




Toward Multidisciplinary Tools for Complex Clinical Psychopharmacology Cases: A Qualitative Study with French Healthcare Professionals

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Purpose: Psychopharmacology prescriptions are complex, partly due to the complexity of the relationship between diagnosis and its etiology, as well as the iatrogenic impact on symptomatology. Many multidisciplinary tools exist to optimize their management and improve evidence-based practice. However, their multidisciplinary integration seems to be a challenge. This study aimed to collect information on barriers and facilitators perceived by hospital health professionals regarding the use of multidisciplinary tools to address complex situations in psychopharmacology.

Research Design and Methods: A mixed-methods research approach using semi-structured interviews was conducted with physicians and pharmacists from 11 hospital institutions. An interview guide developed from the COM-B model (Capability, Opportunity, and Motivation - Behavior) was used to identify barriers and facilitators to the use of multidisciplinary tools. Data were analyzed using thematic analysis to identify emerging themes and mapped to the COM-B model.

Results: 28 professionals were interviewed. Identified barriers were: lack of knowledge and time to address complex situations, incomplete medical records, lack of easily accessible multidisciplinary tools, insufficient levels of evidence in psychopharmacology. Identified facilitators were: continuing education, communication and networking among professionals, implementation of adapted and shared resources, deprescribing, awareness of medication-induced iatrogenesis, accessibility of tools for all populations.

Conclusion: Identified barriers and facilitators in the use of multidisciplinary tools for complex situations in psychopharmacology helped to model factors that enable behavior change. Answers need to be provided to help professionals ensure and optimize psychopharmacological therapies.

Keywords: patient care team, psychopharmacology, hospitals, mental health, capability – opportunity - motivation – behavior (COM-B) model

Introduction

Psychopharmacology is the science that studies psychotropic drugs, medications that modify mental activity, behaviors, and sensations by acting on the central nervous system. Psychotropic drugs are frequently used, as in 2019, it was estimated that one in eight people worldwide had a mental health disorder.¹ In France, like in other countries, these disorders are a public health issue.² They represent a leading cause of years lived with a disability and one of the main causes of years of healthy life lost.^{3,4}

Psychopharmacology can be a challenging discipline, especially when it comes to using the most suitable molecule for the patient's clinical situation. Pharmacological treatments are still symptomatic drugs and do not directly target the underlying causes of mental disabilities, which remain uncertain. Despite the significant evolution of etiological theories

of psychiatric diseases, many etiopathogenic areas remain under investigation to further improve therapeutic approaches.⁵ In mental health, the weak association between clinical outcomes (diagnosis, as reported in both the Diagnostic and Statistical Manual of Mental Disorders–5th edition (DSM-5)⁶ and the International Classification of Diseases–11th revision (ICD-11)⁷) and their etiology has caused a lack of confidence in psychiatric diagnoses.⁸ Along with these concerns regarding biomedical models, the prescription of psychotropic drugs used to improve symptoms is not without iatrogenic effects.^{9,10}

Managing the side effects of psychotropic drugs is even more challenging because they can impact the symptoms themselves, which, as we have seen, are at the basis of the diagnosis and therefore the pharmacological treatment. This implies consequences on clinical practice that G. A. Fava and C. Rafanelli have been investigated in a 2019 editorial, synthesizing these iatrogenic components.¹¹ The authors discussed key concepts such as “behavioral toxicity”, “iatrogenic comorbidity” and “cascade iatrogenesis” involved in current classification systems, which fail to consider the iatrogenic burden of psychopathology related to behavioral toxicity (defined as pharmacological actions of a drug that, within its effective dose range, can cause alterations in mood, perception, cognition, and psychomotor functions, impairing an individual’s abilities).¹¹ Thus, psychopharmacology is challenging in its imperative to adequately consider diagnoses (under classifications like DSM-5 or ICD-11) among patients who receive psychotropic drugs, especially during their follow-up, and requires evaluation of iatrogenic factors.

All these factors make decisions in psychopharmacology often at risk and underscore the value of multidisciplinary approaches in this field to improve evidence-based practice in psychopharmacology. Moreover, multi-professional approaches on medication management are recommended globally in many health systems to improve safe medication use.^{12–15} Studies have shown effectiveness of multidisciplinary interventions on multiple outcomes and across diverse settings in healthcare.^{16,17} In mental health care contexts, available literature has discussed the importance of multidisciplinary approaches in contributing to the decision-making process in psychopharmacotherapy.¹⁸

Several multidisciplinary tools and resource structures exist to optimize and ensure the management of medications in psychopharmacology prescriptions, ranging from multidisciplinary medication reviews¹⁹ to multidisciplinary resources such as pharmacovigilance centers,²⁰ psychiatric expert centers²¹ or psychopharmacology resource platforms like CREPP (Center of resources and expertise in psychopharmacology²²). Little is known regarding the usage prevalence of these tools in psychiatry, with incomplete data often originating from local contexts. For example, L. Marceau et al²² showed a usage rate of their expertise resource CREPP of 79.4% by health professionals affiliated with their hospital, with 373 expert evaluations between September 1, 2020 and September 30, 2021. Furthermore, there are differences in their applications. While some multidisciplinary tools, such as medication reviews, can be applied in routine practice and potentially benefit all types of patients, other multidisciplinary resources, such as expertise from pharmacovigilance centers or psychiatric expert centers, are used more occasionally for specific cases. The use of multidisciplinary tools in practice appears to be inconsistent, with numerous disparities between professionals and settings.

Additionally, the multidisciplinary integration of these tools in practice seems to be a current challenge.²³ There is currently a lack of information on the reasons for this and on how to improve them.

In this context, it is necessary to investigate how multidisciplinary resources are currently used and how health professionals approach and consider complex pharmacotherapeutic situations. Therefore, this study aimed to collect information on the barriers and facilitators perceived by hospital-based health professionals in France in the use of multidisciplinary tools to manage complex psychopharmacological situations.

Materials and Methods

Model and Study Design

Data collected for this work are predominantly qualitative (with the exception of a few scale questions) exploring the individual practices of professionals and eliciting their opinions. A mixed methods approach was chosen, using semi-structured interviews. Indeed, they are the main source of qualitative data in studies focusing on health services.²⁴

Healthcare professional’s behavior in using multidisciplinary tools for complex clinical psychopharmacology cases may be influenced by different determinants, including both individual characteristics and factors related to the external

environment. Many studies investigating evidence-based practice or health behavior utilize the COM-B model (Capability, Opportunity, and Motivation – Behavior system).^{25,26} This model allows characterizing a health behavior using several categories of interventions derived from interacting sources of behavior: capability, opportunity, and motivation.²⁵ We used this model to develop the semi-structured interview and to categorize the barriers and facilitators in the use of multidisciplinary tools to address complex clinical psychopharmacology cases. The Consolidated Criteria for Reporting Qualitative Research (COREQ)²⁷ were used accordingly in the reporting of the present study ([Supplementary Table 1](#)).

The interview guide, used for semi-structured interviews, is provided in the [Supplementary Material 2](#).

Participants

Interviews were conducted between May and August 2023 with doctors from different specialties, including psychiatrists and pharmacists. The professionals interviewed came from 11 healthcare hospital institutions, mainly in the Auvergne-Rhône-Alpes region of France.

Professionals who had once encountered a complex prescription in psychopharmacology were eligible for the interview. In our study, a complex prescription in psychopharmacology was defined as any situation involving one or more psychotropic medications with ineffectiveness, a therapeutic “dead-end”, an iatrogenic situation, a complex switch, or any other psychopharmacological issue requiring an in-depth case study.

Participants were selected by e-mail using a general distribution list of psychiatrists in health care institutions. For other specialties, physicians and pharmacists from healthcare facilities were approached randomly. Participants were invited by Email or verbally, and they were also encouraged to recommend other healthcare professionals who might be interested. A nonprobability sampling was therefore used to select eligible participants. There was no prior relationship established with participants before the study began. The aim of this study was communicated to participants by the interviewer before the interviews, along with the information that this work was part of the interviewer’s thesis. Any potentially relevant affiliations and conflicts of interest were disclosed.

Data Collection

Data were collected through individual interviews conducted by the first author either face-to-face or via videoconference when in-person meetings were not possible, using a semi-structured interview guide. The interview guide was developed through several discussions between the authors ([Supplementary Material 2](#)). The person conducting the interviews was a male hospital pharmacy resident at the time of the study and received training from the senior authors in qualitative research. Data was collected at the workplace, without anyone else present besides the participants and researcher. Pilot interviews were conducted by the authors to ensure the smooth running of the interview and to gather feedback on the interview guide. After some minor adjustments to the interview flow and question order, a final version was developed. During the interview, participants were questioned about their current behavior regarding the use of multidisciplinary tools in resolving complex situations in psychopharmacology. Questions were asked about the barriers to resolving complex situations in psychopharmacology and what should be developed to improve these situations. Some questions were formulated with expected quantitative answers. The desired response was then directed to be expressed in categories (ie, frequency classes) or, in the case of expressing agreement or disagreement, with a Likert scale.²⁸

Data collection continued until saturation was reached (ie, until no new theme, observation, or concept emerged). The interviews were transcribed verbatim in real time using an Excel[®] spreadsheet specifically designed for interview data collection, to facilitate data analysis. It was decided not to audio-record the interviews to encourage greater spontaneity from the interviewees.

Ethics

The study was conducted in accordance with the French National Commission on Information Technology and Liberties (CNIL) regulations and the General Data Protection Regulation (Regulation (EU) 2016/679). No ethical approval by an ethics committee was required because this was not a scientific health research project involving the collection of personal health data.

Oral information was provided before starting the exchanges: the declaration of research objectives, the statement that participation was voluntary and could lead to the publication of anonymized responses or direct quotes, and the need for oral consent. All participants gave oral consent to participate in this non-interventional study involving healthcare providers. No potentially identifying data was transcribed to guarantee the anonymity of the participants.

Data Analysis

Data were analyzed using inductive (ie the coded categories were derived directly from the text data) thematic analysis to identify emerging themes from the interviews.^{29,30} No interview transcripts were returned to participants before the analysis. After several rounds of reading all gathered data, initial codes were generated and discussed by three researchers (ML, RM, AB) based on the dataset. These researchers then combined the codes to form potential overarching themes. All candidate themes were reviewed by all authors and discussed until consensus was reached. Following this step, themes were individually considered against the dataset to check for validity. Finally, themes were clearly defined, named, and hierarchically organized after a collective analysis to be mapped into the COM-B model. Feedback was obtained from a participant of each medical profession type to enhance the validity of the researchers' interpretations.

Results

Out of 54 healthcare professionals approached, N=28 professionals from 11 healthcare hospital institutions were interviewed. There was no explicit refusal to participate; however, some professionals did not respond to our contact requests. The interviews ranged in duration from 20 to 70 minutes. No repeat interviews have been carried out. Participants characteristics are detailed in the following [Table 1](#):

Potential affiliations and conflicts of interest were noted: there were professionals affiliated with expertise structures in psychopharmacology, 2 pharmacovigilants from pharmacovigilance centers (Regional Centers of Pharmacovigilance) and 2 pharmacists from a center of resources and expertise in psychopharmacology (CREPP).^{22,31}

Professionals' practices and habits in using multidisciplinary tools to address complex situations in psychopharmacology vary. Some do not use multidisciplinary tools and face significant challenges in the safe use of psychiatric therapeutics, while others have multiple tools and can more easily benefit from expertise in psychopharmacology. Different practices and needs have been identified. Barriers and factors facilitating the resolution of complex situations through multidisciplinary expertise are perceived differently among those interviewed, although there are many commonalities. It was recognized by all participants that the use of easily accessible resources on psychotropic medications,

Table 1 Participants Characteristics (n=28)

Characteristics	Number, %
Years of experience	
• 0–10 years	11, 39%
• 10–20 years	9, 32%
• 20–30 years	2, 7%
• > 30 years	6, 21%
Type of medical profession	
• Hospital psychiatrist	6, 21%
• Hospital somatic physician	10, 36%
• Hospital pharmacist	10, 36%
• Pharmacovigilant	2, 7%

such as summaries of product characteristics (SmPCs) or treatment recommendations for major psychiatric illnesses published by national institutions such as the Haute Autorité de Santé (HAS),³² is not always, in practice, sufficient to address therapeutic questions quickly and reliably.

Indeed, regarding the question of the sufficiency of these easily accessible resources, the collected responses were as follows in Figure 1:

Professionals generally perceived a lack of good quality information on psychotropic drugs. In response to the question, “Do you sometimes feel that there is a lack of reliable and safe information when dealing with therapeutic issues in psychopharmacology?”, the responses were as follows in Figure 2.

There is also a consensus among professionals that there is a problem of access to specialist information in psychopharmacology. Indeed, when necessary, they often seek advice from another healthcare professional in order to secure and manage certain therapeutic interventions. In Figure 3, the professionals surveyed reported the following frequencies of consultation.

The themes related to barriers and facilitators to the use of multidisciplinary tools for complex clinical psychopharmacology cases, as perceived by the participants, have been integrated under the corresponding category of the COM-B model, as shown in Figure 4. Considering this model allows us to see the areas that influence problem solving in psychopharmacology through multidisciplinary tools. The two inner circles in Figure 4 represent the three components of the COM-B model with their respective subcategories. Adjacent to these categories on the figure, at the level of the outer

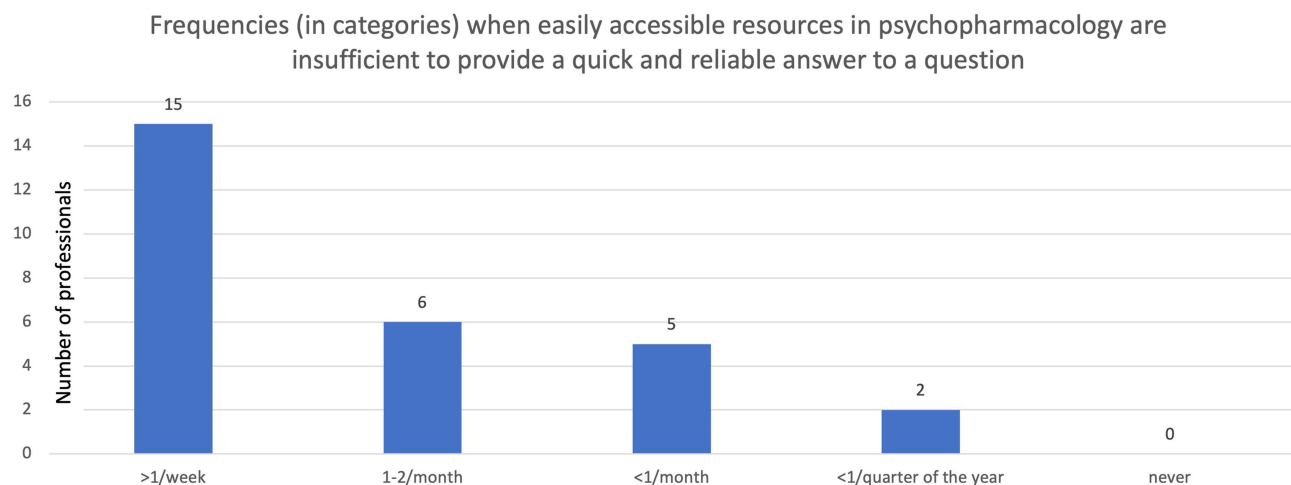


Figure 1 Answers to the question: “In your practice, do you encounter complex therapeutic interventions for which the use of easily accessible classical resources and databases in psychopharmacology (eg, Vidal®, HAS recommendations, etc) does not allow you to address therapeutic questions quickly and reliably?” from n=28 healthcare professionals.

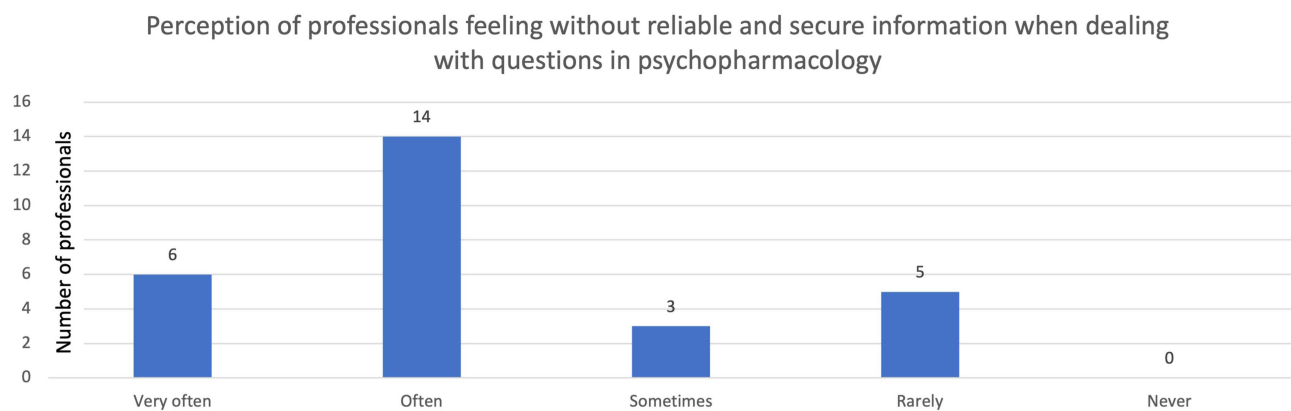


Figure 2 Answers to the question: “Do you sometimes feel lacking reliable and secure information when dealing with therapeutic questions in psychopharmacology?” from n=28 healthcare professionals.

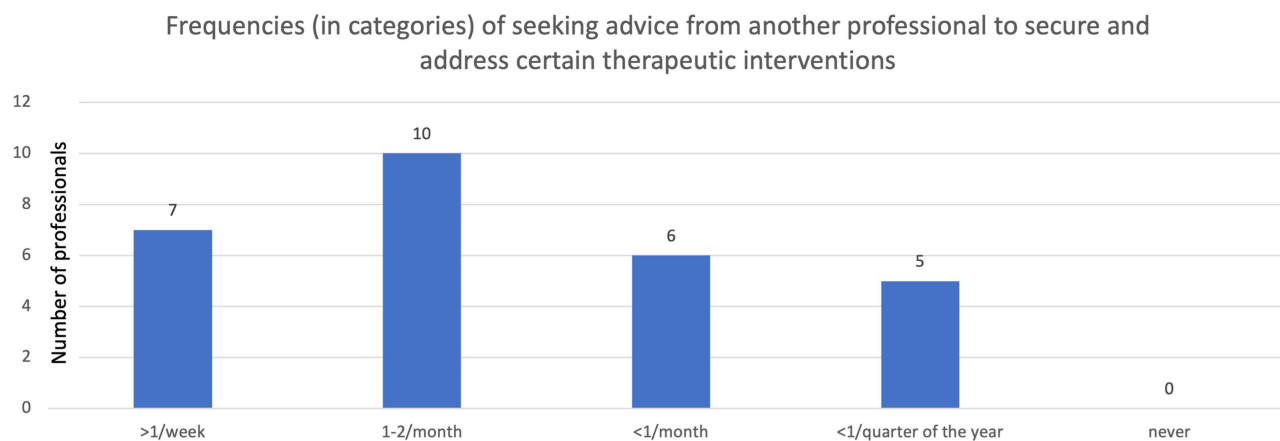


Figure 3 Answers to the question: "In your practice, do you sometimes seek advice from other healthcare professionals to secure and address certain therapeutic interventions?" from n=28 healthcare professionals.

circles, are the corresponding domains that emerged from the interviews. It is worth noting that the barriers and facilitators related to ability (physical) and motivation (automatic) were not investigated during the interviews. The data presented were consistent with the findings.

According to the COM-B model, we obtained the following detailed classification regarding barriers and facilitators in the use of multidisciplinary tools to manage complex psychopharmacological situations from participants:

Barriers

Capability

Lack of Knowledge in Psychopharmacology

Most surveyed participants reported a lack of knowledge in psychopharmacology, either among themselves and/or other health professionals. This hinders optimal management of patients with psychotropic medications and participation in multidisciplinary activities in psychopharmacology. However, it can also facilitate the use of multidisciplinary tools to address complex situations in psychopharmacology, as professionals facing a knowledge gap are motivated to seek support. Multiple sources of information with varying levels of evidence make it difficult for professionals to acquire knowledge. Knowledge is also sometimes challenging to apply in practice, partly due to the methodological quality of clinical trials, which does not allow for a systematic extrapolation of the psychotropics action to specific clinical situations. The applicability of knowledge is also dependent on diagnostic reliability, which, according to some professionals, is more complex in psychiatry than in other medical specialties. The precision of the syndrome is called into question. This has a direct impact on the knowledge mobilized in psychopharmacology, as it must be applied cautiously to the clinical situation. A lack of updating of knowledge is also reported.

We face a lack of knowledge among practitioners outside of psychiatry about these medications and a lack of follow-up on recommendations. (Hospital psychiatrist)

There is a lack of knowledge about psychotropic medications and their limitations. Especially a lack of knowledge about the limitations of clinical psychopharmacology assessment. (Pharmacovigilant)

Opportunity

Lack of Time to Address Complex Situations

Almost all the professionals interviewed reported a lack of time to deal with complex situations in psychopharmacology and to use multidisciplinary tools. One strategy suggested in the interviews is to address complex situations quickly and not leave a long-term difficulty unresolved.

For certain categories of individuals, psychotropics are challenging to use; they have many side effects, different half-lives, and therefore, in emergencies, it's complicated. (Hospital somatic physician)

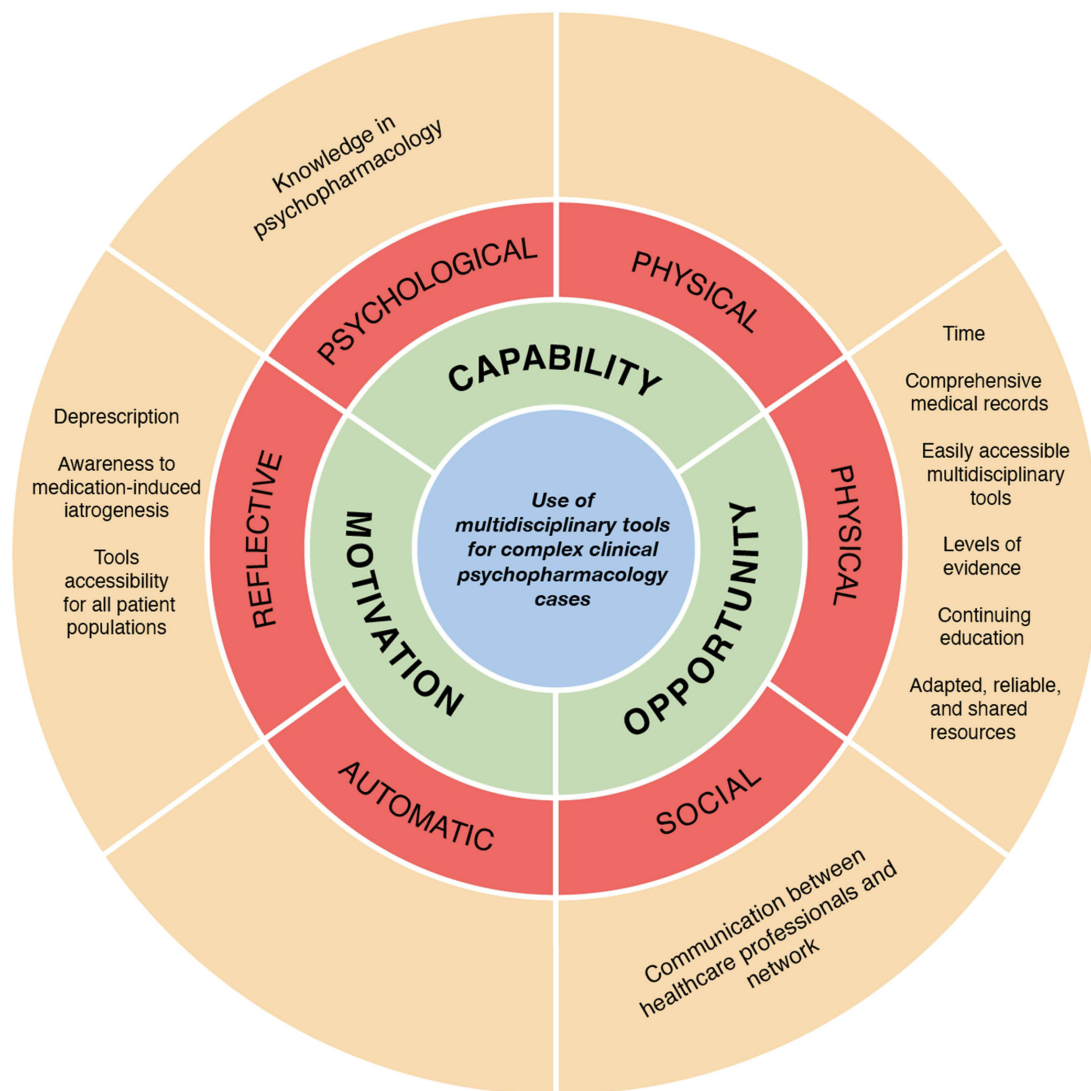


Figure 4 COM-B model.⁹

Lack of Medical Records and Medication History / Incomplete Information

Many practitioners identified the lack of psychiatric information in medical records as a barrier. In particular, there is a lack of information on psychiatric history, the patient's syndrome and diagnosis, and their pharmacological history. This is crucial information when dealing with complex psychopharmacological situations. This lack of information is particularly significant in somatic care, where access to psychiatric information can be very difficult, especially when information systems do not automatically integrate psychiatric medical records.

We are removing psychiatry information from the standard medical record when we shouldn't be. (Hospital pharmacist)

Lack of Easily Accessible Multidisciplinary Tools

The lack of easily accessible multidisciplinary tools for professionals was also identified as a barrier. Tools to improve multidisciplinary care in psychiatry were highlighted and professionals were asked whether they thought these tools should be developed or not. Regarding tools to improve adherence (eg therapeutic education of patients, psychoeducation about treatments, etc), most of the professionals interviewed considered these tools to be valuable for multidisciplinary care. They advocate their development given the current limited availability, especially for populations that could benefit

from such tools. Work on medication rehabilitation ensures good adherence without the need for systematic long-term care interventions. Several professionals emphasized the importance of adapting these tools to patients and developing their accessibility.

Patients should be well informed about iatrogenic risks, and then the treatment is better tolerated because the patient is aware of the potential side effects. They are more likely to continue the treatment afterward. (Hospital psychiatrist)

With regard to expertise tools in psychopharmacology (such as psychopharmacology resource platforms like CREPP, expertise provided by pharmacovigilance centers, expertise provided by expert centers for psychiatric disorders, etc), professionals reported some complexity in accessing these resources. They mostly support their development, believing that they could be facilitators in solving complex psychopharmacological cases. According to our interviews, the existence of these resources generally helps to secure and legitimize treatments. For psychiatrists, these structures would provide expertise in psychopharmacology for issues outside their usual area of expertise or for which the level of evidence is insufficient. For other physicians, these resources provide both expertise at a time of shortage of psychiatrists (including a shortage of liaison psychiatrists for the hospital professionals surveyed in this work) and the ability to complement usual care by providing safe prescribing. For hospital pharmacists, these resources would facilitate their development of pharmaceutical interventions for psychopharmacological problems, where we have seen a lack of ease according to most pharmacists surveyed. A rapid response is generally desired and considered important to be compatible with the practical needs of professionals. A key point raised by several professionals is the feasibility and actual use of these theoretical structures, which are considered useful only if they are practical and not an additional layer to the existing multiple resources.

The issue of tools to improve hospital-community liaison was also raised. Professionals agreed that these multidisciplinary tools need to be developed and are currently lacking. The lack of liaison and coordination between community and hospital practitioners is a barrier to resolving complex psychopharmacological cases and can lead to medication errors. Several limitations were identified that should be addressed when developing tools to improve hospital-community liaison: difficulties in identifying professionals involved in the patient's care, complex communication of information about therapeutic changes, and poor interoperability of information systems.

Finally, with regard to multidisciplinary tools within care services (eg, multidisciplinary prescription reviews, pharmaceutical analysis within care services, multidisciplinary meetings, pharmaceutical mediation, etc), they are generally appreciated by professionals and relevant for them in resolving complex pharmacotherapeutic situations, especially in the field of psychopharmacology. They generally help secure the use of psychotropics, facilitate pharmacovigilance activities, including reporting, and rethink the relevance of the use of molecules.

These tools are underused. They allow discussion of practices and confrontation of viewpoints. (Hospital pharmacist)

Lack of Sufficient Levels of Evidence in Psychopharmacology

Several of the professionals interviewed highlighted the weakness of the level of evidence available in psychopharmacology. This seems to be an obstacle due to a lack of scientific robustness. The methodological quality of the evaluation of psychotropic drugs seems to be too low for some professionals, and there is a need to confirm the data on which the marketing authorization of the psychotropic drugs studied is based and to assess the robustness of clinical trials.

In psychopharmacology, benefits are uncertain, but risks are systematic. (Pharmacovigilant)

Facilitators

Motivator

Deprescription

Deprescribing of psychotropic drugs was a motivating factor for the judicious use of psychopharmacology, involving the use of multidisciplinary tools at different levels. Many of the professionals interviewed reported frequent situations of over-prescription in psychiatry, and deprescribing is now seen as an important issue. In some situations, deprescribing is

useful to limit medication-related harm, to comply with recommendations for monotherapy as first-line treatment, or to assess the patient's cognitive functioning without treatment bias. For some professionals, there may also be a lack of non-pharmacological alternative proposals and some pressure from the patient and/or family with significant expectations for a pharmacological response to a mental health condition, combined with an information barrier.

We try to see how we assess the evaluation when there are psychotropics affecting the cognitive functions of the child. We have difficulties because children are polymedicated. We need to work together for deprescription, especially with pharmacovigilance, the pharmacist, and the prescribers. (Hospital somatic physician from a psychiatric facility)

Awareness to Medication-Induced Iatrogenesis

The professionals interviewed stated that they were aware of the precautions to be taken in terms of tolerance to psychotropic drugs. Medication-induced iatrogenesis due to psychotropic drugs therefore appears as a facilitator in the use of multidisciplinary tools for complex clinical psychopharmacology cases. Efforts are being made to address medication-induced iatrogenesis, particularly through the collection of adverse events and their increased reporting during interventions and requests for expertise.

If it's a complex situation, we think more about the harm than benefits. (Pharmacovigilant)

Tools Accessibility for All Patient Populations (All Pathologies and All Ages)

The professionals interviewed generally expressed an interest in having tools and developing knowledge regarding the recommendations for the psychopharmacological management of specific populations for which the literature is still lacking. This is particularly the case for pediatric populations, the elderly, pregnant or lactating women, and men and women of reproductive age. These specific populations motivate professionals to make multidisciplinary decisions for their care.

I find that there are few marketing authorizations, few studies, and little overall data for children with complex prescriptions. There is a lack of consensus that would be desirable for children. (Hospital psychiatrist)

Opportunity

Continuing Education in Psychopharmacology

With regard to awareness-raising and training tools for health professionals on psychiatric therapies, the professionals interviewed were generally in favor of their development in various forms. They felt that despite the many training opportunities available, few professionals could actually benefit from them on a regular basis. According to them, such training would help them to be more in line with national and international recommendations on the use of psychotropic drugs. For some, initial training in psychopharmacology needs to be strengthened. There is a desire for coordination of psychopharmacology training, at least at regional level, and for it to be integrated as much as possible into real professional practice. Overall, professionals are aware that these training opportunities could improve the correct use of psychotropic drugs, and some have also indicated a lack of continuous training in relation to specific populations (such as child psychiatry or the elderly).

We have very little access to continuing education. Newsletters on psychopharmacology are good. We would also like to have an annual training with courses on that subject. (Hospital psychiatrist)

Link Between Different Healthcare Professionals, Communication, and Network

As shown in [Figure 3](#), approximately 60% of the professionals surveyed (17 out of 28) seek advice from another health professional at least once a month to secure and manage specific therapeutic interventions. Moreover, when they seek advice, the response from the professional consulted is generally considered sufficient for the complex psychopharmacological situation in most cases. Indeed, the responses to the question, "Are there situations where seeking advice from another health professional is not sufficient for the complex psychopharmacological situation?" are distributed as follows in [Figure 5](#):

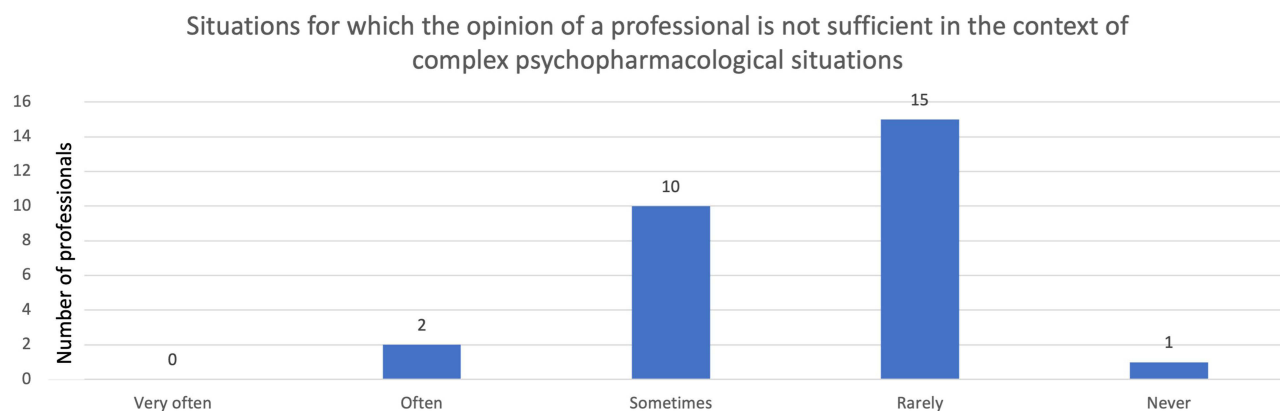


Figure 5 Answers to the question: "Are there situations where seeking advice from another healthcare professional is not sufficient for the complex psychopharmacological situation?" from n=28 healthcare professionals.

The different categories of professionals consulted for these opinions and mentioned during the interviews were: neurologist, endocrinologist, psychiatrist, biologist, emergency physician, general practitioner, cardiologist, geriatrician, dermatologist, internist, pharmacist, pharmacovigilant from pharmacovigilance center, laboratory marketing the drug, professional from a reference center, peer support worker, and neuropsychologist. The importance of the network and knowing these professionals in advance has been emphasized. This is indeed perceived as a facilitating factor for the possibility of exchange and multidisciplinary expertise in resolving complex psychopharmacological situations. Some professionals experience significant isolation and do not have the opportunity to seek psychopharmacological advice. The creation of regional multidisciplinary meetings is one of the ideas that was suggested in the interviews, to share the expertise of different professionals on complex psychopharmacological prescriptions.

Sometimes I intervene in the deprescription of medications; I refer back to the treating physician by sending them the information. (Hospital pharmacist)

When it's complex, I refer to the literature, to investigate, and I don't do things alone; I try to rely on references and opinions from colleagues. (Hospital psychiatrist)

Implementation of Adapted, Reliable, and Shared Resources in Psychopharmacology

The implementation of resources appeared to be a facilitating factor for the majority of respondents. Different types of resources were requested:

- Easily available, concise support (eg decision trees of recommendations) adapted to practice, different situations and specific populations. The issue of the multiplicity of resources was also raised, as professionals often feel overwhelmed by numerous tools and databases that are not standardized (tools for the use of psychotropic drugs in specific populations, interaction tools, good practice tools, pharmacological dosage tools, etc).

- Resource persons for obtaining psychopharmacological opinions. Professionals have emphasized the need to be close to the people whose opinions are sought and to be responsive. This includes questioning the rationale for the choice of molecule in the light of clinical considerations. This resource can also be implemented in clinical pharmacy tools in care services, which is highly valued by the professionals interviewed.

- Multidisciplinary resources with communication between professionals: multidisciplinary meetings with a review of psychotropic drugs, meetings on complex cases, multidisciplinary meetings with experts in psychopharmacology (pharmacovigilance centers, CREPP-type structures or expert centers) and pharmaceutical analysis of prescriptions. The doctors and pharmacists interviewed believe that a shared medical decision-making model (team-based model) is necessary for therapeutic decision-making. In fact, 79% "strongly agree" (and 21% "agree") with this model in relation to therapy.

For example, in cardiology, we seek a lot of opinions, so we are familiar to prescriptions, while for psychotropics, we don't seek opinions even though they are common, and we use them a lot without really knowing and with little training. The basis of what we learn dates back to university. We are not well supervised by specialists, both pharmacists and psychiatrists. (Hospital somatic physician)

Discussion

Using a mixed methods research approach with semi-structured interviews, this paper presents health professionals' perspectives on the barriers and facilitators of using multidisciplinary tools for complex clinical psychopharmacology cases. The COM-B model used in this study allows us to consider that health behavior in the use of multidisciplinary tools for complex psychopharmacological situations arises from a combination of capabilities, motivations and opportunities. Barriers and facilitators were identified in all three categories of the COM-B model. In terms of barriers, they were identified at the level of professional capabilities, including lack of expertise. At the level of opportunities in the COM-B model, lack of time, sometimes incomplete medical records regarding psychiatry, lack of easily accessible tools and insufficient evidence in this area are the main barriers that emerged from the interviews. To facilitate the use of multidisciplinary tools to address complex situations in psychopharmacology, several themes emerged within the model categories, including deprescribing, the development of psychopharmacology training, the provision of appropriate, reliable and shared resources, and improved communication between professionals through the creation of networks.

Ideally, to influence behavior in dealing with complex situations, interventions should target and modify these model categories through different mechanisms. The analysis of the interviews highlighted the need to develop tools and resources that are tailored to professionals, that are accessible and reliable, and that meet the needs of complex situations in psychopharmacology that require a multidisciplinary approach. Collegiality emerged as an important theme in the interviews, implying efforts to put it into practice.

This work shows that the intention of professionals to limit the overprescription of psychotropic drugs and their iatrogenic effects is a motivating factor for their involvement in multidisciplinary approaches to make the most appropriate therapeutic decision for patients. They aim to implement collective strategies to address the lack of knowledge in psychopharmacology for certain patient populations and the often-insufficient level of evidence from clinical trials.

To our knowledge, modelling of barriers and facilitators in this area has never been undertaken. However, some of the barriers or facilitators identified in our study have been studied individually and related to psychopharmacology prescriptions. In terms of knowledge, previous studies have identified areas for improvement.³³ For example, a study in Canada surveyed 60 general practitioners representing a variety of practice settings who reported difficulties managing patients with serious mental disorders.³⁴ Those more comfortable had received special trainings or were more specialized. The authors recommend more continuing education and case discussion in local networks with multidisciplinary resources. An other study conducted in France on depression management in general practice found that of a sample of $n=1159$ GPs, 61% prescribed an antidepressant for mild depression (in a fictitious case presented to them).³⁵ This is despite common recommendations against pharmacological intervention in mild cases.^{36,37} Further investigation into the specific types of knowledge and skills that are lacking would be of interest.

The issue of sometimes heterogeneous levels of evidence from clinical trials of psychotropic drugs,³⁸ highlighted in our interviews, may partly explain the lack of strict adherence to recommendations. With regards to barriers related to opportunity: lack of time, sometimes incomplete psychiatric records, lack of easily accessible tools and insufficient levels of evidence, some research has addressed these aspects in mental health care. According to a descriptive study in the United States exploring perspectives of primary care providers about delivery of mental health care in primary care settings, lack of time was identified as a limitation.³⁹ Other studies identified this constraint.^{33,34,40} The issue of the completeness of medical records with the availability of psychiatric information to all professionals, and thus the challenge of hospital-community liaison, depends on the organization of care and support at the territorial level. Several studies have focused on information transfer between professionals and the importance of hospital-community liaison.⁴¹⁻⁴³ Literature specifically addressing the lack of psychiatric data in a somatic care setting, an issue that emerged

as a major barrier in our interviews, is more limited. This barrier is more related to local peculiarities of the organization of information systems in our region (lack of integration of psychiatric expertise from neighboring psychiatric hospitals into the Easily[®] computerized medical record of the Hospices Civils de Lyon, for example). Nevertheless, the problem of inadequate medical data transfer between practitioners is a major problem recognized in the literature in several health systems and confirmed by our study.^{44,45}

The lack of easily accessible tools in psychopharmacology adapted to clinical situations has been noted by Javelot et al and has been the subject of tool proposals, notably through a “shared expertise in psychopharmacology” approach.^{18,23} With regard to the facilitating factors identified in our study, including the desire to limit overprescribing and drug-related iatrogenesis due to psychotropic drugs, numerous studies have highlighted these issues, familiar challenges in psychopharmacology.^{46–48} In our study, deprescribing emerged as a significant theme, highlighting the particular challenge it poses for psychotropic drugs. Indeed, in a systematic review of randomized controlled trials, psychotropic medications were identified as the most resistant drug class to deprescribing, even with intensive intervention.⁴⁹

Although this study, through its semi-structured interview design, allows for an examination of barriers and facilitators in the use of multidisciplinary tools for complex clinical psychopharmacology cases, it also has its limitations. Firstly, the sample of professionals interviewed was selected through Email responses via a distribution list and requests to doctors and pharmacists from healthcare institutions. This is a non-probability sampling method that may introduce selection bias. We attempted to interview a range of health professionals who may be involved in complex psychopharmacological prescribing in their practice. Another limitation is the exclusively hospital-based origin of the respondents. Due to the predominantly hospital-based tools discussed and the complexity of working with general practitioners, it was decided to conduct this study only with hospital-based professionals. Furthermore, some of the barriers and facilitators identified are related to a local setting and may not be generalizable. They should be interpreted with caution.

Finally, the size of the studied sample may seem small and not representative of the different professions. The aim of this study was to capture the perceptions of health professionals who may encounter complex prescriptions in psychopharmacology and to explore this perspective across different categories of professions to gain complementary insights.

Conclusion

This qualitative study identified barriers and facilitators to the use of multidisciplinary tools to manage complex situations in psychopharmacology. The perceptions of hospital health professionals in France, interviewed for this study, helped to model these factors that enable behavior change in health care.

The barriers and facilitators, whether related to ability, motivation or opportunity, were classified using the COM-B model. Subsequently, these factors will help to develop interventions and tools tailored to the individual and collective needs of professionals when using multidisciplinary tools to address complex situations in psychopharmacology. Healthcare professionals have expressed numerous expectations regarding the management of these situations, to which answers must be provided in order to help them secure and optimize pharmacological therapies in the field of mental health.

Disclosure

The authors have no relevant affiliations or financial involvement with any organization or entity with a financial interest in or financial conflict with the subject matter or materials discussed in the manuscript. This includes employment, consultancies, honoraria, stock ownership or options, expert testimony, grants or patents received or pending, or royalties.

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