Het Choreatiforme Syndroom werd door Prechtl en Stemmer in 1957 onderkend als een neurologisch af te zonderen ziektebeeld binnen de totale heterogene groep van hyperkinesieklen. Een beschadiging van het Centrale Zenuwstelsel van het heel jonge kind werd gevonden oorzaak te zijn voor ongeremdheidsverschijnselen in het totale organisme. Deze zouden aanleiding tot uitgesproken ongerustheid bij de ouders worden als het kind eenmaal de lagere school bezoekt. Als klachten werden dan naar voren gebracht ongeconcentreerdheid en algemene leermoeilijkheden.

In het onderhavige onderzoek werd getracht de psychologische zijde van dit syndroom nader te belichten voor zover het de aspecten van de intellectuele ontwikkeling, in combinatie met de aspecten van de aandacht betreft.

Daartoe werd een groep kinderen, die het Choreatiforme Syndroom vertoonden, onderzocht in de leeftijden 9 tot en met 12 jaar. Een controlegroep in dezelfde leeftijdsspreiding werd daarnaast onderzocht. De bedoeling van dit onderzoek was vooral na te gaan of het Choreatiforme Syndroom, dat een motorisch syndroom is, aansprakelijk gesteld zou kunnen worden voor storingen in de intellectuele ontwikkeling. Nader gepreciseerd luidden de vraagstellingen aldus:

1e Hebben deze kinderen inderdaad specifieke leermoeilijkheden?
2e Van welke aard zijn deze?
3e Zouden deze gebaseerd kunnen zijn op motorische disfuncties, direct of indirect?
4e Zouden deze, als "basis functies" een specifieke ontwikkelingsvertraging in het intellectuele gebied veroorzaakt kunnen hebben?

Als antwoorden op deze vraagstellingen kon worden aangetoond dat bij deze kinderen de discontinuïteit, die aanwezig is in de processen van aandachtsconcentratie en perceptie, en in het algemeen, in het verloop van
de fijnere motorische processen, als centrale factor aangemerkt moest worden voor het ontstaan van een vertraging in de intellectuele ontwikkeling. Deze achterstand kan twee tot vijf jaar bedragen. Door de stoornissen in het continue en gecoördineerde verloop van waarnemen en handelen, waarin begrepen de processen van opnemen, vasthouden en voorstellen van (zintuigelijke) indrukken wordt de harmonische opbouw van de intelligentie belemmerd. Op school resulteert dit in stoornissen bij het verwerven van vaardigheden in de vakken lezen en rekenen.

This study will introduce damages, named by Prech. We hope this study may amount of troubles arising mostly unrecognized birth normal. Anyone who has dealings easily distracted child. Every conspicuous in the family activity. Once they attend segments for behaviour adjustment doing sustained work, in curriculum. Their poor scholastic performance and general intellectual inadequacy to impress, in everyday life an impression based on rapid observation. Parents children are merely lazy; he The remarkable fact is that problems, e.g. in arithmetic laziness or obstinacy, some classes, teachers can give re with special difficulties and repeating the lessons at horror of effort and stress and a sh This 'help' has therefore little tensions in the family. Their measures have failed, and d
Introduction

This study will introduce the problems of children with small cerebral damages, named by Prechtl and Stemmer the Choreatiform Syndrome. We hope this study may give a first brief information about the huge amount of troubles arising from a relatively trifling, and until now mostly unrecognized birth trauma in children who are expected to be normal.

Anyone who has dealings with children is familiar with the restless, easily distracted child. Even before they reach school age, these children are conspicuous in the family for their uncontrollable and diffuse hyperactivity. Once they attend school, they prove unable to meet the requirements for behaviour adjustment, such as sitting still, paying attention, doing sustained work, making social contacts, and for those of the curriculum.

Their poor scholastic performance is usually not ascribed to a potential and general intellectual inability. In fact these children are more likely to impress, in everyday life, as possessing a normal-to-good intelligence - an impression based on the vivacity of their interests and powers of rapid observation. Parents and teachers consequently believe that these children are merely lazy; 'he could if he only would' is too often heard. The remarkable fact is that these children often show specific learning problems, e.g. in arithmetic and reading. This is sometimes ascribed to laziness or obstinacy, sometimes to their carelessness. In today's large classes, teachers can give relatively little individual attention to children with special difficulties and many parents try to help their children by repeating the lessons at home. To the children, this means a prolongation of effort and stress and a shortening of the playtime they need so much.

This 'help' has therefore little useful effect, but is more likely to produce tensions in the family. There comes a time when all the usual educational measures have failed, and desperate parents turn to the family doctor, a
child guidance clinic or a psychologist. But it is not only the parents who are desperate. The child, about whom the conflicts accumulate, feels insecure and threatened, because there are constant admonitions, more often punishments, while the requirements cannot be met. Ultimately it may react bij neurotic or even 'psychopathiform' behaviour.

Our modern society places severe demands on the adjustability of even the normal child: on the one hand, the child must cope with the increased enervation resulting from the compactness of the community and the increased tempo of man and machine; on the other hand there is an increasing emphasis on specialized skills, and children unable to pass the appropriate examinations will have poor chances for a future career.

It is therefore understandable that these children should have received increasing attention, as attested by the rapidly growing number of schools for children with 'learning and behaviour difficulties', where a proportion of these children nowadays can be placed.

A psychological study of children referred to a child guidance clinic, observed in psychological practice or considered for admission to a special school because of learning and/or behaviour problems, has shown that hyperactivity, associated with disorders of concentration and learning difficulties1, is so common as to suggest as a possible cause, beside various other causes (e.g. malignant environmental influences, premature birth, affections of sense organs) affections or dysfunctions of the central nervous system (C.N.S.). This suggestion was advanced by Annell as early as 1949, at the Second Orthopaedagogic Congress in Amsterdam. At the Groningen Neurological Clinic, Prechtl and Stemmer (1959) meanwhile noticed that the hyperkinetic children observed there, reported not with neurological symptoms but with learning and behaviour problems. They raised the question whether a causal relation might exist between learning difficulties and hyperkinesis, or whether the two might have a common cause. The concomitance of a disturbance in motor development and a disturbance in mental development struck them as so conspicuous that they suggested to Bladergroen a joint neurological-psychological study of these children, with the co-operation of the Institute of Child Psychology. The neurological study was to be an attempt to determine the specific aetiological factors for this group, in order to differ-

1 The term 'children with learning difficulties' is used in Bladergroen's sense of: children, who suffer from a developmental abnormality as a result of which their effective intellectual performance is inadequate for normal, primary education, in spite of a potentially adequate level of intelligence.

entiate a homogeneous hyperkinesis. The specific differences in psychic control group.
entiate a homogeneous hyperkinetic syndrome for the large heterogeneous groups of hyperkinesis. The psychological study was to establish the specific differences in psychic habitus between these children and a control group.