your life in Canada/the Netherlands (choose the one which applies)? How so? What about your mental health?

[For other individuals: Do you think that being part of the majority population has had any impact on your life? How so? What about your mental health?]

4. What do you think caused the problem that brought you to be followed in this program?

Now I will share some research findings about psychosis. Please note that I will be using this word (psychosis) during the rest of this interview because I will talk about studies that used that same word to name and study mental states of intense distress often accompanied by experiences like hearing voices, confused thoughts and so on, similar to the ones that may bring people to be followed in services like this one.

I want to hear your perspectives about these findings. However, I understand that the findings that I share may or may not relate to your own experiences.

5. Research from several countries, mostly in Europe, has found that some ethnic minority groups are more likely to be diagnosed with psychosis.

What do you think about this? (If need be, ask: What do you think explains this finding?)

Some research has found that experiences such as not having a job or an occupation, not being able to study, having low economic resources, being isolated, excluded, marginalized or discriminated may increase the risk of having psychosis. And perhaps because these experiences may be more common among certain groups, they may also have higher risk for developing psychosis.

What do you think about this?

Have you had any of these experiences? What role have these experiences played in your life? And in your mental health? What about your family members or other people you care about?

6. Other studies have shown that living in neighbourhoods where there is a sense of community (especially if this is a community to which one identifies with), may help reduce the risk of developing psychosis.

What do you think about this?

Have you had any positive experiences of feeling supported by or feeling like you belong to a particular group or community? What role (if any) have such experiences played in your life? And in your mental health? What about your family members or other people you care about?

7. Studies have also shown that living in urban environments increases the risk of developing psychosis.

What do you think about this? What is your own experience, have you ever experienced that urban living influenced in your health? Which physical aspects of urban living do you think play a role?

[Examples of prompts : crowding; greenness (amount of trees, vegetation, grass, and natural elements in the neighborhood); noise, air-quality, traffic, safety, vandalism, or access to services such as healthcare, public transport, or infrastructures]

8. What do you think could be done to reduce people's risk to develop psychosis?

Are there any ideas you have for this based on your experience?

COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	3
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	5
Occupation	3	What was their occupation at the time of the study?	5
Gender	4	Was the researcher male or female?	5
Experience and training	5	What experience or training did the researcher have?	3
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	3
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	3
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	5
Domain 2: Study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	4
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	3
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	3
Sample size	12	How many participants were in the study?	4
Non-participation	13	How many people refused to participate or dropped out? Reasons?	N/A
Setting			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	3,4
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	N/A
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	6
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	4, 5
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	N/A
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	4
Field notes	20	Were field notes made during and/or after the inter view or focus group?	5
Duration	21	What was the duration of the inter views or focus group?	3
Data saturation	22	Was data saturation discussed?	N/A
Transcripts returned	23	Were transcripts returned to participants for comment and/or	N/A

Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	4
Description of the coding tree	25	Did authors provide a description of the coding tree?	6
Derivation of themes	26	Were themes identified in advance or derived from the data?	4
Software	27	What software, if applicable, was used to manage the data?	5
Participant checking	28	Did participants provide feedback on the findings?	N/A
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	6-10
Data and findings consistent	30	Was there consistency between the data presented and the findings?	6-10
Clarity of major themes	31	Were major themes clearly presented in the findings?	6-10
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	6-10