Effectiveness of intensive autism programmes

Michelle Dawson, Morton Ann Gernsbacher

In their Seminar on autism (Nov 7, p 1627),[1] Susan Levy and colleagues claim that intensive programmes based on applied behaviour analysis (ABA) "were highly effective for up to half of children enrolled in about ten randomised clinical trials done in the past 20 years".

The review that Levy and colleagues cite for this claim, by Rogers and Vismara,[2] describes five randomised controlled trials, three of which do not involve trials of intensive ABA-based programmes. In one of the two other trials, by Sallows and Graupner,[3] the intended comparison between randomised groups was not done. As Rogers and Vismara accurately report, Sallows and Graupner "merged data from both groups, changing the design into a noncontrolled pre–post design".

This leaves a study reported by Smith and colleagues,[4] which in fact is the only published randomised controlled trial to study intensive ABA-based programmes for autistic children. As Rogers and Vismara note, the results of this one very small study (intervention group n=15) do not support the claim that intensive ABA-based programmes are "highly effective", especially not for children with the specific diagnosis of autism.

Thus, the claims made by Levy and colleagues, with respect to intensive ABA-based programmes for autistic children, have no basis—either in the review they cite or in any other published study.

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Authors' reply

Michelle Dawson and Morton Ann Gernsbacher correctly point out that Sallows and Graupner[1] did not do their originally planned analysis of between-group differences and therefore their study should not count as a randomised trial showing the efficacy of applied behaviour analysis (ABA). However, we respectfully disagree with their characterisation of the other three trials referenced in the Rogers and Vismara review,[2] each of which includes as an important component an instructional strategy based on the principles of ABA. These strategies are not always discrete trial training, the oldest (but not only) form of ABA tested for children with autism. In keeping with current thinking in the field, the ABA-based techniques tested in these studies have expanded to include more incidental strategies than can be found in early versions of discrete trial training.

With regard to other randomised trials of ABA, space limitations prevented a more thorough listing of references within that review; however, referenced within Rogers and Vismara's article is Rogers's 1998 review[3] of the five randomised trials preceding the five referenced in her 2008 article. It is by combining these two studies that we arrived at 10 randomised trials, which Dawson and Gernbacher correctly point out are really nine.

In addition to these trials, a host of other studies that used rigorous and sometimes not-so-rigorous quasi-experimental designs point to the efficacy of ABA-based methods, such as discrete trial training, pivotal response training, and teaching in functional routines, either alone or in combination, in improving adaptive behaviour, language, and in some cases socialisation of children with autism.[4]

Certainly much more work is needed to determine the efficacy, effectiveness, and active ingredients of psychosocial interventions for children with autism. Our statement that ABA-based methods have the most evidence to support them represents both an endorsement of ABA but also an indictment of the rest of the treatment research field, which must quickly catch up with practice. Many other psychosocial therapies, such as developmental, individual difference, and relationship-based therapies certainly are requested frequently by families and have anecdotal evidence to support them. We eagerly await more rigorous trials of their efficacy.

We declare that we have no conflicts of interest.

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