

"THE EVALUATION OF A DEVELOPMENTAL SCREENING
PROGRAMME FOR USE BY CHILD HEALTH NURSES IN THE
AUSTRALIAN CHILDHOOD POPULATION"

by

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This thesis is submitted for the Doctorate of Medicine
to the Faculty of Paediatrics, University of Adelaide.

JUNE 1983

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A B S T R A C T

The basic premise underlying paediatric screening is that the earlier a disability or defect is found, the better will be the final outcome for parents and child.

Traditionally, the surveillance of the development of children in the age group of 0 - 5 years was left either to the family doctor, or to the specialist paediatrician. However, in the past 2½ decades, developmental surveillance has also been carried out by various other professionals and para-professionals, so creating a need for more formal and valid methods of assessing and quantifying development. "Norms" for development were required not only for the traditional medical aspects of development (i.e. physical or structural growth, visual function and hearing function) but also for aspects which are more clearly related to educational needs (i.e. language development; cognitive function; eye/hand co-ordination).

This need was recognized and more formal screening systems and instruments were devised. Various instruments were constructed according to the ability and background of the users, who ranged from highly trained professionals to lesser trained para-professionals and also to parents for use with their own child. Of all the different instruments, the Woodside System, as adapted for Australian

conditions, was considered to be the one most appropriate to the work-load of the child health nurses of the Mothers and Babies' Health Association (M.B.H.A.) which is now part of the Child, Adolescent and Family Health Service (C.A.F.H.S.).

The Woodside System consists of 8 items, with 2 items in each of the 4 major subsections of "Gross Motor", "Hearing and Language", "Vision and Fine Motor" and "Social/Emotional Reaction". Over the past 3-4 years, the adapted Woodside system has been used as the screening instrument by M.B.H.A. Child Health Nurses in their regular monitoring of child development. Until now it had not been fully evaluated in terms of standardization, reliability and validity, though the impression of its accuracy had been favourable.

In the study the adapted Woodside System, administered by a trained child health nurse, was used on 444 children from Adelaide suburbs aged between 6 weeks and 4 years. The validation sample consisted on the 27 "abnormal" children, the 20 "doubtful" children, and 77 "normal" children. All these 124 children were re-assessed on the criterion test - the Griffiths Scales for the Abilities of Infants and Young Children. A highly significant correlation was obtained between the Woodside subsection scores and the relevant Griffiths subsection scores. Pearson's correlation coefficient ranged between $r = 0.5$ and $r = 0.8$, $p < 0.001$.

Since the environment plays an important role in child development, study also included an assessment of the Socio-Economic

Status (S.E.S.) and the home environment of the same 444 children. The correlation between S.E.S. and Mental Indices (Griffiths) was found to be poor in the 0 - 3 year age-group ($r = 0.25$, $p < 0.05$) and "not significant" in the 3-6 year age group, so supporting the growing dissatisfaction with the use of S.E.S. as a measure of the environment. The home environment was assessed using Caldwell's HOME inventory, which covers the amount of specific stimulation given by the parent or care-giver. There was a significant correlation between the HOME scores of the environment and the Griffith's scores of mental indices ($r = 0.5$, $p < 0.05$) for the older child.

The temperament of a child was also considered as a possible influence on development. However, the results with six-month-old infants, using Carey's Infant Temperament Scale (I.T.S.) were inconclusive.

Therefore, it is felt that a comprehensive profile of a child's development requires an assessment of both the child and his/her home environment. The assessment of the child himself/herself gives an indication of concurrent developmental status; while the assessment of the child's environment possibly gives a better indication of future development, especially in view of the latest concepts that development "waxes and wanes" according to environmental changes. (McCall 1974).

The present study has served to provide child health nurses with a standardized, reliable and valid test for Australian children

in the 0 - 5 years age group. There is no similar available test standardized on Australian children with as high a validity. The findings of the study support the initial impressions that the adapted Woodside System is an accurate instrument. It is highly recommended for use by child health nurses as part of their developmental surveillance.

The present study has also shown the value of the HOME inventory for assessing the Child's home environment. Although the "HOME" is time consuming and requires individual home visits to complete the inventory, it could be of value for use with families at "risk", and families with new babies. The study also recognises the need for further research into more sensitive and less time consuming methods of assessing the child's environment. With a combination of developmental screening of children, and the assessment of the home environment when indicated, it may be possible for all "handicapped" children to be identified. Identification is fundamental if one remembers that a "handicapped child" is - "One who suffers from any continuing disability of body, intellect or personality which is likely to interfere with his normal growth and development or capacity to learn and thus prevent him from achieving his inherent potential". (M. Sheridan, 1977)