



Ethics Committee
Attn. Professor Ove Lundgren
Sahlgrenska Academy

Regarding a request from the Ethics Committee dated 2002-09-12 to comment on certain questions from Eva Kärfve.

Description of the longitudinal Gothenburg study regarding children with ADHD/DAMP and associated neuropsychiatric dysfunctions

Introduction



Phase 1

The study was about a population-based investigation of six year-old-children in preschools and day care centers in Gothenburg and this was done in two steps. A questionnaire was filled out by a preschool teacher for each child born 1971, and after that an extensive investigation was done regarding a number of children who were selected among those with and among those without MBD-associated problems according to the questionnaire. The investigations started in 1977 when the children were six years old. The questions in the questionnaire were of the yes-and-no type and involved daily problems that a child with DAMP is likely to have.

The investigation instruments were adjusted in a way that they could be used for possible neuropsychiatric diagnoses of various kinds and included extensive interviews of parents and scrutinizing of medical records from the period of pregnancy and other relevant medical records from hospitals and outdoor clinics. Detailed descriptions of illnesses or dysfunctions among parents, siblings, and relatives were included as well as a thorough of mapping the children's psychosocial environment, parents opinions of their situation of life, and their views in regard to bringing up children. All children were examined by the same researchers and they were at the time of the investigation unaware of the results from the questionnaire given to the preschool teachers .

After all the investigations had been completed, the results for each child were compiled and the researchers made the decisions in regard to a possible diagnosis. The results, however not in terms of specific diagnoses, were also presented to the parents.

Altogether the questionnaires for just over 3400 children were replied to, which corresponds to 72% of the population. After an extensive examination of altogether 141 children, it was shown that 42 of the children fulfilled the criteria for MBD. Moreover some children had certain MBD/DAMP- associated problems in regard to either shortcomings in attention without a disorder in regard to motor function and perception (12 children) or motor function/perception disorders without a disorder in regard to attention (7 children). Some children had other types of diagnosed dysfunctions. An additional group of children MBD/DAMP- associated problems according to the questionnaire but no neuropsychiatric diagnosis at the investigation. In all these groups there was a majority of boys. In the control group there were 51 children who did not have any MBD/DAMP- associated problems, neither in the preschool nor at the examination. Calculations regarding the prevalence of MBD/DAMP and associated dysfunctions in the population could now be performed as well as an analysis of differences between boys and girls in this matter. It was also possible to study the connections between various diagnoses as well as other possible factors which could be the cause.

The results from this first phase of the study was presented in a child psychiatric doctoral thesis (Christopher Gillberg 1981, supervisor Professor Max Frisk, Uppsala) and in a child neurology doctoral thesis (Peder Rasmussen, 1982, supervisor Assoc. Prof. Olle Hansson, Gothenburg).



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Ethical questions

To ensure that the examining doctors were unaware of the examined persons identity and diagnosis.

From what we have described above in regard to the different phases of the study, the persons who have examined the participants have been unaware of the results from the questionnaire (phase 1) respectively have been unaware of the original group assignment (phase 2–5). Christopher Gillberg (CG) and Peder Rasmussen (PR) examined personally all the children in Phase 1. These two are the only persons in the research group who have had knowledge about the group assignments and the diagnoses. They have not examined or interviewed participants at any time after phase 1 except in phase 4 where CG participated in a inter-rater reliability study regarding 12 individuals. The interviews which CG made, with a “blind” examiner, were not used as a source that could influence the final results. The agreement between CG and the other examiners was very good. Kärfve makes the conclusion that it is Lars Hellgern (LH), Carina Gillberg (ICG), and CG who have interviewed all the children in phase 4 despite that it is clearly written in the summary report in LH’s doctoral thesis, page 21.23, and that it is LH and two other child psychiatrists who have done the interviews. ICG participated in administrating the personality inventory for the first 20 examined participants (which is pointed out clearly in LH’s thesis). She had at that time met them on one occasion for two hours either 3 or 6 years earlier.



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“Compilation of material and drops out rates....”

All the participants in phases 2, 3,4 and 5 are among those who were examined in phase 1. Any new individuals have thus not ”sneaked into” the study.

The 141 children who were examined in phase 1 were grouped in the following way: 42 children had MBD (“motor perceptual dysfunction” plus “attention deficit disorder”) and from them 14 children had “severe DAMP”. Seven children had “motor perceptual dysfunction” (“MPD only”). Twelve children had “attention deficit disorder” (“ADD only”). Three children had “mental retardation” (MR). 51 children were incorporated in the “comparison group” (comp), i.e. they had no significant outcome in the questionnaire and no neuropsychiatric diagnosis at the examination. 26 children had problems according to the preschool questionnaire, but no neuropsychiatric diagnosis at the examination, “pre-school questionnaire group” (PSQ). The participants in the PSQ-group and those who had MR have been examined at the follow-ups in the same way as the other participants, but the presentation of the results for these groups has not taken place in the published reports as the question has been about the prognosis for children with DAMP, not for children with MR or in the PSQ-group.

Our aim have been to—at each phase of the study—investigate all participants from phase 1. In each single study there is a thorough report of the drop-out rates. For phase 2 and 3 this is reported in Carina Gillberg’s thesis (summary report, table 1 page 20).Some individuals have participated in those parts of the follow-up study which is dependent of the questionnaire replies, but for geographical reasons could not participate in an investigation. Expressed in an other way: moving to an other community in Sweden has made it more difficult to examine the child, but it has not always been an obstacle to get a questionnaire reply. Children who have moved abroad have on the other hand neither been able to be reached for an investigation nor have been reached by questionnaires. As you can see from the summary presentation, we have in phase 3 also investigated children who have moved to another community in Sweden when the parents have accepted participation, which is why this reason for missed investigation is about a small number of participants compared with phase 2. On the other hand many parents have refused to participate in phase 3 compared with phase 2. The total drop out rate in regard to the examination of the children (“the neurology part”) is by chance the same on both occasions (16 children). From this



[page 6] you can also understand that it is not always exactly the same child that was a drop out. This makes the pattern of drop outs complicated, but the description in the above reference is correct.

Unfortunately there has been a typographical error in one of the reports (and only in this report) from phase 3 (a number 1 has wrongly become a number 7). Thus it is about 12 children, not 5, who have not participated because the parents did not want to participate. This typographical error was discovered when Carina Gillberg made her doctoral degree presentation for the opponent Professor Torkel Scholander; the wrong number in the report unfortunately was not corrected before publication. *However in her framework report and in her future reports her figures have been correctly reported.* Observe also the added number for the drop out rate is correct—even in the case where the mistake in writing is there—that is why the results are not affected by this mistake. In the table in Kärffe’s attachment 2 page 2, regarding information from two different sources in regard to the analysis of the drop-out rates, the reports thus are not correct but should be:

	Gillberg & Gillberg (1989)	Gillberg, Gillberg & Groth (1989)
Moved to another place	1 (0)	0
Moved to home country	4	4
Parents refusal to participate	11 (12)	12

The first column is about the replies from the questionnaire. As “moved to another place” does not make it impossible to receive a reply from a questionnaire it is actually “parents refusal”, which is the reason for the drop out even for those children who have moved to another place.

The number of participants at the age of 22 (phase 5) happens to be exactly the same as at the age of 16 (phase 4), but the figures are not about the same individuals. There is nothing strange in the fact that some persons living in Sweden who were born abroad move to their home countries during adolescence and then later return to Sweden when they are young adults.

Explain the distribution of the individuals in the different investigations

Phase 1. 3400 questionnaires regarding children born 1971 were replied to. 141 children were examined.



Phase 5. Besides the 101 participants who were presented in the report, also 20 persons were examined in the PSQ group and two persons in the MR-group. The results from these two groups were not presented in the article and have not yet been published.

The examinations in phase 5 were performed by experienced child psychiatrists who were "... blind to original study diagnostic group status of the individuals ...". One of them had never met any of the participants or in any other way participated in the study before. The others had met the participants 15 respectively 6 years earlier (on one occasion). None of these child psychiatrists had any knowledge of the original group assignments.

Kärfve's other criticism

Annex 1

Page 1. Kärfve confirms what difficulties we must have had to trace and make such a great number from the original groups to turn up at the follow-up investigations. We can inform that this is quite correct. At the latest follow-up examination, no efforts have been saved in this respect.

The question about what Kärfve calls uncertainties regarding phase 2 and 3 has been explained above. As we have already mentioned, the drop-out rates between phase 4 and 5 is not =0. As many has dropped as have been included which makes the final result be the same in regard to number of participants.

Kärfve obviously can not imagine that persons with this type of problem, which many of our participants have, can make themselves extra motivated to participate in an investigation of this kind if they do not receive any treatment. For many with DAMP and similar difficulties it is in fact something positive to receive help to investigate and map out [i.e. describe] your difficulties. We ourselves were more than surprised that the drop-out rate for the comp-group was only to a minor extent higher than for the index groups!

Page 2 and 3. The last sentence: The number Kärfve asks for ("knows how to read—yes-no?") is in this work included in a comprehensive variable called "Obvious school achievement problems". It



[page 8] is of course problematic if a child at this age—not having an obvious developmental disorder—is not being able to read and/or write at all, but you hardly use words like analphabetic or illiterate. More noteworthy it is of course if a 22-year-old person could not read and/or write, (this is the reason) why this has been explained explicitly in phase 5. Kärffve says that in the group with severe damp there has entered an individual who “could not read or write at all at the age of 22 years” (does it mean that they could not read and/or write) compared with at the age of 16. This can be explained by the fact that only 12 of the 13 participants in the group with severe DAMP were the same at both these examinations. Here we will also like to point out that it is not possible in detail to make comparisons between reading and writing abilities at the different examinations as these aspects are investigated in different ways. In phase 5 an extensive reading and writing test was performed and the results from them cannot be compared with earlier phases and make this into (some kind of) hard evidence as Kärffve does.

Page 8. The argument that Kärffve here puts forward in regard to depression and whether prevalence of depression should be a criteria for “poor outcome” or not is strange. We have just presented what we have found. After that we have made the conclusion that as depression, according to the measuring devise we used, has been very common in the index groups as well as in the control groups; therefore it can hardly be motivated to include depression among criterias for “poor outcome”. This is clearly presented and motivated and it is unbelievable that this could be regarded as a sign of “fabrication or manipulation of data or the raw research material”.

Annex 3

Kärffve criticises here a report that summarizes the results from the follow-ups at 10 and 13 years of age, but it is about a report which is not included in any of the doctoral theses. Kärffve has not understood that we have examined 141 children in phase 1 and that we also later followed all these individuals even if we have had some drop outs. Now Kärffve makes the conclusion that 39 children have been excluded from the follow up. First it is 29 individuals it is about and not 39(!), secondly they have not been excluded. That the results for the children in the PSQ-and MR-group are not presented in this report can be explained by that the question for the report was: “What happened for the children with ADHD, DCD, and DAMP?”

Kärffve further asserts that there are 6 different follow-up studies which have been presented in this report “with varying drop-out rates”. As we can understand Kärffve is either meaning the examinations at 7, 10, and 13 or at the different [single] examinations mentioned in the figure columns (“Neurodevelopmental



[page 9] problems”, Behavioral abnormality”, “Obvious school achievement problems”). Both alternatives are about 3, not 6, partial examinations.

In the following argument Kärffve asserts that the size of the groups (n-numbers) wrongly have been put to high. Readers who are familiar to these kinds of reports understand that numbers high up in figure sheets, which Kärffve has included in her attachment, are referring to the group’s original size. Exactly that which Kärffve mentions herself, that there are varying drop-out rates in the different examinations could have been a hint to her that the reporting of the n-number just means the size of the original group. Moreover we would like to point out that the numbers in the article are about the accumulated prevalence during the follow up period. These are completely correct.



In this type of criticism/misconceptions which Kärffve has presented in her petition, the scientific society normally is able to handle such things quite easily by the person who wants to ask questions actually asking the authors those questions either directly or through the scientific magazine where the information was given. Instead Kärffve has chosen during the last 2–3 years to pursue a campaign, where she in particular slanders Christopher Gillberg personally but also the Gothenburg groups research and neuropsychiatric activities as a whole. In this campaign her book *Hjärnspöken—DAMP och hotet mot folkhälsan* (2000) is the starting point. Leif Elinder, who since previous events is well-known to the members of the Research Council is a co-author in the book. Kärffve's accusations about scientific misconduct must be seen in the light of this campaign, which has an ideological, not a scientific cause.

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Christopher Gillberg
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