Chapter 1

Introduction
The purpose of psychological assessment of a child is to screen, diagnose, evaluate and classify the child’s current level of functioning. This information enables professionals to adjust support, intervention and education to the developmental level of a child. As a result of a general view that early support and intervention in a child’s life is necessary to minimize lasting effects (e.g. Kenny & Culbertson, 1993; Conlon, 2002) the use of appropriate instruments to evaluate the general development of a child has become a necessity. Although measures of cognitive development should never be the sole indicator for making diagnostic and classification decisions, much of the assessment is centred around the use of an intelligence test (for children below the age of 4 often called developmental test) (Lichtenberger, 2005; Flanagan & Alfonso, 1995, Neisworth & Bagnato, 1992). For instance, in government guidelines, results from a standardized, norm-referenced test are often decisive in determining eligibility of a child for intervention programs or education.

Because of the great impact test results can have on a child’s life and that of its family, the utility and technical adequacy of early childhood (psycho-)diagnostic instruments are often subject of research. Usually the overall conclusion is that standardized cognitive measures can be used to aid in decision making as long as the practitioner is aware of the test’s limitations, considers the limitations in the interpretation and uses other data to substantiate test findings (e.g. Bracken, 1987, Flanagan & Alfonso, 1995 Black & Matula, 2000, Bradley-Johnson, 2001, Lichtenberger, 2005). A psycho-diagnostic instrument is defined as a device for the quantitative assessment of psychological characteristics (Mittler (1970)). This thesis focuses specifically on an early childhood psychodiagnostic instrument. The addition ‘early childhood’ refers to the starting age level of the test; this should be preschool age.

A subject that is gradually receiving more attention, and is in fact the subject of this dissertation, is the limited usability and applicability of standardized instruments with children with disabilities. For the group of children for multiple disabilities, Davidson & Dolins (1992, pp. 252) put it as follows: “One important goal of the evaluation of a child with multiple disabilities is always to estimate his or her cognitive, language, and perceptual abilities, independent of limitations that the neurological disorder places on processing or integrating information, or of limitations on performance imposed by
neuromuscular dysfunction. In practice, as this goal is often difficult to achieve, there is a high probability of diagnostic error.” For the purpose of maintaining standardization and applicability of the norm tables, examiners cannot deviate from the administration procedures dictated in the test manual (Kelly-Vance, Troia & Oliver-Ryalls, 1999). The test procedures may be biased though and therefore inadequate and less valid for use with children with specific disabilities (Skovgaard, Houmann, Landorph & Christiansen, 2004). Early child developmental tests, especially before the age of 24 months, place great demands on the child’s motor skills. Until this age, a child has very limited language skills. For this reason, most tasks the child has to perform in tests require the child to show that it has understood the task by physically performing on a task, instead of verbally. For instance by putting a cube in a cup or by pointing to the right picture. If such a test is administered to a child with a motor disability that also influences fine motor control, the child’s cognitive developmental level may be underestimated, simply because the child lacks the motor skills to perform the cognitive assignment. The results of the developmental test are therefore influenced by the child’s physical limitations. Similar problems are found for children with other limitations. Putting a puzzle piece in the right place within a certain amount of time will be more difficult for a child with a visual disability than for a child with perfect vision and a child with severe hearing loss will not be able to understand all items that require verbal instruction. In the most recent edition (2004) of ‘Algemeen Standaard Testgebruik’ (General Standard Test Practices), the Dutch institute for psychologists (NIP) states that using psycho-diagnostic instruments on special groups such as persons with physical or mental disabilities, persons that do not speak Dutch, etc., places special demands on the test procedure. It indicates that when specific limitations can exert an unwanted influence on test results, and no alternative test is available, these influencing factors should be compensated for as much as possible in the test instrument. The test situation should be suited to the child with the disability and the child should somehow get all visual and auditive information needed to understand the test tasks. Adaptations should be made in such a way that the test content is not changed, meaning every item administered should measure the same skill as the original item and item difficulty should remain unchanged. If this is impossible, then it becomes necessary to use separate norm tables.
In almost every case, diagnostic tools are developed for use with children without any physical disabilities. For children with disabilities hardly any instruments are available that can be used to determine the developmental level in an adequate and valid way. To facilitate adequate decision making (e.g. school type), effective interventions and follow-up for children with specific disabilities, it is essential that appropriate and fair assessment is made available. An adapted diagnostic tool will allow the child to take the test while minimizing (as much as possible) the effects of its disabilities on the test result. At the same time, an adapted and standardized instrument enables better research on the development of children with specific disabilities. Finally, with regard to the motivation of the child to perform in test situations, adapted play material will increase the child’s intrinsic motivation. It allows the child to better explore and manipulate the material and therefore it gives the child greater opportunity to show its skills in a test situation.

In this dissertation we give account of the construction and psychometric characteristics of the Dutch version of the Bayley Scales of Infant Development – Second Edition (BSID-II-NL, Van der Meulen, Ruiter, Lutje Spelberg & Smrkovsky, 2002; BSID-II, Bayley, 1993) and our aim to develop adapted versions of this standardized instrument to enable educational psychologists and orthopedagogues to determine the current developmental level of children with specific impairments in a valid way. The main research question to be answered is:

Is the Dutch translation and adaptation of the BSID-II a valid instrument for individual developmental assessment in general and for children with specific impairments in particular?

This question is answered, first, by analyzing results from validity and reliability studies for the BSID-II-NL for children from the standard population (norm population) and second, by analyzing the value and validity of adapted versions of the BSID-II-NL for use with children with specific disabilities. Account is given of research into the limitations of the BSID-II-NL for use with special groups of children and possible solutions in the form of constructing adapted versions of this instrument.
This dissertation is arranged as follows:

In chapter 2, the standard version of the BSID-II-NL is described and we discuss the Dutch standardization and validity and reliability studies. Next, the BSID-II-NL was used as a starting point to create adapted test procedures for use with children born prematurely (chapter 3) and for use with children with speech/language disabilities and/or hearing loss (chapter 4). An adapted test procedure, item instructions and adapted play materials were developed for use with children with visual disabilities (chapter 5) and finally for children with motor disabilities (chapter 6). The discussion (chapter 7) completes the dissertation. In it we discuss to what extent we have succeeded in our aim to develop a standardized, norm-referenced instrument for the (standard) population of Dutch speaking children and adapted versions of this instrument for determining the developmental level of specific groups of children.
References


