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Diagnostic overshadowing and stigma in people with mental disorder and physical comorbidity: a mixed methods systematic review protocol

Eclipsamiento diagnóstico y estigma en personas con trastorno mental y comorbilidad física: protocolo de revisión sistemática con métodos mixtos

Neli Lamprell Martín[1] y Concepción Martínez-Martínez[2]

1. Hospital Nueve de Octubre. Valencia, España.
2 Facultad de Enfermería y Podología, Universidad de Valencia. Valencia, España.
Contacto: Concepción Martínez-Martínez concepcion.martinez-martinez@uv.es
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Abstract

Background: Individuals with mental disorders experience more significant health disparities compared to the broader population and have a life expectancy that is, on average, 10 years shorter than those without such conditions. Diagnostic overshadowing could be a very important factor in the existence of this inequality in morbidity and mortality of people with a psychiatric diagnosis by producing a systemic difference in health care for the diagnosis and treatment of these patients.
Aim: To understand the perceptions and experiences of healthcare professionals and individuals with a mental disorder about diagnostic overshadowing.
Methods: The proposed review will be conducted in accordance with the JBI methodology for mixed method review and will take a convergent integrated approach. A systematic search will be conducted across MEDLINE/PubMed, CINAHL, PsycINFO, and Web of Science. The critical appraisal tool, the Mixed Methods Appraisal Tool will be used to assess the quality. This protocol has been recorded in PROSPERO under the number CRD42024523764.
Conclusion: Diagnostic overshadowing is a cognitive bias present in health professionals. Individuals with a mental disorder perceive that many symptoms are incorrectly interpreted when it is known that they have a psychiatric diagnosis, which contributes to diagnostic errors and referrals to inappropriate medical specialities. Among the factors contributing to its presence are personal and environmental factors.

Keywords: diagnostic overshadowing, multimorbidity, mental disorder, stigma, nurses, mixed method systematic review, protocol.

Resumen

Introducción: Las personas con trastornos mentales experimentan desigualdades en salud más significativas en comparación con la población general y tienen una esperanza de vida que, en promedio, es 10 años más corta que la de aquellas sin estos trastornos. El eclipsamiento diagnóstico podría ser un factor muy importante en la existencia de esta desigualdad en la morbilidad y mortalidad de las personas con un diagnóstico psiquiátrico, al generar una diferencia sistémica en la atención médica para el diagnóstico y tratamiento de estos pacientes.
Objetivo: Comprender las percepciones y experiencias de los profesionales de la salud y de las personas con un trastorno mental sobre el eclipsamiento diagnóstico.
Métodos: La revisión propuesta se llevará a cabo de acuerdo con la metodología del Instituto Joanna Briggs (JBI, por sus siglas en inglés) para revisiones de métodos mixtos y adoptará un enfoque integrado convergente. Se realizará una búsqueda sistemática en MEDLINE/PubMed, CINAHL, PsycINFO y Web of Science. Para evaluar la calidad de los estudios se utilizará la herramienta de evaluación crítica Mixed Methods Appraisal Tool. Este protocolo ha sido registrado en PROSPERO bajo el número CRD42024523764.
Conclusión: El eclipsamiento diagnóstico es un sesgo cognitivo presente en los profesionales de la salud. Las personas con un trastorno mental perciben que muchos de sus síntomas son interpretados incorrectamente cuando se sabe que tienen un diagnóstico psiquiátrico, lo que contribuye a errores diagnósticos y derivaciones a especialidades médicas inadecuadas. Entre los factores que contribuyen a su presencia se encuentran factores personales y ambientales.

Palabras clave: eclipsamiento diagnóstico, multimorbilidad, trastorno mental, estigma, enfermería, revisión sistemática de métodos mixtos, protocolo.

Introduction

In 2019, 970 million people (one in eight) were reported to have suffered from a mental disorder, with prevalence remaining around 13% throughout these years (World Health Organization, 2022). People with mental disorders, especially the most severe cases, experience more significant health disparities compared to the general population and have a life expectancy that is shorter by 10 to 20 years (Fiorillo & Sartorius, 2021). The study conducted by Chan *et al.* (2023) found that the years-of-potential-life-lost (YPLL) grouped by natural causes for any mental disorder was 4.84, with metabolic/endocrine, digestive, and infectious diseases having the highest YPLL estimates relative to other causes.

One of the contributing factors to the existence of this disparity in the morbidity and mortality of people with mental disorders is diagnostic overshadowing (Jopp & Keys, 2001). Diagnostic overshadowing can be defined as the wrongful attribution of signs and symptoms of physical diseases to concurrent psychiatric disorders (Thornicroft *et al.*, 2007). It is a type of cognitive bias that can affect healthcare professionals, consequently resulting in concomitant illnesses going undiagnosed and untreated (Jopp & Keys, 2001). Bueter (2021) analyses the concept from the perspective of pathocentric epistemic injustice and concludes that it has several causes: extant prejudice in clinics, errors which have been justified by complex clinical presentations, and the lack of credibility given to people with mental disorders favoured by the structural characteristics of the health care system. Research published in the 1960s and 1970s already suggested the possibility of bias in health care for people with disabilities (Philips, 1967; Routh & King, 1972). But it was not until later that several researchers, Levitan and Reiss (1983) and Reiss *et al.* (1982), demonstrated the existence of diagnostic overshadowing. In 2006, the Disability Rights Commission identified it as an important factor contributing to health inequity for people with a mental disorder (Disability Rights Commission, 2006).

Stigma and discrimination contribute to diagnostic overshadowing. This includes both lack of knowledge and the attitudes and behaviours of professionals (Thornicroft *et al.*, 2007). Negative beliefs towards people with mental disorders can diminish the quality of health care received by these patients (Disability Rights Commission, 2006). This can occur in two ways, firstly, because the clinician does not give credibility or sufficient importance to the symptoms present, and secondly, because the person with a psychiatric diagnosis, after recurrent experiences in which he/she does not feel listened to or believed by the professional, chooses not to seek help from the health system when needed (Corrigan, 2004; Thornicroft *et al.*, 2007).

Rationale

Since the existence of diagnostic overshadowing has been identified in different clinical settings, there has been interest in getting to know the factors that contribute to its presence and the consequences for people with a psychiatric diagnosis. Jopp and Keys (2001) consider that this bias in health professionals reduces specificity and sensitivity in making an accurate diagnosis due to false negatives (failing to diagnose an illness that exists) and false positives (diagnosing a mental disorder that does not exist or its exacerbation). The consequences can be numerous and range from mild worsening of physical conditions to mortality or occurrence of aftereffects due to the delay in diagnosis and appropriate treatment (McIntyre *et al.*, 2023).

Various reviews have been conducted to understand the extent of diagnostic overshadowing. Jopp & Keys conducted a review in which they studied the moderators of diagnostic overshadowing, areas requiring further research, and implications for methodological approaches in the study of overshadowing. Their study population consisted of individuals with intellectual disabilities and concomitant psychiatric disorders (Jopp & Keys, 2001). More recently, Molloy (2021) conducted a systematic review of the experiences of people with mental disorders and professionals concerning diagnostic overshadowing. This review only included qualitative studies. Hallyburton (2022) for their part, conducted a narrative review of the literature to analyse the concept of diagnostic overshadowing.

We have not found a Mixed Methods Systematic Review (MMSR) from the perspective of both people with mental disorders and health professionals, based on studies using quantitative, qualitative, or mixed methodology. The inclusion of quantitative studies in this systematic review will provide objective data that reinforces the accounts of professionals and individu-

als with mental disorders regarding their experiences with diagnostic overshadowing (Pluye & Hong, 2014).

Aims

The aim is to understand the perceptions of healthcare professionals and individuals with a mental disorder about diagnostic overshadowing.

Review question

Do people with psychiatric diagnoses receive different health care due to the diagnostic overshadowing of health professionals?

Methods

The elaboration of this protocol has been done following the PRISMA-P guide for protocols (Shamseer et al., 2015) (Anex 1).

Design

The reporting of the MMSR adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) 2020 checklist (Page et al., 2021).

Search methods

A systematic search will be conducted using MEDLINE/PubMed, CINAHL, PsycINFO, and Web of Science. There will be no date limitation.

The search strategy will aim to locate published studies. An initial limited search of PubMed was undertaken to identify articles on the topic. The text words contained in the titles or abstracts of relevant articles, and the index terms used to describe the articles were used to develop a full search strategy. The search strategy is developed by two researchers after trying different combinations and will be adapted to each data source. The search will be carried out in Title or Abstract with natural language combining the words 'overshadowing', 'mental illness', 'mental health', mental disorder', 'severe mental disorder', and 'serious mental disorder' using the Boolean operators AND / OR. The reference list of all studies selected for critical appraisal will be screened for additional studies.

Here is an example of a search conducted in Web of Science: (TI = (overshadowing AND (mental illness OR mental disorder OR severe mental disorder OR serious mental disorder or mental health))) OR AB = ((overshadowing AND (mental illness OR mental disorder OR severe mental disorder OR serious mental disorder or mental health))).

Selection criteria

Inclusion criteria

The general inclusion criterion will be diagnostic overshadowing. It should be included in the title/abstract.

The PICOS/ PICO framework will be used for the inclusion of studies in this review. The population comprises both adults of any gender who have a psychiatric diagnosis and have used health services for any reason and healthcare professionals working in health services. The intervention/phenomenon of interest is diagnostic overshadowing in people with mental disorders. Comparisons are varied: they can be exposed and unexposed cohorts, people with mental disorders versus the general population, as well as qualitative designs that do not mention any comparison.

The outcome refers to the effects or consequences of diagnostic overshadowing. In terms of study design, this review will consider quantitative, qualitative, and mixed methods studies. Quantitative studies will include descriptive, experimental, correlational, experimental, and causal-comparative studies. Qualitative studies will include descriptive and interpretive designs involving data collection techniques such as observation, interviews, or focus groups. Mixed methods studies will be considered if both data collection methods are explained in the article. The synthesis of published research in any language and without a year of publication filter will be identified to identify any relevant studies for this review. Regarding context, any health setting, regardless of country or city, may be considered.

Exclusion criteria

Studies with no research results (protocols, validation of measurement instruments…) and case reports. Grey literature will not be included.

Search outcomes

Following the search, all identified citations will be loaded into the bibliographic manager Zotero 6.0.35 and duplicates will be removed. Titles and abstracts will then be screened by two independent reviewers for assessment against the inclusion criteria for the review. Data extraction will be carried out by XXX and XXX will check the extracted data. To resolve any disparities in the selection criteria, articles will be co-read again and a consensus will be reached. Data will be extracted on the population studied, the size of the sample, the country, city, and place where the study was carried out, the type of study, objectives, and main results.

The complete search results will be reported in the final review and presented in a PRISMA flowchart (Page *et al.* 2021).

Quality appraisal

The methodological quality of studies will be assessed independently by XXX and XXX. Consensus will be arrived at in case of discrepancies between both. The critical appraisal tool Mixed Methods Appraisal Tool (MMAT) 2018 version will be used to assess the quality of the articles (Hong *et al.*, 2019). This critical appraisal tool was developed to assess the methodological quality of various study designs, including mixed methods studies. The MMAT includes 25 criteria in five categories of studies.

To determine the quality of an article, two screening questions about the research in general must be answered. If the answer to one or both questions is "No" or "Unknown", the study cannot be further assessed with the MMAT tool. Below are 5 specific questions for each type of study design: qualitative, quantitative randomised controlled trials, quantitative non-randomised, quantitative descriptive, and mixed methods. This tool does not provide an overall score and does not exclude research of low methodological quality. The aim is to provide more information about the studies included in the research (Hong *et al.*, 2019).

Data extraction

For data abstraction, the JBI Data Extraction tool will be used (Lizarondo *et al.*, 2020). For each paper, one author (XX) extracts the data, which another author will subsequently countercheck (XX). Data will include specific details about the author, year, characteristics of participants, location, city, country, study methods, data collection methods, objectives, and results necessary to answer the study objectives. Wherever available, quantitative data will provide information about magnitude and statistical significance. Qualitative data will provide themes with corresponding examples.

Synthesis

The Joanna Briggs Institute (JBI) methodology for Mixed Methods Systematic Reviews. will be employed –specifically, a convergent integrated approach (Lizarondo *et al.*, 2020).

A synthesis of the data will be presented in tables with the most relevant results to answer the research question. The quantitative data will be summarised in narrative form and integrated with qualitative data that will provide the perceptions and experiences of health professionals and people with mental disorders on the interference of diagnostic overshadowing in the diagnosis of non-psychiatric illnesses, which will contribute to enhancing the results obtained (Pluye & Hong, 2014).

Discussion

The aim of this work is to understand the perceptions and experiences of healthcare professionals and individuals with a mental disorder regarding diagnostic overshadowing.

Diagnostic overshadowing is a cognitive bias that prevents an objective analysis of the symptoms present in a patient (Jones *et al.*, 2008). Healthcare professionals, primarily doctors and nurses, acknowledge the presence of this bias among themselves (Bueter, 2023; Molloy *et al.*, 2023). Furthermore, individuals with mental disorders report having suffered the consequences of its existence, as their physical symptoms have been minimized or they have been referred to psychiatric services due to the belief that the origin of their symptoms was mental, resulting in delays in treatment (Happell *et al.*, 2016; Noblett *et al.*, 2017).

Among the factors contributing to diagnostic overshadowing is the presence of stigmatising attitudes such as fear. This emotion during the diagnostic process can lead to misinterpretation of certain behav-

iours, labelling them, and a desire to conclude the interview as quickly as possible, resulting in incorrect diagnoses (Happell *et al.*, 2016; Thornicroft *et al.*, 2007). Another factor is the lack of knowledge about mental illnesses, as acknowledged by healthcare professionals in the report by the Joint Commission (2022). In addition to these personal factors, environmental factors also contribute to the presence of diagnostic overshadowing. These include the duration of the diagnostic visit (The Joint Commission, 2022), waiting times, overcrowding in some departments' waiting rooms, ambient noise, and lighting (van Nieuwenhuizen *et al.*, 2013).

However, it is important to consider that some individuals with mental disorders may not be able to accurately express their symptoms during times of crisis. At times, they may not even be able to interpret what is happening to them (Molloy *et al.*, 2023), which complicates the accuracy of diagnoses. This situation could be mitigated by a compassionate attitude from professionals. However, it has been shown that professionals' attitudes are often unhelpful. On the contrary, they can lead patients to distrust their own judgment and doubt the attribution of their symptoms (Bueter, 2023). The consequence is that patients may avoid or delay seeking help due to fear of not being believed or even being humiliated (Thornicroft *et al.*, 2007), worsening their recovery prognosis. Greater understanding and guidance during medical care would help alleviate their concerns and improve disease management (Molloy *et al.*, 2023).

Conclusion

Diagnostic overshadowing is a cognitive bias present in health professionals. Individuals with a mental disorder perceive that many symptoms are incorrectly interpreted when it is known that they have a psychiatric diagnosis, which contributes to diagnostic errors and referrals to inappropriate medical specialities. Among the factors contributing to its presence are personal and environmental factors. Personal causes include stigmatising ideas and lack of knowledge. Environmental factors such as visiting time, waiting time, ambient lights or noises may also contribute to their presence.

Relevance to clinical practice

The diagnostic judgment of healthcare professionals may be affected by diagnostic overshadowing. This can have consequences for people with mental disorders who have concomitant physical illnesses. Mental health nurses can be the professionals who serve as liaisons between the various clinical specialties to ensure that all patient information is known and decrease the likelihood of diagnostic error.s.

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