A comprehensive review of ecosystem research and context analysis in mental health care

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Background and Aims:

The role of context is critical in health services research. In health care, "context" could be defined as all sources of evidence of the local system: geographic, social and demographic factors, other environmental factors, service availability and scope, capacity, use, costs and the historical development of the health care system. The analysis of context of care of "healthcare ecosystem research" is an emerging discipline that should play a critical role in implementation sciences [1] and in the analysis of complex interventions [2, 3]. "Contextual evidence" has recently been identified as a major source of knowledge in health systems research together with experimental, observational, expert and experiential knowledge [4]. In spite of its relevance, the need for context analysis in health services and delivery research has not been sufficiently recognised [1, 2, 4]. One of the most widely used instrument in context analysis providing data on service availability is ESMS/DESDE (Description and Evaluation of Services and Directories for Long Term Care.

This piece of research aims 1) to analyse available methods of context analysis and healthcare ecosystem research for standard description of mental health (MH) systems and services; 2) to analyse the gaps in the literature; ·3) to review the use and impact of the ESMS/DESDE system for service research and policy making.

Material and Methods:

Two literature reviews have been carried out. First, a scoping review on methods and instruments for standard description of mental health service delivery. Second, a systematic review of the system better suited for this type of research following the PRISMA guidelines [5].
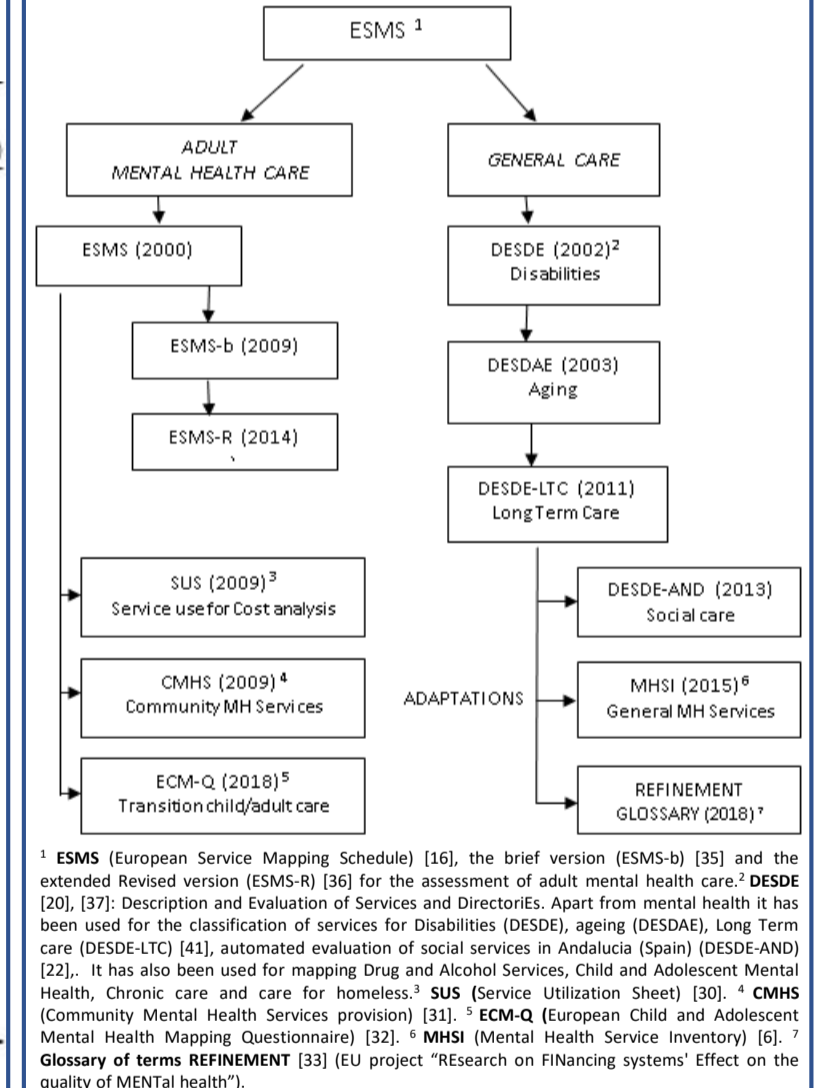
Results:

The scoping review [6] identified 46 papers that fulfilled inclusion criteria and 6 instruments for context analysis: ESMS/DESDE, WHO-AIMS, MHCP, PROMO, PRIME and ASME (Table). The ESMS/DESDE was the better suited for local context analysis and its aggregation to national level. The systematic review of ESMS/DESDE [7] identified 155 papers that mentioned the system in the scientific literature and 71 used it for service research and planning. The evolution of the system from year 2000 is showed below.

Table: Characteristics of methods used by included studies

Framework		ESMS/DESDE	WHO-AIMS	MHCP	ASME	PRIME study instrument	PROMO study instrument	Other papers (number)
Ontology based		Yes	No	No	No	No	No	0
Taxonomy based		Yes	Yes	No	No	No	No	0
Psychometrically validated		Yes	Yes	Yes	No	No	No	0
Unit of analysis	Macro (Organ-isations)	No	Yes	Yes	Yes	Yes	No	14
	Meso (Services)	Yes	Yes	Yes	Yes	Yes	Yes	13
	Micro (Teams)	Yes	No	No	Yes	No	No	5
Number of comparison studies	Regional comparisons within a single country	4	1	0	2	0	0	0
	International comparisons at regional level	4	0	0	0	1	1	0
	International comparisons at national level	0	3	0	0	0	0	2
	Longitudinal comparisons	0	0	0	0	0	0	4
Glossary included		Yes	Yes	No	No	No	No	0
Data sources		Service providers	National level data from ministries, organ-isations etc; aggregated regional data where national data not available	Govt and other national level data sources	Local Implementation Teams	Govt and non govt reports, triangulated with local key co-ordinators	Service providers	X
Sectors[a] included		H,S,E,Ed,Ho,O	H,S,E,Ed,Ho,O	H,S	H,S	H,S,Ho	H,S,E,Ho	X
Mental health specific or generic		Generic health	MH specific	MH specific	Generic health	MH specific	MH specific	X
Accessibility		Open Access but requires training	Open Access	Instrument itself unable to be accessed online	Unable to access online	Accessible online but specific to PRIME study	Study specific-Unable to access instrument online	X
Study design		Survey/Interviews	Survey/interviews	Survey/interviews	Survey	Survey	Survey/interviews	X

[a]H-Health; S-Social; E-Employment; Ed-Education; Ho-Housing; O-Other

[1] ESMS (European Service Mapping Schedule) [16], the brief version (ESMS-b) [35] and the extended Revised version (ESMS-R) [36] for the assessment of adult mental health care.[2] DESDE [20], [37]: Description and Evaluation of Services and DirectoriEs. Apart from mental health it has been used for the classification of services for Disabilities (DESDE), ageing (DESDAE), Long Term care (DESDE-LTC) [41], automated evaluation of social services in Andalucia (Spain) (DESDE-AND) [22],. It has also been used for mapping Drug and Alcohol Services, Child and Adolescent Mental Health, Chronic care and care for homeless.[3] SUS (Service Utilization Sheet) [30]. [4] CMHS (Community Mental Health Services provision) [31]. [5] ECM-Q (European Child and Adolescent Mental Health Mapping Questionnaire) [32]. [6] MHSI (Mental Health Service Inventory) [6]. [7] Glossary of terms REFINEMENT [33] (EU project "REsearch on FINancing systems' Effect on the quality of MENTal health").

Conclusions:

In general, the challenges of commensurability, of terminological variability, and of data availability and validity which face this area of research are poorly addressed, with few standardized frameworks available. This presents a barrier to valid system comparison, particularly across regions or countries, where regional and historical variations in service provision increase terminological variability.

ESMS/DESDE is readily accessible and validated, and takes both a local approach and a whole bottom-up systems perspective.

We have identified the relevance to this area of research of use of a standardised instrument, formal geographic boundaries, a glossary of terms, formal target populations and a whole systems approach.

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