# **CHRIS Study**

# Interview – Chronic pain

Version 1.1 24<sup>th</sup> April 2024

Authors: LB, MG

### 1. Introduction

This module stores information related to the current chronic pain of the participants, that was collected at the interview.

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 interview occurs always after the spiralography and the blood drawing, for most as the last session, after the ECG assessment and the self-administered questionnaire (workflows B, C, E, F, H, I, L). For the remainder, the interview occurs after breakfast and just before the self-administered questionnaire (workflows A and G) or in between the blood drawing and the anthropometry (workflow D).

The questionnaire was developed by researchers of the IfB, with the aim of assessing especially back pain and joint pain.

The interview full text and its corresponding answer lists are available at CHRIS Baseline/Interview.

# 2. History version changes

Version 1 of this interview module was in use since August 24<sup>th</sup>, 2011 and it remained the same throughout the CHRIS baseline assessment.

The cleaning process did not add any additional variables.

# 3. Data cleaning

- 1. The main CHRIS dataset was loaded.
- 2. The variable on recurrent pain lasting more than 6 months, x0pn00, had it observations transformed into "Unexpected missing" (-89) if they were missing.
- 3. The variables on the presence of back pain, joint pain and other pain, x0pn01, x0pn11, and x0pn21, had their observations transformed into:
  - a) "Missing by design" (-99) if they were missing and no recurrent pain was reported (x0pn00="No" or "Missing by design"),
  - b) "Unexpected missing" (-89) if they were still missing.
- 4. The variables on the beginning of back pain, x0pn02a (months) and x0pn02 (years) were transformed as follows: the former was transformed into years, they were summed, and only the information in years (x0pn02) was retained. Furthermore, its missing observations were transformed into:
  - a) "Missing by design" (-99) if no back pain was reported (x0pn01="No" or "Missing by design"),
  - b) "Unexpected missing" (-89) if they were still missing.
- 5. The variables on the frequency of back pain, x0pn03a (days/month) and x0pn03 (days/year), were transformed as follows: the latter was assigned x0pn03a\*12 if missing, only the

information in days/year (x0pn03) was retained. Furthermore, its missing observations were transformed into:

- a) "Missing by design" (-99) if no back pain was reported (x0pn01="No" or "Missing by design"),
- b) "Unexpected missing" (-89) if they were still missing.
- 6. The variable on back pain intensity, x0pn04, had its missing observations transformed into:
  - a) "Missing by design" (-99) if no back pain was reported (x0pn01="No" or "Missing by design"),
  - b) "Unexpected missing" (-89) otherwise.
- 7. The variables on back pain localisation and whether it radiates to legs/arms, x0pn05a, x0pn05b, x0pn05c, x0pn06a, x0pn06b, had their missing observations transformed into:
  - a) "Missing by design" (-99) if no back pain was reported (x0pn01="No" or "Missing by design"),
  - b) "Unexpected missing" (-89) if back pain was reported or missing (x0pn01="Yes" or "Unexpected Missing").
- 8. The variables on the beginning of joint pain, x0pn12a (months) and x0pn12 (years), were transformed as follows: the former was transformed into years, they were summed, and only the information in years (x0pn12) was retained. Furthermore, its missing observations were transformed into:
  - a) "Missing by design" (-99) if no joint pain was reported (x0pn11="No" or "Missing by design"),
  - b) "Unexpected missing" (-89) if they were still missing.
- 9. The variables on the frequency of joint pain, x0pn13a (days/month) and x0pn13 (days/year), the latter was assigned x0pn13a\*12 if it was missing, and only the information in days/year (x0pn13) was retained. Furthermore, its missing observations were transformed into:
  - a) "Missing by design" (-99) if no joint pain was reported (x0pn11="No" or "Missing by design"),
  - b) "Unexpected missing" (-89) if they were still missing.
- 10. The variable on joint pain intensity, x0pn14, had its missing observations transformed into:
  - a) "Missing by design" (-99) if no joint pain was reported (x0pn11="No" or "Missing by design"),
  - b) "Unexpected missing" (-89) if joint pain was reported or missing (x0pn11="Yes" or "Unexpected Missing").
- 11. The variable on joint pain localisation, x0pn15, was classified in different dichotomous variable: arms, shoulders, feet, hands, legs, hips, neck, and other.
- 12. The variables on the beginning of other pain, x0pn22a (months) and x0pn22 (years), were transformed as follows: the former was transformed into years, they were summed, and only the information in years (x0pn22) was retained. Furthermore, its missing observations were transformed into:
  - a) "Missing by design" (-99) if no other pain was reported (x0pn21="No" or "Missing by design"),
  - b) "Unexpected missing" (-89) if they were still missing.

- 13. The variables on the frequency of other pain, x0pn23a (days/month) and x0pn23 (days/year), the latter was assigned x0pn23a\*12 if it was missing, and only the information in days/year (x0pn23) was retained. Furthermore, its missing observations were transformed into:
  - a) "Missing by design" (-99) if no other pain was reported (x0pn21="No" or "Missing by design"),
  - b) "Unexpected missing" (-89) if they were still missing.
- 14. The variable on other pain intensity, x0pn24, had its missing observations transformed into:
  - a) "Missing by design" (-99) if no other pain was reported (x0pn21="No" or "Missing by design"),
  - b) "Unexpected missing" (-89) otherwise.
- 15. The character variables on description of other pain and main pain, x0pn25 and x0pn30, were translated and categorized when possible.
- 16. The variable on intensity of the main pain, x0pn31, had its missing observations transformed into:
  - a) "Missing by design" (-99) if no chronic pain was reported (x0pn01="No" or "Missing by design"),
  - b) "Unexpected missing" (-89) otherwise.
- 17. The variables storing the notes additional information on chronic pain, x0pnn1, x0pnn2, x0pnn3, x0pnn4, and x0pnnote, were translated and categorized when possible.
- 18. The baseline dataset was saved.

## 4. Advices for the analysis

The content of the nurse's notes includes information on back pain, joint pain, as well as any pain in other locations. Furthermore, the notes also mention the circumstances when this pain arises or the disease that is causing the reported pain. Sometimes the participant might have reported in the notes that their pain is not chronic but very recent.

The current medications can be looked at in the drugs module x0dd, where the participant let their current medication packages be scanned by the nurse at the study center.

The variables on joint pain and other pain localization, x0pn15a-x0pn15h and x0pn25, depend on the participant recalling such pain and their willingness to share this information.

Finally, the analyst should always take into account that the operator in charge of carrying out the interview might have influenced how the participant reported their answers. The analyst should therefore adjust for the operator variable, x0 opintc, when possible.

### 5. References

Löwel H, Döring A, Schneider A, Heier M, Thorand B, Meisinger C. The MONICA Augsburg surveys - basis for prospective cohort studies. Gesundheitswesen. 2005;67(Sonderheft 1):S13–S18. DOI: 10.1055/s-2005-858234

Holle R, Happich M, Löwel H, Wichmann H-E. KORA-A Research Platform for Population Based Health Research. Gesundheitswesen. 2005;67(Sonderheft 1):S19–S25. DOI: 10.1055/s-2005-858235