INPLASY

A scoping review of Context Characteristics associated with Negative Symptoms of Psychosis

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INTRODUCTION

Review question / Objective In the current scoping review, we aim to delineate the current evidence for context characteristics in the development and maintenance of negative symptoms and identify the gaps in the research. Following Bronfenbrenner's ecological systems theory of development, development occurs through the interaction between a person with specific characteristics and an ecosystem. The current scoping review focuses on the context, which is divided into 4 ecosystems. The micro- and meso-system refers to the living situation of people, whether they work, and the size and quality of their social network. The exo-system (or area-level) characteristics refer to neighbourhood characteristics such as population density, social fragmentation, and deprivation of the neighbourhood, but also the availability of services, and policy on work and social disability. Macrosystem characteristics include cultural and religious beliefs and attitudes. This scoping review aims to identify characteristics of the 4 ecosystems that have been associated with the development or maintenance of NS in people with psychosis and to identify the research gaps.

Rationale Psychotic disorders such as schizophrenia are amongst the most severe mental disorders, affecting up to 3% of the population[1], mostly adolescents and young adults[2]. Psychotic disorders constitute a major individual, family, and public health problem, and are a leading cause of Years Lived with Disability. Whereas research to date has mainly focused on the so-called 'positive' symptoms (PS) of psychosis, such as hallucinations and delusions, much less research has been dedicated to the 'negative' symptoms (NS), such as amotivation and affective flattening. Yet, NS are most strongly associated with poorer illness outcomes, including worse global and social functioning. This is echoed by people with lived experience, who identified NS as being the

most disabling and the prime target for treatment. Research on the pathogenesis of negative symptoms (NS) in individuals diagnosed with psychotic disorders has mostly focused on specific biological or cognitive deficits within the person, overlooking the importance of contextual factors. This contrasts with theories concerning positive symptoms of psychosis, which underscore the influence of developmental and environmental factors such as urban upbringing or childhood trauma on the onset of positive symptoms. The chronic neglect of the context in relation to NS is remarkable, as even the DSM 5 definition of NS acknowledges the potential relevance of the environment ('these problems are possibly due to limited opportunities'). Strauss emphasized the significance of context and suggested that the lack of progress in effective treatments for NS may stem from the complete disregard of environmental factors in NS theories. Strauss proposed a bio-ecosystem theory of NS, based on Bronfenbrenner's influential ecological systems theory. This theory posits that development occurs through the interaction between a person with specific characteristics and an ecosystem, which comprises four components: the microsystem (the setting where the individual directly interacts with the environment), the mesosystem (captures the interrelations between microsystems), the exosystem (the indirect environment that the individual does not directly participate in, but that potentially has an impact, such as neighbourhood characteristics or employment policies), and the macrosystem (the wider ecological system, including cultural ideologies and attitudes). The current scoping review aims to delineate the existing evidence regarding context characteristics related to the 4 ecosystems and their association with negative symptoms.

Condition being studied The condition being studied is psychosis.

METHODS

Search strategy The search strategy has been developed, with support from a qualified librarian. The search terms relate to
1) micro-system
2) meso-system
3) exo-system
4) macro-system
5) Negative Symptoms
6) Psychosis

Pubmed
Microsystem
"microsystem*"[tiab] OR "household"[tiab] OR "Family"[Mesh] OR "famil*"[tiab] OR "relatives" [tiab] OR "Siblings"[Mesh] OR "siblings"[tiab] OR "single occupancy"[tiab] OR "Intergenerational Relations"[Mesh] OR "intergenerational relation*" [tiab] OR "intergenerational closure"[tiab] OR "Friends"[Mesh] OR "friend*"[tiab] OR "companion*"[tiab] OR "peer*"[tiab] OR "housing quality"[tiab] OR "house"[tiab] OR "tenement"[tiab] OR "home"[tiab] OR "living situation"[tiab] OR "housing situation"[tiab] OR "domestic situation" [tiab] OR "residential situation"[tiab] OR "housing conditions"[tiab] OR "living arrangements"[tiab] OR "Residence Characteristics"[Mesh] OR "residence characteristics"[tiab] OR "Social Isolation"[Mesh] OR "social isolation"[tiab] OR "social alienation" [tiab] OR "loneliness"[tiab] OR "ostracism"[tiab] OR "social deprivation"[tiab] OR "cultural deprivation" [tiab] OR "psychosocial deprivation"[tiab] OR "social contact*"[tiab] OR "marital status"[tiab] OR "Social Interaction"[Mesh] OR "social interaction*" [tiab] OR "social support"[tiab]

Mesosystem
"mesosystem*"[tiab] OR "Work"[Mesh] OR "work" [tiab] OR "Volunteers"[Mesh] OR "volunt*"[tiab] OR "communit*"[tiab] OR "job"[tiab] OR "Employment"[Mesh] OR "employment*"[tiab] OR "underemployment"[tiab] OR "Unemployment"[Mesh] OR "unemployment"[tiab] OR "Incarceration"[Mesh] OR "incarceration*"[tiab] OR "imprisonment*"[tiab] OR "confinement"[tiab] OR "Institutionalization"[Mesh] OR "institutionali*" [tiab] OR "Custodial Care"[Mesh] OR "custodial care"[tiab] OR "Hospitalization"[Mesh] OR "hospital*"[tiab] OR "custody"[tiab] OR "deinstitutionali*"[tiab] OR "Inpatients"[Mesh] OR "inpatient*"[tiab] OR "Hospitals, Psychiatric"[Mesh] OR "psychiatric hospital*"[tiab] OR "social context" [tiab] OR "Schools"[Mesh] OR "school*"[tiab] OR "Occupations"[Mesh] OR "vocation"[tiab] OR "social network"[tiab]

Exosystem
"exosystem*"[tiab] OR "neighbor*"[tiab] OR "neighbour*"[tiab] OR "social fragmentation"[tiab] OR "social inequalit*"[tiab] OR "domicile*"[tiab] OR "Cities"[Mesh] OR "city"[tiab] OR "urban*"[tiab] OR "metropolitan*"[tiab] OR "Rural Population"[Mesh] OR "rural population"[tiab] OR "rural"[tiab] OR "slum*"[tiab] OR "megalopolis"[tiab] OR "conurbation"[tiab] OR "residential density"[tiab] OR "ethnic density"[tiab] OR "ethnic segregation" [tiab] OR "Population Density"[Mesh] OR "population density"[tiab] OR "Social Environment"[Mesh] OR "social environment"[tiab] OR "social cohesion"[tiab] OR "psychological support systems"[tiab] OR "residential

segregation"[tiab] OR "Socioeconomic Factors"[Mesh] OR "socioeconomic factor*"[tiab] OR "socio-economic factor"[tiab] OR "living standard"[tiab] OR "housing instability"[tiab] OR "economic factors"[tiab] OR "economic stability" [tiab] OR "residential eviction"[tiab] OR "housing eviction"[tiab] OR "housing insecurity"[tiab] OR "housing affordability"[tiab] OR "economic status" [tiab] OR "poverty"[tiab] OR "ghetto"[tiab] OR "social class"[tiab] OR "low socioeconomic status" [tiab] OR "low socio-economic status"[tiab] OR "social mobility"[tiab] OR "social factors"[tiab] OR "social-economic factor"[tiab] OR "affluence"[tiab] OR "socio-economic deprivation"[tiab] OR "socioeconomic deprivation"[tiab] OR "income deprivation"[tiab] OR "income inequality"[tiab] OR "local econom*"[tiab] OR "national economy"[tiab] OR "global economy"[tiab] OR "Crime Victims"[Mesh] OR "crime"[tiab] OR "victimization" [tiab] OR "victimisation"[tiab] OR "Violence"[Mesh] OR "violence"[tiab] OR "atrocit*"[tiab] OR "social standing"[tiab] OR "sociocultural class"[tiab] OR "socio cultural class"[tiab] OR "Social Identification"[Mesh] OR "social identi*"[tiab] OR "group identification"[tiab] OR "Anomie"[Mesh] OR "anomie"[tiab] OR "social disorganization"[tiab] OR "social disorganisation"[tiab] OR "Social Discrimination"[Mesh] OR "social discrimination" [tiab] OR "Social Determinants of Health"[Mesh] OR "social determinants of health"[tiab] OR "employability"[tiab] OR "Politics"[Mesh] OR "politic*"[tiab] OR "Public Health Infrastructure"[Mesh] OR "Public Policy"[Mesh] OR "health polic*"[tiab] OR "environmental polic*"[tiab] OR "family planning polic*"[tiab] OR "health care reform"[tiab] OR "Mental Health Services"[Mesh] OR "mental health services"[tiab] OR "street walkability"[tiab] OR "Sports and Recreational Facilities"[Mesh] OR "recreational facilit*"[tiab] OR "socio-political event*"[tiab] OR "Social Capital"[Mesh] OR "social capital"[tiab] OR "Social Control, Formal"[Mesh] OR "Social Control, Informal"[Mesh] OR "social control"[tiab] OR "public opinion"[tiab] OR "environmental factors" [tiab] OR "resource deprivation"[tiab] OR "context characteristics"[tiab]
Macrosystem
"macrosystem*"[tiab] OR "Religion"[Mesh] OR "religio*"[tiab] OR "Culture"[Mesh] OR "cultur*" [tiab]

Negative symptoms
"negative symptom*"[tiab] OR "Apathy"[Mesh] OR "apathy"[tiab] OR "Anhedonia"[Mesh] OR "anhedonia"[tiab] OR "affective flattening"[tiab] OR "alogia"[tiab] OR "avolition"[tiab] OR "asocial*" [tiab] OR "diminished expression"[tiab] OR "deficit

symptoms"[tiab] OR "affective blunting"[tiab] OR "blunted expression"[tiab] OR "blunted affect"[tiab]

Psychosis
"Psychotic Disorders"[Mesh] OR "psychosis"[tiab] OR "psychoses"[tiab] OR "at risk mental state"[tiab] OR "psychotic"[tiab] OR "Schizophrenia"[Mesh] OR "schizophrenia"[tiab] OR "schizophreniform"[tiab]

The search terms for Embase, Web of Science and PsychArticles can be find on the OSF webpage https://osf.io/h8w6u/
We will pilot the search strategy to allow refinement.

Participant or population Patients with a psychotic, schizophrenic or schizophreniform disorder, but also participants with sub-clinical levels of psychosis or at-risk mental states for psychosis.

Intervention NA.

Comparator NA.

Study designs to be included Given that this is a scoping review, we will not select on study designs.

Eligibility criteria 1) Inclusion Criteria:- Cross-sectional and longitudinal studies investigating the association between context characteristics and both clinical and subclinical levels of negative symptoms. Negative symptoms will be defined as one or a combination of the 5 core Negative Symptoms defined at the American MATRICS consensus meeting in 2005: a flattening of emotional expression, both in facial expression and voice (blunted affect), a reduction in the amount of speech (alogia), a lack of drive and motivation to engage in activities (avolition), a reduction in social contacts (asociality), and a reduced capacity to experience pleasure (anhedonia – since reconceptualised as a reduced capacity to anticipate pleasure). Micro-systems include family, friends, housing, social connection and social deprivation. Meso-systems include work, vocation and institutionalisation. Exosystems include neighbourhood characteristics such as social fragmentation, socio-economic status, crime, social standing, sports facilities as well as policy related to the environment and public health infrastructure. Macro-system includes factors related to cultural and religious aspects.2) Exclusion criteria- Studies that do not include patients with psychosis- Studies that do not examine the association between negative

symptom/s and context characteristics- Not empirical (e.g., protocols, perspectives/opinions), not original research (e.g., reviews, meta-analyses), not published in a peer-reviewed journal, and not published in the English language. Once we have become more familiar with the literature, we may decide on some post-hoc inclusion and exclusion criteria, which we will document and transparently report as deviations to this registration.Given that this is a scoping review, it is possible that the literature linking contexts and negative symptoms is not well established. In this case, we will broaden our inclusion criteria to instead focus on psychosis in general rather than limiting to negative symptoms.

Information sources We will search the following electronic databases: PubMed, Web of Science Core Collection (via Clarivate), Embase (via Elsevier), Psycharticles (via ProQuest)
We will then search the reference lists of all papers included in the review.

Main outcome(s) Negative symptoms, defined as one or a combination of the 5 core Negative Symptoms defined at the American MATRICS consensus meeting in 2005 including: a flattening of emotional expression, both in facial expression and voice (blunted affect), a reduction in the amount of speech (alogia), a lack of drive and motivation to engage in activities (avolition), a reduction in social contacts (asociality), and a reduced capacity to experience pleasure (anhedonia – since reconceptualised as a reduced capacity to anticipate pleasure), are the main outcome. This includes both clinical and subclinical measures of negative symptoms, assessed with standardized/validated measures of negative symptoms.

Additional outcome(s) If the search does not deliver enough publications for any of the 4 eco-systems, we will extend our outcome to the broader range of psychosis. This includes symptoms of psychosis, psychotic or schizophreniform disorder, as well as subclinical levels of psychosis.

Data management After constructing the search strategy and building the search strings on the corresponding databases, all the results will be uploaded in Rayyan (www.rayyan.ai). Rayyan is a platform that allows researchers to perform data collection simultaneously in a blinded way. First, all titles/abstracts will be screened by one reviewer. Full-text articles will be assessed by two independent reviewers (AM and EVG). If the researchers do not reach the same decision regarding inclusion/exclusion, a third member of the team (JB or IMG) will have a meeting with the independent reviewers to reach a consensus on in- or exclusion.

Quality assessment / Risk of bias analysis Given that this is a scoping review, no quality assessment or risk of bias analysis will be conducted.

Strategy of data synthesis Following the framework of Arksey & O'Malley, and guided by the theoretical framework of Bronfenbrenner, we will chart the key items of information from the research reports reviewed for the 4 ecosystems separately. We will use a descriptive-analytic approach (within the narrative tradition), which involves applying a common analytical framework to all the primary research reports and collecting standard information on each study. This will include Authors, year of publication, study location, Study population (subclinical, psychosis, psychotic disorder, schizophrenia or schizophreniform disorder), Micro-system characteristics, Meso-system characteristics, Exo-system characteristics, Macro-system characteristics, Negative Symptoms, Study Type, and Important Results. We then will present a narrative account of the findings. This will include a basic numerical analysis of the extent, nature and distribution of the studies included in the review, as well as tables and charts. This part of the analysis will facilitate understanding of the main areas that have been investigated and identify the research gaps. Second, the literature will be organized thematically, with the 4 eco-systems as the core themes. If possible, we will also identify sub-themes to capture different facets of micro, meso, exo and macro contexts currently investigated in relation to each negative symptom. In the case that we broaden our search to include studies on psychosis in general, we will follow the same synthesis process outlined above, however will identify sub-themes relating to specific psychosis symptoms.

Subgroup analysis NA.

Sensitivity analysis NA.

Language restriction English.

Country(ies) involved Belgium, Australia.

Other relevant information NA.

Keywords negative symptoms, psychosis, context characteristics, micro-context, meso-context, exo-context, macro-context.

Dissemination plans The scoping review will be preprinted and submitted to an international peer-reviewed journal.

Contributions of each author
Author 1 - Inez Myin-Germeys - Author 1 drafted the preregistration, will supervise the data-selection and data-extraction, and will draft the final manuscript.
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