

CHRIS Study

**Neuropsychiatry
questionnaire –
Temperament Evaluation
of Memphis, Pisa, Paris and
San Diego brief version**

Version 1.1

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1. Introduction

This module stores information related to temperament, that was collected with the neuropsychiatry questionnaire, part of the self-administered questionnaire.

Participants book a morning appointment at the CHRIS study center, ranging from 7.45 to 8.45 a.m. Each study participant is assigned a workflow at the reception. If there are ten study participants (maximum capacity), there are ten different workflows, marked with the letters from “A” to “K”. The current workflow is as follows: A-B-C-D-E-F-G-H-I-K. All the workflows can be found in the documentation of CHRIS Baseline/General information/Administrative data, in the file named “Workflows at baseline assessment”. The self-administered questionnaire is filled in always after the blood draw, for most before the interview (workflows B, C, E, F, H, I, L). For the remainder, the self-administered questionnaire is filled in just after the interview (workflows A, G) or after the interview and the ECG measurement (workflow D). The neuropsychiatry questionnaire was printed on paper and could be filled in at the study center, or at home and then returned by mail.

The Temperament Evaluation of Memphis, Pisa, Paris and San Diego (TEMPS) was developed by Akiskal and colleagues to assess temperament and affective disorder. It was initially conceived as an interview-based questionnaire (TEMPS-I), then later a self-assessment one was created (TEMPS-A). Later on, Erfurth developed a shorter version, called briefTEMPS-M.

The BriefTEMPS-M consists of 35 questions, 7 for each temperament type: depressive, cyclothymic, hyperthymic, irritable, anxious. For each of the 35 items of BriefTEMPS-M, the respondent is required to assess to which extent the statement applies to their life, on a 5-point Likert scale ranging from “None” to “Very much”. For each temperament type a subscore is produced, as the sum of its items (range 7-35). The temperament with the highest score is the dominant one.

The BriefTEMPS-M was already developed in German, and its Italian translation was also available and validated.

The briefTEMPS-M questionnaire is available at CHRIS Baseline/Self-Assessment/Neuropsychiatry questionnaire.

2. History version changes

Version 1 of this module was in use since November 25th, 2015.

The cleaning process added the variables x0bt36, x0bt37, x0bt38, x0bt39, x0bt40.

3. Data cleaning

1. The main CHRIS dataset was loaded.
2. All the questionnaire items, x0bt01-x0bt35, had their missing observations set to:
 - a) “Not in use” (-98) if the examination date was before November 25th, 2015,
 - b) “Missing by design” (-99) if the exact age (not the rounded one x0_ager, but x0_age) was at least 65,
 - c) “Unexpected missing” (-89) otherwise.

3. The number of missing answers was investigated. Of those returning the neuropsychiatry questionnaires, 93% had no missing item of the BriefTEMPS-M and just 1% had at least 15 missing items.
4. The briefTEMPS-M depressive temperament subscale was computed as the sum of the items x0bt01-x0bt07. It was further assigned the values:
 - a) "Not in use" (-98) if the examination date was before November 25th, 2015,
 - b) "Missing by design" (-99) if the exact age (not the rounded one x0_ager, but x0_age) was at least 65,
 - c) "Unexpected missing" (-89) if any of the x0bt01-x0bt07 was "Unexpected missing".

It was saved as x0bt36.

5. The briefTEMPS-M cyclothymic temperament subscale was computed as the sum of the items x0bt08-x0bt14. It was further assigned the values:
 - a) "Not in use" (-98) if the examination date was before November 25th, 2015,
 - b) "Missing by design" (-99) if the exact age (not the rounded one x0_ager, but x0_age) was at least 65,
 - c) "Unexpected missing" (-89) if any of the x0bt08-x0bt14 was "Unexpected missing".

It was saved as x0bt37.

6. The briefTEMPS-M hyperthymic temperament subscale was computed as the sum of the items x0bt15-x0bt21. It was further assigned the values:
 - a) "Not in use" (-98) if the examination date was before November 25th, 2015,
 - b) "Missing by design" (-99) if the exact age (not the rounded one x0_ager, but x0_age) was at least 65,
 - c) "Unexpected missing" (-89) if any of the x0bt15-x0bt21 was "Unexpected missing".

It was saved as x0bt38.

7. The briefTEMPS-M irritable temperament subscale was computed as the sum of the items x0bt22-x0bt28. It was further assigned the values:
 - a) "Not in use" (-98) if the examination date was before November 25th, 2015,
 - b) "Missing by design" (-99) if the exact age (not the rounded one x0_ager, but x0_age) was at least 65,
 - c) "Unexpected missing" (-89) if any of the x0bt22-x0bt28 was "Unexpected missing".

It was saved as x0bt39.

8. The briefTEMPS-M anxious temperament subscale was computed as the sum of the items x0bt01-x0bt07. It was further assigned the values:
 - a) "Not in use" (-98) if the examination date was before November 25th, 2015,
 - b) "Missing by design" (-99) if the exact age (not the rounded one x0_ager, but x0_age) was at least 65,
 - c) "Unexpected missing" (-89) if any of the x0bt29-x0bt35 was "Unexpected missing".

It was saved as x0bt40.

9. The baseline dataset was saved.

4. Advices for the analysis

The briefTEMPS-M questionnaire does not provide a total score, but rather a score for each temperament type.

Additional information related to depression, anxiety, and mania was measured with the instruments State-Trait Anxiety Inventory STAI-Y-2, Center for Epidemiologic Studies Depression (CES-D), Mini International Neuropsychiatry Interview (MINI), the Hypomania Checklist HCL-32, part of the self-administered questionnaire, and it can be found in the modules x0sa, x0ds, x0np, and x0hc.

Furthermore, depression, anxiety and mania were also reported in the neurology and other diseases modules of the interview, i.e. in the variables x0ne21*, x0ne22*, and x0ot*.

5. References

Erfurth A, Gerlach AL, Hellweg I, Boenigk I, Michael N, Akiskal HS. Studies on a German (Münster) version of the temperament auto-questionnaire TEMPS-A: construction and validation of the briefTEMPS-M. J Affect Disord. 2005 Mar;85(1-2):53-69. DOI: [10.1016/S0165-0327\(03\)00102-2](https://doi.org/10.1016/S0165-0327(03)00102-2)

Favaretto E, Gögele M, Bedani F, Hicks A, Erfurth A, Perugi G, et al. Pain sensitivity is modulated by affective temperament: Results from the population-based CHRIS Affective Disorder (CHRIS-AD) study. J Affect Disord. 2022 Nov 1;316:209-216. DOI: [10.1016/j.jad.2022.08.015](https://doi.org/10.1016/j.jad.2022.08.015)