MINI REVIEW

Initial Recommendations for Overcoming Challenges in Studies on Self-Medication: Mini Review

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ABSTRACT

The challenges associated with studying Self-Medication (SM) are examined in the article, along with recommendations to overcome these hurdles and enhance the quality of research in this field. Establishing a clear and unified definition of SM is important since its lack may lead to variations in prevalence rates and difficulty in comparing studies. The definition should be consistently applied in the methodology and reflected in reporting. Methodological differences in SM studies are also identified as a challenge. Establishing consistent inclusion criteria, designing questionnaires that encompass all forms of Self-Medication (SM) and its duration, and defining a clear recall period are recommended to improve the quality of research in this field. The importance of separate reporting for SM involving Over-The-Counter (OTC) and Prescription-Only Medications (POMs), as well as separate reporting for SM prevalence among all participants and medication users, is emphasized.

It is acknowledged that these recommendations are initial steps, collaboration among researchers and healthcare professionals to refine definitions and develop consistent methodologies to improve the understanding of SM's pattern and prevalence are important.

Key Words: Self-medication; Prevalence; Methodology; Definitions; Research quality

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INTRODUCTION

Understanding the patterns and prevalence of Self-Medication (SM) is of utmost importance due to its significant impact on public health and potential health consequences. Numerous studies have been conducted globally to explore SM, providing valuable insights into prevalence rates, types of medications used without medical supervision, the reasons behind SM choices, and influencing factors [1-4].

The knowledge gained from these studies is beneficial for targeted interventions, policies, and educational campaigns, ultimately enhancing medication safety and promoting rational drug use. Studying SM patterns sheds light on adverse effects, drug interactions, and vulnerable populations prone to SM.

Still, the lack of standardization in studies on SM poses challenges in understanding its prevalence, pattern, benefits, risks, and overall impact on public health. Defining SM and establishing consistent methodologies have indeed presented challenges. The absence of a clear and agreed-upon definition of SM and the use of inconsistent methodologies can result in significant variations in reported prevalence rates across studies. For instance, a meta-analysis involving 89 studies and 60,938 students discovered a wide range of reported SM prevalence among students, spanning from 7.9% to 99%. Similarly, another meta-analysis examining 163 articles reported SM prevalence rates ranging from 2% to 92% across different countries [1,2].

Recognizing and addressing these difficulties in definition and methodology is crucial for advancing research on SM. Establishing a standardized definition, adopting consistent methodologies and approaches that can assess the appropriateness and risks of SM on a larger scale seems to be essential for more comprehensive understanding of this important public health issue.

This article represents an early stage in the process of standardizing studies on SM by highlighting the significance of establishing a clear and unambiguous definition as well as maintaining consistency in research methodologies within the field of SM research. The article presents initial recommendations to tackle these challenges. By acknowledging the necessity for standardization and providing practical suggestions, this article contributes to the ongoing advancements in the field of SM research advancing our comprehension of SM and its consequences.

Definition of Self-Medication (SM)

There is a lack of a unified and clear definition of SM. This problem has been mentioned in some previous articles. Different studies use different definitions, leading to inconsistencies in measuring and comparing SM prevalence and patterns [3,4]. The majority of articles define SM based on factors such as the method of drug acquisition, absence of involvement of a healthcare professional, medication source, and the underlying reasons. Additionally, related concepts like self-care, deviation from prescribed medication, reuse of stored drugs, and sharing or lending of medicines were also recognized as forms of self-medication. Due to variations in definitions used across different studies, inconsistencies arise, making it challenging to draw accurate conclusions or conduct meaningful comparisons across populations and settings [4]. Developing a standardized and unambiguous definition is crucial for consistency and enhancing the reliability of research in this area. The definition should be consistently applied in the study methodology and reflected in the reporting of findings. While a universally accepted standard definition of SM is yet to be established, it remains crucial for researchers to clearly define SM in their reports. It is equally important for researchers to develop their chosen methodology and reporting to align with the defined concept of SM. This approach enhances the clarity and comparability of findings, facilitating a more accurate understanding of SM and its implications.

LITERATURE REVIEW

Methodological differences also pose challenges in studying SM. Some main issues in methodology are listed as follows:

Inclusion criteria

Differences in inclusion criteria, such as specific age groups or the exclusion of particular populations, can affect the generalizability of the results. Even if it is carried out in one strata of the population, the potential differences between subgroups should be taken into account, e.g., studies on SM prevalence among medical students that include

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all students indiscriminately and ignore the potential differences in SM practices among students in different years of study. Some studies have examined SM prevalence among students in different years, revealing variations in rates [3-9]. If SM studies are carried out within a community setting, it is important to conduct subgroup analyses to examine variations and differences among different groups. This allows for a more in-depth understanding of SM practices within specific subgroups, such as age groups, gender, socioeconomic status, or geographical locations. By conducting subgroup analyses, researchers can identify unique patterns, factors, and potential risks associated with SM within different segments of the community, leading to more targeted interventions and healthcare strategies.

Expanding the scope

To achieve a comprehensive assessment of medication usage, it is crucial to consider both SM and prescribed medications use. This broader perspective should be integrated into the questionnaire design and reflected in the reporting of study findings. By getting information on both SM practices and prescribed medications use, researchers can gain a more comprehensive understanding of SM patterns. Focusing solely on the prevalence of SM among all study participants may introduce bias, as those who did not engage in SM may not have required medication during the recall period [3]. Therefore, it is important to examine the prevalence of SM specifically among participants who took medications during the specified period of time, which may be a more accurate representation of self-medication practices and their associated factors.

Questionnaires should be designed to encompass all forms SM as defined by the researcher

When designing a questionnaire for studying SM, it is important to include all forms of SM that are accepted by researchers and align with the defined concept. The questionnaire should accurately reflect the chosen definition of SM for consistency in data collection and analysis. To address potential misunderstandings, it is crucial to provide clear and detailed explanations in the questionnaire, particularly in areas where confusion or ambiguity may arise. For example, specific practices like self-refill and reuse of remaining prescribed drugs should be explicitly described to avoid participant misunderstanding. Participants may mistakenly believe that reusing a drug prescribed by a doctor does not fall under the category of SM.

Recall period

Variations in the recall periods used in different studies can impact the reported prevalence rates. Some studies use longer recall periods, e.g., six months, while others use shorter recall periods, e.g., one-week and one month [3,5,10]. The choice of recall period can influence the accuracy of the reported prevalence rates. Extended recall periods can be susceptible to recall bias, where participants may have difficulty accurately remembering and reporting their SM behaviours over a longer time frame. On the other hand, longer recall periods have the advantage of capturing a broader range of people who are practicing SM, including those who engage in infrequent or episodic SM. Researchers should carefully consider the trade-off between recall bias and inclusiveness when selecting the appropriate recall period for their study, taking into account the specific research objectives and the nature of the SM behaviours being investigated.

Getting information about drug names and their dosage forms

It is essential to collect information about the dosage forms of medications in SM practices. The classification of drugs as OTC or prescription-only can vary based on their specific dosage forms, since a drug may be available as OTC in one dosage form but as POM in another form. For instance, Paracetamol tablet is an OTC, while its injection is not. Therefore, questionnaires should be designed to gather information about dosage forms that have been used rather than just the drug name, enabling a more accurate assessment of SM practices.

Getting information about duration of SM

It is worthy to understand whether SM is practiced occasionally or continuously. Collecting and reporting data on the duration of SM can provide valuable insights into the patterns and frequency of self-medication behaviours. By examining the duration of SM, researchers can better understand the temporal aspects of SM, identify potential risks or benefits associated with long-term self-medication, and develop appropriate interventions or guidelines tailored to different patterns of self-medication behaviour. Therefore, incorporating data on the duration of SM in research studies contributes to a more comprehensive understanding of self-medication practices. Prolonged SM poses a higher risk of health consequences than occasional or short-term use.

DISCUSSION

Separate reporting for SM of OTC and of POMs

Failing to make a clear distinction between these categories can lead to inaccurate assessments of the risks and appropriateness of medication use in self-care practices. Not all studies make a clear distinction between the use of OTC medications and POMs in SM. Differentiating between these two categories is crucial, as the use of POMs without medical supervision carries higher risks. Limited studies have examined the ratio of OTC and POMs in SM practices [3].

Separate reporting for SM prevalence among all participants and medication users

By solely focusing on all participants, the prevalence of SM may be underestimated. This approach may overlook individuals who engage in SM practices but did not require medications during the specified period. It is important to consider and report the prevalence among both groups: All participants and specifically those who used medication. This will be a more accurate estimation of SM prevalence and provide a comprehensive understanding of the phenomenon, including its appropriateness, risks, and influential factors. According to Daanish AF and Mushkani EA, the prevalence of self-medication among medication users was found to be twice as high as the prevalence among all participants, with rates of 64.9% and 25.16% respectively [3].

CONCLUSION

Evaluating the appropriate use of medications in self-medication practices presents difficulties, as assessing the appropriateness of each medication on an individual basis becomes impractical. It is important to acknowledge that the recommendations outlined in this article represent only the initial steps towards addressing the challenges of SM research. Further progress is required to establish comprehensive standards for studying SM.

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