Programming Blaise for a Multi Questionnaire Study

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Outline

- PSID Study Background
- CDS Study – Multi Questionnaire Design
- Coverscreen Questionnaire
- Parallel Block Programming
- Woodcock Johnson Assessments Programming
PSID Background

The Panel Study of Income Dynamics (PSID) is a longitudinal survey of a representative sample of U.S. men, women, children and the families in which they reside. Data on employment, income, wealth, housing, food expenditures, transfer income, and marital and fertility behavior have been collected bi-annually since 1968. From 5,000 families in 1968, the study has grown to include over 10,000 families.
CDS – Multi Questionnaire Study

Child Development Study (CDS) – PSID Sub Study

Three Questionnaires:

• CoverScreen
• Child
• PCG
CoverScreen

• First Questionnaire for a Family Unit
• Generate Child and PCG (Primary Care Giver)
• It is very important to be programmed accurately and user friendly
CoverScreen – Relationship Table

It is used to identify CDS children’s relationships with other FU members. In order for users to navigate the table easily and complete table quickly and correctly, some complex programming were added. In the example below, at row 5, user entered 17 - Austin is a brother of Kara. Then, at row 6, user did not need to enter the relationship repeatedly. 13 is auto assigned – Kara is a sister of Austin.
To achieve the conversion
  • As many as 4 For/Do loops are used,
  • Keeps are used in order to pass data from parent blocks to child blocks
  • A procedure is used to convert sister and brother code so the program is simplified

```plaintext
XRichev := RNPY (Start empty)
FOR I=1 TO 24 Do
  IF I<#Index THEN  (Loop Previous Rows)
    FOR J=1 TO Num_Consid Do  (Loop all columns)
      IF RTCFmLstB[I].RTCDDSLetB[J].RTCDDSAGSN = pRTCDDSAGSN (AGSNs are FU member's IDs)
        AND RTCFmLstB[I].RTCDDSAGSN = RTCDDSAGSN THEN
            (Biological/Step/Half/Adoptive sister/brother or cousin)
            xRTCPrev := RTCFmLstB[I].RTCDDSLetB[J].RTC
            xGender1 := RTCFmLstB[I].RTCDDSLetB[J].RTCDDSGender
            xGender2 := RTCFmLstB[I].RTCDDSGender
          ENDIF
        ENDIF
      ENDIF
    ENDF
  ENDF
ENDDO IF xRTCPrev<>EMPTY THEN  (Found a match)
  (Procedure Assigning code to the current cell based on previous gender and relationship)
  AssignSbRelCode (xRTCPrev, xGender1, xGender2, RTC)
  RIC.SHOW
```
CoverScreen – Preload Generation/Testing

After finishing the coverscreen, the system generates preload strings for PCG and Child instruments. Both datamodels have large number of preload to be pulled from the Coverscreen datamodel. In order to generate and test the process properly, the processes are as follows:

• Create preload strings in Coverscreen Blaise datamodel
• Test the preload generation in our CAI testing system – a new testing feature was added
• In production, our SMS system only need to pull a small number of variables from Coverscreen to be loaded into subsequent PCG and Child datamodel
Parallel Block Program

In PCG and Child’s datamodel, it is used to allow administering different survey sections concurrently.

- One procedure to setup different statues
- STARTPARALLEL is used if the link is clicked so DEP will jump to the designated parallel block
- Color codes are used for different kind statues
Parallel Block Program – Cont.

Another use of parallel block is to enable and disable the Achievement Tests in the Child and PCG datamodels.
Woodcock Johnson Assessments Programming

The Woodcock Johnson (WCJ) Test of Achievement is a well-known, established educational assessment tool. CDS has three subtests. They are:

• Letter-Word Identification
• Passage Comprehension
• Applied Problems

- In this wave of CDS, we modulized the programming code so it is easy to maintain
- One procedure for Basel calculation and another procedure for Ceiling calculation – they are called as many as 80 times
- To be able to use procedures for different tests and different items, parameters are passed into the procedures
- More over, same tests can be used for both PCG and Child datamodels
Conclusions

CDS is a complex study. Several challenging features were specified by the research staff in order to assist interviewers in easily navigating the various data collection instruments while collecting quality data. With careful design, testing and implementation, new features were developed to program three high quality instruments, they are well accepted by the research staff, project team and interviewers.

From our experience, Blaise proves to be a powerful and flexible survey program system and helped us to achieve almost all complex requirements for this study.