

HOW MANY HOURS IS FORTY HOURS? RANGE OF TREATMENT INTENSITY IN LOVAAS (1987)

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BACKGROUND

40hrs/wk of one-to-one treatment—the universally reported intensity of ABA-based intervention received by the experimental group in Lovaas (1987) and McEachin, Smith and Lovaas (1993)—is a benchmark in autism research.

- High intensity of treatment (often reported as “at least 40” hrs/wk or in similar terms in the literature; e.g., NRC, 2001) is widely agreed to be an essential factor in the success of the experimental group (47% or 9 of 19 “normal functioning”) vs Control Group 1 (10 hrs/wk or less; 0 of 19 “normal functioning”) in Lovaas (1987).
- In subsequent ABA controlled or uncontrolled trials, results are judged against a 40 hrs/wk benchmark (e.g., Anderson et al., 1987; Birnbrauer & Leach, 1993; Smith et al., 1997; Smith, Groen & Wynn, 2000; Eikeseth et al., 2002; Sallows & Graupner, 2005).
- Many legal actions and public policy decisions have featured the 40hrs/wk figure (NRC, 2001; Mayerson, 2003).

METHOD

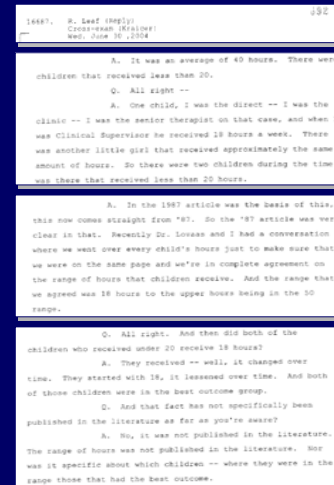
We examined accounts of hrs/wk received by the experimental group in Lovaas (1987) and McEachin, Smith and Lovaas (1993). Sworn expert legal testimony from a behavior analyst (Leaf) directly involved in Lovaas (1987) was compared to descriptions published by Lovaas, Smith and/or McEachin.

- In 2004, Leaf (an ABA service provider) testified as an expert witness for parents and other family members in litigation demanding that the Ontario government fund intensive ABA for school-aged autistic children. Testimony relevant to hrs/wk was obtained (from *Wynberg et al. v. Ontario*; Leaf, pp. 16687-16692 [Compendium, Vol. II, Tab 23, pp. 692-697]).
- We found 35 descriptions of hrs/wk authored by Lovaas, Smith, and/or McEachin, in 23 published papers (1987-2006), each with 1 - 5 descriptions. Only explicit descriptions of Lovaas (1987), not recommendations or general descriptions of the UCLA model, were included.

RESULTS

1. Leaf's Testimony

Excerpts:



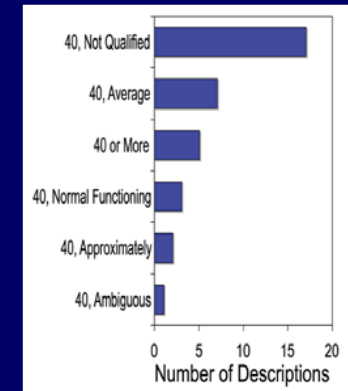
Summary:

Leaf has direct knowledge, as “senior therapist” and “clinical supervisor”, of 10 of the 19 experimental group children in Lovaas (1987):

- 40hrs/wk was an average for the experimental group
- Range of hrs/wk was from 18 to “in the 50 range”
- Leaf recently “went over every child's hours” with Lovaas; they agreed 18hrs/wk to “in the 50 range” was accurate
- Leaf had written to Lovaas re McEachin, Smith & Lovaas (1993), to object to the description “40 or more hours per week”
- One description in Lovaas (1987, p. 5), “an average of 40” hrs/wk, is accurate; no mention of 4 other descriptions (pp. 4 & 5: more than 40, 40 or more; pp. 5 & 9: 40, normal functioning)
- 1 girl and 1 boy in the “normal functioning” group received only 18 hrs/wk which “lessened over time”; others received >20hrs/wk
- Accurate information about the range of hrs/wk and how hrs/wk relates to outcomes has never been published

2. Published Accounts

Summary:



35 published descriptions of hrs/wk in the experimental group in Lovaas (1987), authored by Lovaas, Smith and/or McEachin, report 40hrs/wk, no range or SD:

- 17 are not qualified in any way
- 7 specify a group average of 40hrs/wk, including the only description by Leaf (Leaf & McEachin, 1999)
- 5 (including 2 in Lovaas, 1987, and 1 in McEachin, Smith & Lovaas, 1993) specify 40 or more hrs/wk, or more than 40hrs/wk
- 3 specify “normal functioning” children received 40hrs/wk
- 2 specify approximately 40hrs/wk
- 1 is ambiguous

Highlights:

10 descriptions in 3 major papers (Lovaas 1987; Lovaas & Smith, 1988; and McEachin, Smith & Lovaas, 1993):

- 4 specify 40 or more hrs/wk, or more than 40hrs/wk
- 3 specify “normal functioning” children received 40hrs/wk
- 1 specifies approximately 40hrs/wk
- 1 specifies a group average of 40hrs/wk
- 1 is not qualified in any way

CONCLUSIONS

Leaf's detailed expert testimony questions the influential premise that high intensity of treatment in Lovaas (1987) was essential for achieving “normal functioning” in autistic children.

- Testifying in support of ABA services, Leaf provided information in response to direct questions, and volunteered additional information, that is at odds with prevailing scientific, legal, and popular accounts of hrs/wk in Lovaas (1987).
- However, a variety of descriptions of hrs/wk (without a range or SD) in Lovaas (1987) and McEachin, Smith & Lovaas (1993), some of them contradictory, exist in the authors' own accounts, including in the major papers describing this study.
- ABA group designs have not reported significant correlations between treatment intensity and outcomes; an uncontrolled trial (Sallows & Graupner, 2005) found that neither quality nor intensity of treatment was related to outcome measures.
- Considering the landmark status—as well as the unparalleled scientific, societal and legal impact—of Lovaas (1987) and its follow-up (McEachin, Smith and Lovaas, 1993), we suggest that accurate data regarding treatment intensity and its relation with outcome measures, data which appear to be available, be provided by the authors.