Assessing Progress: What can we learn from Routes for Learning?

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Routes for Learning
Routemap

Background:

Assessing progress in people with PIMD is acknowledged to be a difficult issue (Ware and Healy, 1994; Maes et al 2021; Wessels, 2021), due to a variety of factors including:

- Difficulties in agreeing what progress means for this group.
- Lack of appropriate assessment instruments and assessment instruments devised specifically for this group.

For example Ware and Donnelly (2004) report that teachers in Wales found the assessments then available (e.g. InStep, Equals and 'p' levels) were insufficiently fine-grained for pupils with PIMD
A review of the suitability of standardised developmental assessment instruments for young typically developing children for use with children with SEN, concluded that there are likely to be serious limitations to using such instruments with children with PIMD (Visser et al, 2012). A comprehensive study conducted recently by Wessels et al., (2021) found that most of 116 instruments in use were not designed for people with PIMD. However, Maes et al. (2021) suggest that there are now some instruments being developed specifically for people with PIMD.

Introduction

One assessment specifically for individuals with PIMD is Routes for Learning (RfL) (Welsh Government,2006, 2021). This is a bilingual Welsh-English Assessment devised in response to the need expressed by teachers for an assessment which could demonstrate small steps of progress (Ware and Donnelly, 2004). In small-scale, mainly qualitative studies practitioners reported that RfL does enable them to see these small steps (Atkinson and McDermott, 2016; Ware and Weston, 2018).

Until recently, a lack of longitudinal data analysis meant that establishing the extent to which individuals achieve the Routemap boxes in a predictable order has not been possible. This is particularly important as the numbering of the Routemap boxes is intended for reference purposes rather than suggesting the order of achievement; although, on the whole, lower-numbered boxes are expected to be achieved before higher-numbered boxes.

An analysis of longitudinal data from one school Ware et al.2020) showed that most pupils show some progress at each assessment on RfL and good agreement between the theoretical and achieved ordering of the boxes.

Work carried out at Leuven in 2021-2022 (Vanroye, Vanderstraeten) mapped data already collected for the OJKO study onto the Route Map. They produced Routemaps for 22 children from the OJKO data, and estimates of the reliability of mapping for each Routemap box.

Method

In Ware et al. (2020) the Routemap boxes for the Welsh data were ordered using the following algorithm:

For an individual child Box A is said to precede Box B if there is a data point where that child has achieved Box A, but not Box B. Conversely, if there is a data point where the child has achieved Box B, but not Box A , for that child Box B is said to precede Box A. For any given data set if Box A precedes box B for more children than those for whom Box B precedes Box A, Box A precedes Box B for that data set. This method is described in more detail in Denovan et al. (In preparation)

The current study uses the same method to generate an achieved order of boxes from the Leuven study data. This was then compared with the results from the Welsh data.

Results

Analysis of the order in which individuals achieved Routemap boxes showed good general agreement between the two sets of data. However there are some differences, for example that two "Exploration of the Environment" boxes appear earlier in the OJKO data than the Welsh data. Figure 1 shows the displacement of the OKJO data with reference to the Welsh data. Figures 2 and 3 illustrate two possible behaviours showing "interaction with the environment" (Boxes, 16,21)
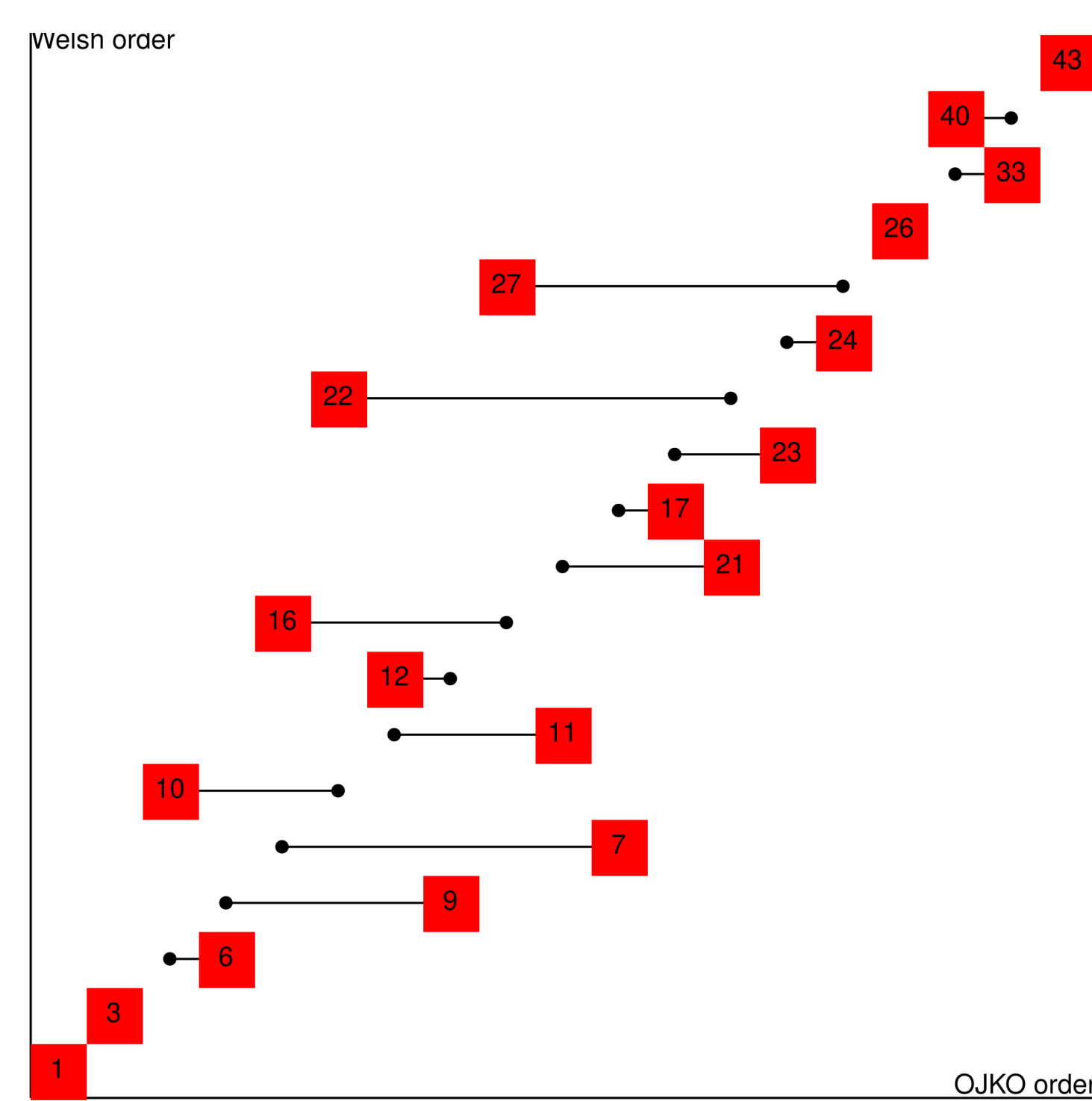

Figure 1

Discussion

We are comparing two very different sets of data:

- The Welsh data uses RfL as a conceptual framework, whereas the OJKO data does not (although both RfL and the frameworks used in OJKO have a basis in typical child development).
- Different age ranges: 3-19years in the Wales data , 1-5years in the OJKO data
- Different data collection methods, mainly during the course of a normal school day in Wales, by staff familiar to the child; in Belgium in test sessions carried out by researchers who were not familiar to the child.
- The school in Wales from which the data came was closely involved in the development of RfL so staff were very familiar with the concepts underlying this assessment.

Consequently, despite the rigorous methodology adopted taken by the researchers in Belgium, it is possible that interpretations of some boxes differed between the two sets of data.

However, overall for both sets of data there is good agreement between the theoretical and achieved ordering of the boxes.

Future Directions/ Forthcoming Research

The numerous differences between the data sets mean that it isn't possible to draw any conclusions about the reasons for the differences in the order in which some boxes are achieved between the two sets of data. However, we intend to investigate two possible causes by looking how the way people interpret behaviours in relation to the routemap boxes, is related to their professional background and experience with people with PIMD.

We intend to set up a study in which participants with expertise in PIMD will be asked to read some of the routemap materials and then watch a small number of videoclips and make judgements about which routemap box best matches each clip. Once the study is set up and has received ehtical approval, we will be in touch via the Newsletter.

Figure 2

Figure 3

References:

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