Comment on Martino et al. "Scales for Antipsychotic-Associated Movement Disorders: Systematic Review, Critique, and Recommendations"

In a recent article, Martino and colleagues[1] describe the results of a systematic literature review of scales for measuring drug-induced movement disorders in people with severe mental illness (SMI). The article takes the starting point of the neurologist, and the lack of experiential knowledge about the conditions under which the scales are used provides quite a few misses. For example, the plea to replace the term "dyskinesia" with "stereotypy" is inappropriate because in individuals with a SMI, such as schizophrenia, a different meaning should be attached to the mental symptom "stereotypies," which should be distinguished precisely from "dyskinesia." Also, acute dystonia rarely occurs in trial settings, and there will almost never be an opportunity to quantify its severity through a rating scale. Indeed, the physician then responsible for the patient's well-being must intervene immediately in that situation. Also, distinguishing between acute or tardive parkinsonism and akathisia is of little relevance because they cannot (reliably) be described as separate clinical entities. The evaluation of the individual rating scales also arouses surprise. I base this, for example, on the representation of the properties of the Schedule for the Assessment the Drug-Induced Movement Disorders (SADIMoD). Strange, by the way, that only one of the two publications on the validation study of the SADIMoD is mentioned, and that the study by Knol et al.[2] was apparently not found either. That does give me a strange impression about the quality of article selection. Major objections can be raised to the insufficiently critical attitude toward the Abnormal Involuntary Movement Scale (AIMS), which, incidentally, does not refer directly to the original AIMS.[3] The use of this scale is erroneously recommended, because it has been accepted by the US Food and Drug Administration for the registration of some vesicular monoamine transporter-2 inhibitors. The corresponding registration trials used the first seven items of the AIMS, and the raters were extensively instructed and trained by a few American experts.[4] Indeed, a major problem with the original AIMS is that the last five items severely reduce the reliability of the scale and without extensive periodic training, interrater reliability declines unacceptably sharply in longer-term studies.[5,6] There is therefore a need to score only the first seven items, to improve item definitions, and to score the severity of dyskinesia during activity and at rest separately and only retrospectively transform them in an AIMS score. Such a modified version, validated as part of the SADIMoD,[5,7] can be freely downloaded from https://www.antonloonen.nl/.

The publication of Martino et al.[1] also brings some good news. For example, they rightly call attention to other forms of movement disorders. Combination therapy of antipsychotics with benzodiazepines, lithium, antidepressants, and anticonvulsants is often necessary, and this causes a different clinical picture than monotherapy. However, in my opinion, an extensive revision should result from a collaborative effort of neurologists and psychiatrists, which can also lead to the advocated improvements of the available material.

Data Availability Statement

Not applicable.

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Reply to 'Comment on Martino et al. 'Scales for Antipsychotic-Associated Movement Disorders: Systematic Review, Critique, and Recommendations'"

We thank Professor Loonen for the attention given to our article and the detailed critique.[1] Movement disorders associated with antipsychotic drug exposure are among the most common conditions referred to movement disorders specialists, both in outpatient and inpatient settings. Hence, our subcommittee approached this work[2] with longstanding clinical experience of the challenges in assessing these symptoms. Unlike what Loonen states,[1] our article does not suggest replacing the term "dyskinesia" with "stereotypy" but, rather, to introduce in the nomenclature terms that indicate well-defined hyperkinetic phenomena. At present, "dyskinesia" is often used as a *passepartout* word that may encompass different phenomena, including stereotypies.

Supporting the occurrence of new-onset antipsychotic-associated movement disorders in clinical trials, a proportion of which occur acutely, an overview and meta-analysis of Cochrane reviews that focused on acute parkinsonism, dystonia, akathisia, and tremor[3] yielded, respectively, upper limits of prevalence estimate ranges of 29%, 15%, 16%, and 28%. As stated by Loonen,[1] acute antipsychotic-associated dystonia and other movement disorders require rapid intervention. Rather than minimizing the need for rating instruments applicable also to acute movement disorders, the need for rapid treatment corroborates it. Furthermore, even if for some movement disorders (eg, akathisia) acute and tardive counterparts are phenomenologically similar, the need to intervene rapidly justifies swift and efficient rating of acute forms through the adaptation of preexisting instruments or even the development of new instruments.

We were surprised to read Professor Loonen's concerns around the quality of article selection.[1] Both publications on the validation study of the Schedule for the Assessment of Drug-Induced Movement Disorders (SADIMoD)[4,5] as well as the study by Knol and colleagues[6] were cited in the supplementary file of our article[2] (see references 73, 74, and 64 in that document), which contains a detailed analysis of each rating instrument. The criteria for recommendations that we used are those adopted in several publications commissioned by the International Parkinson and Movement Disorder Society Clinical Outcome Assessments Scientific Evaluation Committee. The "suggested" recommendation for the SADIMoD stems from its not having been applied by authors different from its developers, the length of administration, and some limitations of its psychometric profile.

Regarding the comment on the Abnormal Involuntary Movements Scale,[1] again we express clearly in the supplementary file[2] that the total severity is conventionally the sum of the scores of items 1 to 7 and refer to the publication of supplementary instructions to score the first seven items. Its widespread use in psychiatric patients and acceptable psychometric properties justified our recommendation. We also agree on some important limitations, such as limited internal consistency and its being weighted toward facial dyskinesia, to which Professor Loonen's pertinent suggestion[1] to score dyskinesia severity separately during activity and at rest should indeed be added.

Finally, we believe that the persisting divide in movement disorders nomenclature between neurologists and psychiatrists is both dangerously confusing and anachronistic. We were therefore glad to find Professor Loonen in agreement with our advocating for a collaborative effort of neurologists and psychiatrists in revising the nomenclature and classification of antipsychotic-associated movement disorders as well as in planning further psychometric work on existing rating instruments. In this collaborative spirit, we think that our systematic review and critique represents a consultation source that will aid future work to harmonize the screening and assessment of antipsychotic-associated movement disorders.

Data Availability Statement

This is a Reply to a Comment and does not contain any new original data.

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