

TECHNICAL NOTE

Development of the Japanese version of the 30-item Mystical Experience Questionnaire

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Abstract

Introduction: Psychedelics have garnered increased attention as potential therapeutic options for various mental illnesses. Previous studies reported that psychedelics cause psychoactive effects through mystical experiences induced by these substances, including an altered state of consciousness. While this phenomenon is commonly assessed by the Mystical Experiences Questionnaire (MEQ30), a Japanese version of the MEQ30 has not been available. The aim of this study was to develop the Japanese version of the MEQ30.

Methods: We adhered to the “Principles of Good Practice for the Translation and Cultural Adaptation Process for Patient-Reported Outcomes (PRO) Measures: Report of the ISPOR Task Force for Translation and Cultural Adaptation” in our translation process. Two Japanese psychiatrists independently performed forward translations, from which a unified version was derived through reconciliation. This version was subsequently back-translated into English and reviewed by the original authors for equivalency. The iterative revision process was carried out through ongoing discussions with the original authors until they approved the final back-translated version.

Results: The final, approved back-translated version of the MEQ30 is presented in the accompanying figure. Additionally, the authorized Japanese version of the MEQ30 is included in the Appendix A.

Conclusions: In this study, we successfully developed a Japanese version of the MEQ30. This scale will facilitate the assessment of mystical experiences associated with psychedelic-assisted therapy among Japanese speakers. Further research is warranted to evaluate the reliability and validity of this newly translated scale.

KEYWORDS

human, Mystical Experiences Questionnaire, psychedelics

Kengo Yonezawa and Hideaki Tani contributed equally to this work.

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1 | INTRODUCTION

Recently, there has been mounting global interest in psychedelics as potential treatments for various mental illnesses, including treatment-resistant depression, addictive disorders, post-traumatic stress disorder, and terminal mental distress.¹⁻⁸ Psychedelics elicit altered states of consciousness, encompassing altered visual perception, a sense of unity with the universe, transcendence of time and space, and ego dissolution.^{9,10} Previous studies have created several scales, such as the Psychological Insight Scale and Psychological Insight Questionnaire, to gauge these altered states induced by psychedelics.¹¹⁻¹⁵ Several studies indicate that the intensity of altered consciousness, as measured by these scales, correlates with the long-term effects of psychedelics.^{12,16-18} Thus, it is hypothesized that alterations in psychological processes resulting from these altered states of consciousness may play a pivotal role in the therapeutic effects of psychedelics.^{19,20}

Among the most scrutinized altered states of consciousness is the mystical experience.^{11,15,21,22} Stace examined reports of mystical experiences across various world religions and identified universal elements independent of religious and cultural contexts.²³ Stemming from this research, a self-administered 43-item Mystical Experiences Questionnaire (MEQ43) was devised to assess mystical experiences with psychedelics.^{11,24,25} Subsequently, Maclean et al. developed the MEQ30 as a refined version of the MEQ-43.¹⁵ Maclean et al. and Barret et al. tested the reliability and validity of the MEQ30, demonstrating high internal consistency and robust divergent, internal, and external validity.^{15,22}

Each item of the MEQ30 is rated on a 6-point scale, where 0="none; not at all," 1="so slight cannot decide," 2="slight," 3="moderate," 4="strong (equivalent in degree to any previous strong experience or expectation of this description)," and 5="extreme (more than ever before in my life and stronger than 4)." The MEQ30 consists of four subscales: mystical, positive mood, transcendence of time/space, and ineffability. Scale scores for each participant are computed from the average of responses to all items within a given scale.^{15,22}

Previous studies have reported that a higher MEQ30 total score following psilocybin treatment predicted favorable long-term outcomes in people with cancer-related distress,^{12,16} those seeking smoking cessation,² and those with alcohol dependence.²⁶ Self-administered scales need to be prepared in each language to conduct clinical trials globally. However, a Japanese version of the MEQ30 has not yet been developed. The aim of this study was to develop a Japanese version of the MEQ30.

2 | METHODS

We created a Japanese version of the MEQ30 by translating the original English version of the MEQ30, based on the "Principles of Good Practice for the Translation and Cultural Adaptation Process

for Patient-Reported Outcomes (PRO) Measures: Report of the ISPOR Task Force for Translation and Cultural Adaptation".²⁷

Initially, we procured formal permission for the translation from the original authors of the MEQ30. Two native Japanese psychiatrists then independently undertook the forward translation from English to Japanese. We compared these translations and produced a single, reconciled forward-translated version. This version was subsequently back-translated into English by a professional translator who is a native English speaker. To assess the quality of the forward translation, the original authors of the MEQ30 compared the back-translated version with the original version and evaluated it for equivalence. In case of discrepancies, the forward translators scrutinized the forward- and back-translation processes. We iterated on these processes, communicating with the original authors, until the revised forward- and back-translated versions received approval.

3 | RESULTS

The original author-approved, back-translated MEQ30 is depicted in [Figure 1](#). Furthermore, the authorized Japanese version of the MEQ30 is provided in the [Appendix A](#).

4 | DISCUSSION

In this study, we developed a Japanese version of the MEQ30, adhering to the "Principles of Good Practice for the Translation and Cultural Adaptation Process for PRO Measures: Report of the ISPOR Task Force for Translation and Cultural Adaptation."

Given the rising global interest in psychedelic research, creating a Japanese version of the self-administered MEQ30 is imperative. It is also crucial to assess the reliability and validity of the Japanese version of the MEQ30 when applying this scale to the Japanese populace. Regarding reliability, Maclean et al. reported that estimates of alpha reliability (Cronbach's alpha) were 0.933, 0.926, 0.831, 0.810, and 0.800 for the total score and the four subscales (mystical, positive mood, time/space, and ineffability) of the original MEQ30, respectively, indicating good internal consistency for these scales.¹⁵ For validity, Maclean et al. showed that participants reporting mystical experiences had significantly higher total scores ($p < 0.001$) on all MEQ30 subscales compared to those not reporting any mystical experiences, implying good divergent validity of the original MEQ30.¹⁵ To date, clinical trials for psychedelic-assisted therapy have not been conducted in Japan. Therefore, feasibility studies are needed to evaluate its efficacy and safety and to characterize the mystical experience using the MEQ30 in a Japanese population. Upon data collection, the reliability and validity of the Japanese version of the MEQ30 should be confirmed.

In conclusion, we have developed a Japanese version of the MEQ30, which will help capture the mystical experiences induced by psychedelics in Japanese speakers. Future psychedelic research is needed to test the reliability and validity of this scale.



Instructions: Review the sessions as a whole and rate the extent to which you experienced the following phenomena during the sessions. Please answer each question according to your feelings, thoughts, and experiences during the sessions. Please use the scale below when making your rating.

0 - Not at all

1 - So slight and cannot say either way

2 - Slight

3 - Moderate

4 - Strong (comparable to other strong experiences)

5 - Extreme (strongest ever in my life and stronger than 4)

-
- _____ 1. Loss of normal sense of time
- _____ 2. Awe experience
- _____ 3. The feeling that words cannot adequately describe the experience
- _____ 4. Acquisition of insightful knowledge experienced on an intuitive level
- _____ 5. I felt I had experienced eternity and infinity
- _____ 6. Feeling of oneness or unity with surrounding objects or people
- _____ 7. Loss of normal sense of space
- _____ 8. I felt tenderness and gentleness
- _____ 9. Confidence in encountering the ultimate truth (in the sense that at some point in one's experience one can 'know' or 'see' whether it is a true reality)
- _____ 10. Feeling of being unable to put into words your experience
- _____ 11. Loss of normal sense of where you were
- _____ 12. Feeling peaceful and calm
- _____ 13. A sense of timelessness, with no past or future
- _____ 14. A sense of freedom from self-limitations or a sense of unity or connection with something perceived to be 'greater than self'
- _____ 15. A sense of spiritual heights
- _____ 16. The experience of pure being and pure consciousness (beyond the world of sensory impressions)
- _____ 17. A sense of ecstasy
- _____ 18. Experience the insight that all is one
- _____ 19. Sensation of being in an area with no spatial boundaries
- _____ 20. A sense of oneness with the inner world
- _____ 21. A sense of reverence
- _____ 22. Timeless experience
- _____ 23. Now, as you reflect on your experience, you are convinced that you have encountered the ultimate truth (i.e., you "knew" or "saw" what was really real)
- _____ 24. I felt that I had experienced something deeply sacred
- _____ 25. Awareness of life and living presence in everything
- _____ 26. Experiences in which the individual self merges into a larger whole
- _____ 27. A sense of awe or awesomeness
- _____ 28. The experience of oneness with the ultimate truth
- _____ 29. I find it difficult to share my experiences with people who have not had similar experiences
- _____ 30. Feelings of joy

MEQ30 scoring method

Factor scores are calculated by taking the average of responses to the following items.

- Mystical: 4, 5, 6, 9, 14, 15, 16, 18, 20, 21, 23, 24, 25, 26, 28
- Positive emotions: 2, 8, 12, 17, 27, 30
- Transcendence of time and space: 1, 7, 11, 13, 19, 22
- Indescribable sensations: 3, 10, 29

MEQ30-The total score is calculated by taking the average of all item responses.

MEQ30 is provided free of charge for non-commercial use.

AUTHOR CONTRIBUTIONS

Dr. Yonezawa and Dr. Tani were involved in Conceptualization, translation, writing. Dr. Nakajima was involved in conceptualization, translation, project administration, supervision. Dr. Uchida was involved in conceptualization, methodology, project administration, supervision, writing. All authors have approved the final version of the manuscript.

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CONFLICT OF INTEREST STATEMENT

Dr. Yonezawa has received manuscript fees from Sumitomo Pharma and Wiley Japan within the past 3 years. Dr. Tani has received manuscript or speaker fees from Sumitomo Pharma, Janssen Pharmaceutical, Otsuka Pharmaceutical, Takeda, Wiley Japan, and Yoshitomi Yakuhin within the past 3 years. Dr. Miura declares no conflict of interest. Dr. Nakajima has received grants from Japan Society for the Promotion of Science (18H02755, 22H03002), Japan Agency for Medical Research and Development (AMED), Japan Research Foundation for Clinical Pharmacology, Naito Foundation, Takeda Science Foundation, Uehara Memorial Foundation, Watanabe Foundation, and Osake-no-Kagaku Foundation within the past 3 years. Dr. Nakajima has received an investigator-initiated clinical study grant from Asahi Quality & Innovations, Ltd. Dr. Nakajima has received research support, manuscript fees or speaker's honoraria from Sumitomo Pharma, Meiji-Seika Pharma, Otsuka Pharmaceutical, and MSD within the past 3 years. Dr. Uchida has received grants from Daiichi Sankyo, Eisai, Mochida, Otsuka, and Sumitomo Pharma; speaker's fees from Eisai, Janssen, Lundbeck, Meiji Seika Pharma, Otsuka, and Sumitomo Pharma; and advisory board fees from Lundbeck, Sumitomo Pharma, Takeda Pharmaceutical Company, and Boehringer Ingelheim Japan.

ETHICS STATEMENT

Approval of the research protocol by an Institutional Reviewer Board: N/A.

Informed consent: N/A.

Registry and the registration no. of the study/trial: N/A.

Animal studies: N/A.

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FIGURE 1 The original author-approved, back-translated version of the revised Mystical Experience Questionnaire (MEQ30).



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APPENDIX A

The Japanese version of the 30-item Mystical Experience Questionnaire (MEQ30)
改訂版 神秘的体験質問票 (MEQ30)日本語版

解説: セッション全体を振り返って、そのセッション中であなたが以下の現象をどの程度体験したかを評価してください。各質問には、セッション時のあなたの感情、思考、体験に従って答えてください。それぞれの評価には、次の尺度を使用してください。

0. - まったくない
1. - ごくわずかでどちらとも言えない
2. - わずか
3. - 中程度
4. - 強い(他の強い体験に匹敵する程度)
5. - 極めて強い(これまでの人生で最も強く、4 よりも強い)

- _____ 1. 普段の時間感覚の喪失
- _____ 2. 畏怖の体験
- _____ 3. その体験を言葉で十分に説明できない感覚
- _____ 4. 直感的なレベルで体験する洞察に満ちた知識の獲得
- _____ 5. 永遠や無限を体験したと感じた
- _____ 6. あなたの周囲で知覚される物体および/または人物との一体感または統一感の体験
- _____ 7. 普段の空間感覚の喪失
- _____ 8. 優しさや穏やかさを感じる
- _____ 9. 究極の現実と出会ったと確信した(体験のある時点で何が本当の現実なのかを「知る」「見る」ことができるという意味において)
- _____ 10. 言葉で表現しても、自分の体験を十分に表現できなと感じた
- _____ 11. 自分がどこにいるのかについて普段の意識がなくなった
- _____ 12. 平和で安らかな気持ち
- _____ 13. 過去や未来を超えて、時間の「外」にいる感覚
- _____ 14. 個人的な自己の制限から解放され、個人的な自己よりも偉大であると感じられたものとの一体感やつながりを感じた
- _____ 15. 精神的な高みにいる感覚
- _____ 16. (感覚の世界を超えた) 純粋な存在と純粋な意識を体験した
- _____ 17. エクスタシー(恍惚)の体験
- _____ 18. 「すべては一つ」という洞察の体験
- _____ 19. 空間の境界がない領域にいること
- _____ 20. 「内なる世界」に関して一体感を体験した
- _____ 21. 畏敬の念を抱いた
- _____ 22. 永遠性の体験
- _____ 23. あなたは今、自分の体験を振り返りながら、その中で究極の現実と遭遇した(つまり、何が本当に現実なのかを「知り」「見た」と確信している)
- _____ 24. 何か深い神聖なものを体験したと感じている
- _____ 25. あらゆるものの中にある生命や生きている存在を意識すること
- _____ 26. 個人的な自己がより大きな全体へと融合する体験
- _____ 27. 素晴らしさを感じる
- _____ 28. 究極の現実と一体となった体験
- _____ 29. 自分の体験を、同じような体験をしたことのない人に伝えるのは難しいと感じている
- _____ 30. 喜びの感情

MEQ30 の採点方法

因子得点は、以下の項目に対する回答の平均値を算出することで算出されます。

- 神秘的: 4, 5, 6, 9, 14, 15, 16, 18, 20, 21, 23, 24, 25, 26, 28
- ポジティブな感情: 2, 8, 12, 17, 27, 30
- 時間と空間の超越性: 1, 7, 11, 13, 19, 22
- 言葉にしえない感覚: 3, 10, 29

MEQ30-総得点は、全項目の回答の平均値を取ることで算出されます。

MEQ30 は、非商用利用を前提に無償で提供されています。