

Simple & Effective Therapy

If You Do It, It Will Improve

Vol. 4 #1

December 2012

How Much Therapy Is Needed?

Jack Katz

I hope that all of you have found, as I have, that using the Buffalo Model procedures work very well with most clients in a relatively short period of time. Most people start with Decoding therapy, because it is so important for a person to get full benefit from the other therapies; also Speech-in-Noise and Short-Term Memory these are so very important for most people we see.

The two Buffalo Decoding procedures are the Phonemic Training Program (PTP) and Phonemic Synthesis (PS). The Speech-in-Noise program is Words-in-Noise Training (WINT) and the memory program is Short-Term Auditory Memory Training (STAMT).

No doubt you have seen in issues of *S&E* and in the book, *Auditory Training for APD: Simple, Effective Procedures* (2009) that the data are quite impressive showing considerable improvement in auditory skills. Also consider that in most cases children averaged just 13 sessions in the first round of therapy (R-1). In speaking to some of you, you are also getting excellent results.

What you haven't seen is what happens if someone requires further training based on retest performance or other reasons. How do children perform on retests after R-2 or possibly R-3? I have never gathered these data because I

assumed that R-2 was so idiosyncratic that there was no way to study the effects. For example, one person might need more help in Decoding while another might be stuck on memory span and still others one ear for Speech-in-Noise. Another major need for R-2 is for Integration or Dichotic Listening training. I use the Dichotic Offset Training (DOT) program for these problems. Results are most directly shown on the Dichotic Offset Measure (DOM). We use the standard SSW as an indirect measure of DOT. Hopefully we will soon collect these data to show the benefits following DOT.

Another reason why I have not studied later rounds of therapy is that we had so few cases that came for a second or third round. Occasionally we have recommended R-2 but the family did not follow our recommendation and in other cases they have had a brief R-2 or have not come for retest.

This issue is devoted to an analysis of our standard measures for those who had R-2 and R-3 therapy.

APD Therapy Samples

Data for the 104 cases between 6 and 18-years-of-age who were seen for R-1 therapy and retest comprise Group-1 (Gr-1). The cases that had R-2 and data for all three assessments (Pre, Post-1 and Post-2) make-up Group-2. I was surprised what a small percentage of cases were seen for R-2. About 15%

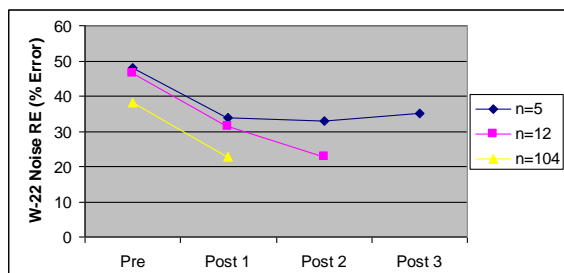
appear to have had a second round of therapy. In part, this small number may have been because in the first year or so of my practice I was less inclined to recommend R-2, as I did not know how much further improvement to expect. But as we began R-2s and found them quite helpful the numbers increased and this led to R-3 in a small number of cases. Very few need more than R-3.

I was surprised to see how few R-3s there were. I could find only 5 cases in all of my files with complete data for R-3 (roughly 5% of the therapy cases). These 5 cases make up Group-3.

In all three groups boys outnumber girls by about a 3:2 ratio. The mean age at the time of the most recent retest was 9.3 years = Gr-1, 9.6 = Gr-2, and 12.8 = Gr-3. It is not surprising that Gr-3 is older than the other 2 groups when retested for R-3. This may be because of the very small sample size and because R-1 requires about 6 months with a minimum of 3 month vacation before R-2 and after about 6 months of R-2 the child is given another 6 months off before R-3 which lasts about 5 months. In addition, two of these children had recurrence of O.M. and came back later on for R-3.

Speech-in-Noise Testing

Figure 1 shows the right ear %-error in Noise scores (on the CTB CD) for the 3 groups.

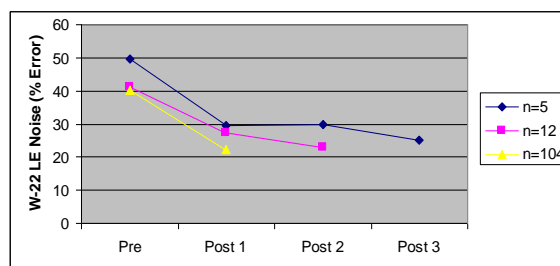


In Figure 1. Gr-1 in yellow had a pre-test and a retest post R-1. Initially their mean %-error was about 10% better than Gr-2 (red). On retest both showed the same amount of improvement after R-1, but the Gr-1 score was essentially within normal limits for 9 year olds but Gr-2 was not.

The results are particularly interesting because the 17 cases in Gr-2 & -3 were part of the Gr-1 data (but R-3 data are not part of R-2). Thus, it appears that those who had one-round only were probably even better than the scores shown.

By the end of R-2 the Gr-2 children had just about equal scores as the Gr-1s; although it took them a second round to do it. The data for Gr-3 may be an anomaly in the entire data set. Their R-1 improvement was equal to Gr-2, but the last 2 data points showed no additional improvement. It is possible that it is somehow due to a calibration error that I did not uncover quickly enough. Hopefully additional data will clarify this relatively small outlier.

The left ear Noise scores are shown in Figure 2.



In Figure 2 we see roughly the same 20% improvement for each group in the left ear following R-1 as shown for the RE. The additional improvement in R-2 enabled Gr-2 to end almost even with Gr-1 as was true for the right ear.

It is interesting that G-3 had the same pattern of no improvement from Post-1 to Post-2 that we saw for the right ear. However, they did make some further gains during R-3. This enabled them to end close to the Gr-2 subjects at the end of R-2 and made the most improvement of the 3 groups in time.

Phonemic Synthesis

Figure 3 shows the results for the 3 groups for the Quantitative PS score. The Quantitative score shows the number of items correct out of 25.

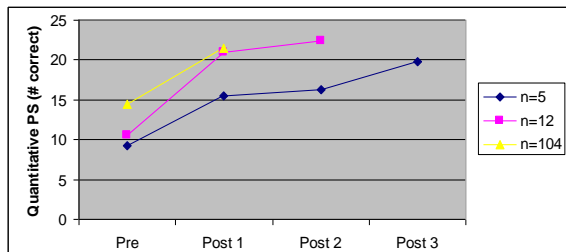


Figure 3 shows that Gr-1 was about 5 points higher initially on this test. At the end of R-1 Gr-1 improved by 8 points to be within normal limits. Gr-2, that started 4 points below Gr-1, closed the gap between them after R-1 and went ahead in R-2. Gr-3 that lagged behind the others initially improved after R-1 yet fell further behind them at the end of R-1 and remained so after R-2. But, post R-3 they reduced the difference to just 2 points.

The PS Qualitative score is most important because it takes into account not only if the items was right but if compensations were used to achieve those scores. If so, delays (X), quiet rehearsals (QR) and other qualifiers are subtracted from items that were scored as correct. This is a major help when our clients figure out answers and elevate their scores; sometimes to score within normal limits. So often the Qual score saves the day.

Figure 3 shows the results for the Qual scores for the 3 groups.

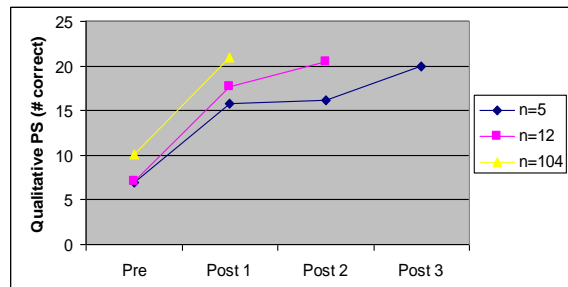


Figure 3 shows Gr-1 slightly ahead of Gr-2 & -3 initially. They all made similar progress during R-1 but Gr-2 evened up their score after R-2 and Gr-3 did it after R-3. This is a good example of, "if you do it (more), it will improve (more)".

SSW Total NOE

Figure 4 shows the SSW NOE results. The SSW is not as directly addressed in therapy as the 2 previous tests. But it benefits from improved Decoding and memory. After R-1 the children often work with Dichotic Offset Training (DOT). This is more directly related to the SSW task than the 2 previous tests.

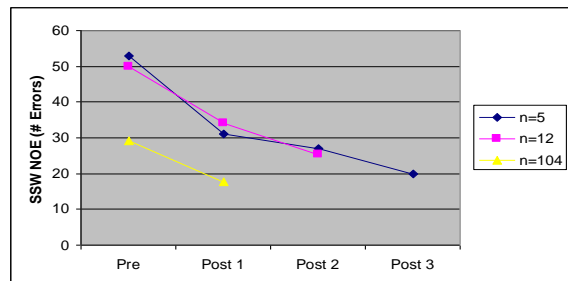


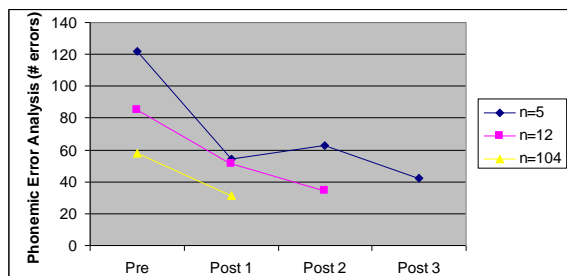
Figure 4 shows that Gr-1 is 20 points ahead of the other 2 groups on the pretest and after R-1. But even after R-1 their score was not within normal limits for a 9 year old. The other 2 groups followed a similar progression for R-1 and R-2 but Gr-3 surpasses Gr-1 when tested after R-3. The poorest group (Gr-3) and best group (Gr-1) ended quite

close to one another. G-3 improved by more than 30 points. This is another example of, “If you do it...”. It is too bad that we do not have R-3 data for Gr-2. I suspect that they too would show good results and perhaps exceed the score for Gr-1.

Phonemic Error Analysis

PEA is a ‘free’ test when the same tests are given before and after therapy. We count the phonemic errors (e.g., *bat* for *cat*). We do not count omissions and on the SSW we do not count when a person makes a compound word demonstrating no idea of what the stimulus was (e.g. white board for black board, as this would not be a phonemic error).

Figure 5 shows the number of phonemic errors on the Buffalo Model tests (SN, SSW and PS) out of 928 phonemes).



The rather typical order of errors for the 3 groups are shown for PEA as well. Even the flattening of Gr-3 from R-1 to R-2. The 2 extreme groups were 64 points apart initially and just 11 points apart at the end. Of course, Gr-3 had almost 3 times as many therapy sessions as Gr-1. But I think that’s the point. If you can’t get the children with more severe scores to improve enough initially (for communication and educational purposes) keep going. The likelihood is, if they don’t burn out, they should continue to move ahead.

Summary plus Conclusions

Three groups were studied. Unfortunately, the 2 groups of primary interest were small. But the trends were consistent across the 5 measures that were used. Those who were a bit younger and a bit more successful on the pretest tended to make the most rapid gains and generally required only one round of therapy (some could have used more help but did not return for R-2). Those who were a little older but had more severe scores initially, not surprisingly, needed more help. Those with moderate or poorer scores initially and good results on R-1 and R-2 often made enough progress to show themselves to be about equal to Gr-1 on the tests. Those with the most problems on the pretest, not surprisingly, required the most therapy.

What was so impressive is that before therapy those who were struggling the most; could continued to improve right through R-3. Their scores at the end were generally as good and sometimes better than those who were younger and more able.

We continue to see that those children who had early intervention (e.g., Speech-Language Therapy) do better and more quickly than those who have not had those advantages.

One could conclude from all this:

1. Therapy works and if you do it, it is very likely to work (if what you do is geared to improving the problem).
2. When a child’s scores are not too severe initially they are likely to make good improvement (or better) in the shortest period of time. When their test scores are

quite severe and also their issues at school etc.; naturally progress is likely to be a bit slower and the journey longer. But the good news is that if you treat it, it will improve. Very often the levels achieved, in time, are comparable to those with milder problems.

3. It seems clear that we should work on the basic problems before the hard/complex ones. Don't keep on working and working and working as improvement will slow down or worse.

4. Consider giving longer vacations over time in most cases (with some severe or degenerative cases too long a break may lead to problems).
5. My questions for you are: Isn't the brain amazing?! And isn't this work rewarding?!

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I would encourage anyone who has a question, a problem, an advice or a therapy case to please speak up.

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