SSW Reports

Dear Ackie (Jack Katz)

SSW with Bilingual English/Spanish Speakers (Rick Saul)

Retests (Jack Katz)

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Dear Ackie

New subscribers to SSW Reports may not know the name, "Dear Ackie". She is one of Dear Abby's sisters. And who is Dear Abby you ask? She was an advice column writer of yesteryear. We heard that Ackie was on vacation from *SSW Reports* for awhile and was considering retiring altogether, but the questions for her just keep on piling up. It's really hard to find people who are both knowledgeable and sassy (obnoxious?) who can take over. So after some bowing and scraping we got Ackie to come back for a few more issues.

From Kathy Page

Q1) How do you score: a) snow fight foot ball; b) bad play play ground, and c) white walls and dog house (Some children tend to put "and" between the two spondees. I usually ignore it, but should we consider it as an IW)?

A1 a) This is a common error. Although generally a smush has 2 errors (i.e., *snow fight ball* for *snow white foot ball*) in some cases, like this, the competing word is correct. It is impossible to know if it is a smush or simply a meaningful substitution for 'white'. I suspect that in most cases that the F-sound influenced the error and therefore it's a smush. But, I would feel even more confident with calling this a smush if there was another smush on the test.

b) *Bad play play ground* (for *back door play ground*) is a Back to Back (BTB) error;

c) *white walls <u>and</u> dog house* (for *white walls dog house*). The 'and' is generally a delay or it may start out that way. Most often the person is not aware that they are putting in this extra word that sounds more grammatically correct. I would instruct (I-and), "You may not have realized it but you said "- and -). I have to write down all the words you say so please try to say just the words that you heard and try not to put in the 'and'. Or if you are not sure you could just ignore it as there are usually plenty of other solid indicators. Fortunately, this is not going to alter the evaluation of a patient, but could reduce the number of delays (this is one of the advantages of multi-dimensional scoring etc. that we have on this test battery).

Q2) How do you report results on children with higher order disorders (autism, low IQ, etc.) - do you still compare test scores to the age-based norms?

A2) I try to describe any aberrant test behavior that could lead to extraneous problems on the test. As clinicians we have to make the determination whether our results are trustworthy or not. If the phones were removed during some items or the person was talking then either the items should be eliminated from the scoring or you can suggest that there were major

problems. I strongly believe that having autism or a low IQ greatly increases the chances of APD. We have tested many individuals with these issues using the SSW test. Among the Intellectually Disabled (ID) who were tested at an institution for ID, I believe, there were 3 with normal SSW results out of about 33 adults (~ 40-86 IQ). Those with cognitive disorders can obtain normal SSW and speech in noise test scores because these procedures require only an echoic response (something at which those with ID are often excellent). I use the regular norms but leave myself 2 options of safety if I feel that in this particular case the person should have some leeway. One can use the 2 SD norm instead of the 1 SD or use the Traditional Analysis (that is for APD especially when there is a hearing loss), but the norms are not as demanding. In both groups with ID and those on the autism spectrum we have had very good results in therapy. This not only showed that they have a great capacity to improve their APD but that APD was a much greater problem before the therapy and much reduced after. In my new book on therapy there is a fuller discussion of this issue.

Q3) Is it OK to use the NOE scoring method for the SSW if a child's WDS is depressed in one ear with normal hearing in both ears or should we use the Traditional scoring method?
A3) That's a good question. Congratulations on understand that if the child had a hearing loss that you would use the Traditional analysis, but you are wondering if the person has a non-normal word recognition score (especially in one ear) should we use the Traditional method rather than NOE. In this case we see no evidence that the person has a hearing loss so the errors are very likely not due to a peripheral problem. I would assume it was central (e.g., DEC). In this case if we use the Traditional approach we are likely to be subtracting out central signs on the WDS from central signs on the SSW. It would likely hurt your ability to see the central indicators on the SSW, so use the NOE. You might also consider rechecking WDS in that ear with a different list.

Q4) What does the "I" signify on the Buffalo Model Questionnaire?
A4)Integration

Q5) My question has multiple parts for the same test item on the Phonemic Synthesis test.
a) What if child says "da-res" out loud and then says "dress"? Is that NF or QR?
A5 a) I would show "da-res" as his/her answer and mark NF and because he/she said it out loud (not quietly) I would not mark it as a quiet rehearsal. It seems that saying the item out loud provided feedback that was helpful in figuring it out. In such cases I often put a slash after the answer and then show a dot (da-res/.) to indicate that on the second try it was correct (but I only count the first one).

b) What if he says "da-res" and examiner asks him to repeat the word or asks him "what word is that?" and he then gives the whole word. Still considered NF? and is it correct or incorrect response?
A) The first answer is the answer. What follows are compensations and higher cognitive efforts and not auditory processsing. Please see a) above.

Q6) Can you review the NF and O/L indicators for the Phonemic Synthesis test?
A6) Sure, non-fused is either saying the word in 2 or more parts (*da-res* or *m-i-l-k*) or if the person says the sounds rather individually but pushes them together (e.g., *mmiillk*). This is an error of synthesis. O for L is a response such as '*chiod*' for '*child*' or '*code*' for '*cold*'.

Some brief thoughts on using the SSW with bilingual English/Spanish speakers

Rick Saul (Nova Southeastern University Ft. Lauderdale)

Since we've been using the SSW, as well as other tests with non-native English speakers, there has been predictable discomfort about interpretation. Clearly, there's a possible affect on the outcome--to a lesser or greater degree, depending on the various variables that may affect outcome.

I'm reminded of an experience I had in Spain. My wife and I were on vacation. I was trying to show off my new found quasi Spanish competence--obtained over the previous few years, studying various language programs. We found ourselves in a familiar chain restaurant in Madrid. There I was communicating somewhat effectively with the staff-- I was so proud!

I thought for a moment--how interesting.. that you can appear to operate at a significantly higher language level than that which you actually can. And, from there, I had further thoughts on the complexities of interpreting the standard English SSW for those who speak English as the second language.

I've had the opportunity to test children and adults, as so many of us have. And for many of those, I've utilized both the English and Spanish versions in order to gain just a bit more insight.

From time to time, concepts in bilingual auditory processing and speech perception appear in the literature--making the point for the importance of carefully defining the various language elements that may affect test results. One matter, though, is clear, that the interaction between bilingual function and auditory processing is complex and, if carefully controlled, may provide us with crucial (and critical) insights into brain processes and language.

As my experience in Spain illustrates, when an individual exhibits relatively appropriate overt expressive language skills in a particular (and restricted) language environment, we often see them, at least superficially, as bilingual--though I am certainly not!

I've tested quite a few university faculty (for normative information and for pure curiosity) who consider themselves balanced bilinguals—individuals with proficiency in both Spanish and English (and who were normal hearing with normal word recognition in both languages and no reported otologic or neurologic history). So often, I have found little performance difference between the two versions (see Soto-Ramos, Katz, and Windham, SSW Reports, August, 1994). I also find cases that are particularly interesting because of disparate results on English (EC) and Spanish (SLV) versions or poor results on both. Here's a 45 year old, LS, who teaches marketing at the university level (NOE outside limits for these adult cases are RNC-1, RC-2, LC-4, LNC-1):

R-SSW (% ERROR)

	RNC	RC	LC	LNC
EC	5	15	18	5
SLV	0	2	2	0

Clear differences in performance were apparent. She reported a more stressful listening experience for the English version. Some background history is noteworthy.

She uses Spanish in the home, and began learning English as a teen after arriving in Florida from Costa Rica.

This 50 year old engineering faculty member came to the US with his parents at age 10 from Cuba. He speaks Spanish with his parents; English in the home.

R-SSW (%ERROR)

	RNC	RC	LC	LNC
EC	0	3	2	0
SLV	0	2	0	0

Performance on the two versions is comparable. Interestingly, he also reported that the English version seemed a bit more difficult and required greater concentration.

I've also seen high schoolers who present interesting test results. They may seem to have high language competence in English, but may or may not. As a group, I have seen comparable results on both test versions (again, hearing within normal limits, normal word recognition in both languages, and no reported otologic or neurologic history). Here are SSW results from a 16 year old from a Miami high school tested as part of a normal group selected to provide information on auditory processing. His academics were reported as average.

R-SSW (% ERROR)

	RNC	RC	LC	LNC
EC	5	15	25	8
SLV	2	22	18	2

Oh, the possibilities! Auditory processing difficulties? Language disorder? Both? Some other factors related to his particular language background? I don't know. He was not referred for testing. He was, rather, an arbitrarily selected classroom subject. Certainly, we would want to delve more deeply here. We may find that he experiences more academic difficulty than was reported. As Brandner, Katz, and Goione-Merchant point out in the last issue of SSW Reports (May, 2009), these cases may not answer many of our questions about bilingual auditory processing, but the results can provide a basis for intervention in order to improve academic success. Perhaps we can also answer more questions about speech perception in general and bilingual auditory processing, in particular. Clinically, this highlights a fascinating combination of auditory processing, neuromaturation, language, and bilingualism. Auditory processing tests can reflect the sum of many of the variables involved. Bilinguals are quite a heterogeneous group. We can, more effectively, define these variables more and describe the bilingual details--ask more pointed questions about an individual's bilingual background and try to control for each: which language is more dominant?, educational background in both languages, age at which English was acquired, the individuals assessment of their own language skills and, I'm sure, even more variables. The affect of bilingualism on sensitized speech tests is greater than for word recognition in quiet--as research suggests. We can also gain insight by correlation non-speech auditory tasks.

(For some background discussion, see Von Hapsburg and Pena-- Understanding Bilingualism and Its Impact on Speech Audiometry, in the Journal of Speech, Language, and Hearing Research, Vol. 45, February, 2002).

Retests
Jack Katz

Retests are interesting, educational and sometimes quite challenging. Most retests that I do are following AP therapy to determine improvement and current status. However, I had 2 recent retests that were different. I found them quite interesting.

1: What's APD?? APD Therapy???

A 9-year-old child was seen for evaluation in 2004 because of academic and communication issues. Subsequently he came for 4 therapy sessions and then they discontinued. This year he came for re-evaluation (age 14) with 3 years each of: reading, phonological awareness and intensive phonics therapies, plus one year of speech therapy and more. His dyslexia specialist said that he is one of the slowest processing kids that she has ever worked with. The Buffalo Model Questionnaire (BMQ) results at test and retest are very similar despite almost 5 intervening years of maturation and therapy.

His mother indicated that they discontinued therapy because the school convinced them that auditory processing is not important and that they had never heard of AP therapy. In fact, they would provide him with the help that he needed. But after years of struggle with reading, spelling, phonics etc. a parent of a child with whom we had worked suggested that the family go back for help with APD because her daughter had great success with a rather brief stint of therapy.

SSW Test/Retest Scores			
Norm	**Test**	**Scores**	**Improve**
6	Total	23/8*	+15
2	RC	7/1	+6
4	LC	14/5*	+9
1	Reversal	1/0	+2
-1	Order Ef	-2/0	+2
0	Delay	19/19*	0
0	Persever.	5/2*	+3
0	Smush-2	1/0	+1
-2	Ear Eff	-9/0	+9
0	Quick	4/0	+4
Note: starred scores indicate it is still significant			
PS Test/Retest Scores			
23	Qunatita.	9/22*	+13
22	Qualitat.	3/8*	+5
0	Non-Fus	10/1*	+9
0	Delay	6/14*	-8
0	Omit 1st	2/0	+2
SN Test/Retest Scores			
82	Right E	72/76*	+4
81	Left E	56/64*	+8

On retest, Bill made good gains on the SSW, but the tell tail sign was the 19 Delays which shows the effort that he needed to put in and is consistent with the 'very slow processing' concern. On the PS if we look at Bill's Quantitative score he looks pretty good but the Qualitative score explains why he is still having those academic problems. Small gains were made in Speech in Noise.

Overall, Bill had 18 significant indicators initially and 11 of them remained significant on retest. It is sad that he is so frustrated at school but suspect that he will make rapid gains in therapy

2: Maybe He'll Grow Out of It?

In a young child that is a reasonable thought, especially with good school support. But I suspect in *many* cases that does not happen.

In 2004 I tested a 5-year-old for APD. His age necessitated a 20-item SSW test and the Phonemic Synthesis *Picture* test; both of which limit the information that we get. Nevertheless, Josh showed Decoding and

TFM categories of APD. Because he was just 5 and clearly a bright child his parents decided to see if the assistance at school would be sufficient. Indeed he had 8 years of speech and 2 years of reading therapy.

Josh was seen again recently at age 11, not because he was doing poorly at school, as he is doing quite well, except for reading comprehension. However, *he* was concerned about himself as he realized that there was something wrong with him, 'everyone else knows what's going on except me' he explained teary-eyed. The reason why the parents brought him back was because of his frustration/humiliation and the effect that it has had on him socially. He works very hard! When he comes home he is exhausted and must take a nap. He is forgetful and disorganized; often forgetting to do his homework. The family is concerned that things will become more difficult when he is in middle school.

SSW Test/Retest Scores			
Norm	**Test**	**Scores**	**Improve**
6	Total[1]	46/27*	+19
1	RNC[1]	10/0	+10
2	RC[1]	14/7*	+7
4	LC[1]	12/15*	-3
1	LNC[1]	10/5*	+5
1	Reversal	cnt/14*	dk
-2	Order Ef	17/-1	+16
-5	(Ear Eff)	(-1)/-13*	-12
1	Delay	(cnt)/22*	dk
0	Quick	6/0	+6
Note: cnt=could not test; starred scores significant [1] These initial 5 were doubled to correct for 20 items			
PS Test/Retest Scores			
21	Quant.	cnt/17*	dk
20	Qual.	cnt/10*	dk
0	Non-Fus	cnt/10*	dk
1	Delay	cnt /4*	dk
0	Persev	cnt /1*	dk
1	Quick	cnt /3*	dk
0	O/L	cnt /1*	dk
SN Test/Retest Scores			
82	Right E	44/72*	+28
81	Left E	36/76*	+40

As with Bill, most of Josh's scores remained significant for his age. Thus, the increased maturation and years of related therapies did not correct the vast majority of his problems. One very interesting finding that we sometimes see in this population is that there is a 'trade' of an anterior (TFM) Order Effect for an anterior (TFM) Ear Effect on retest. We saw this originally with brain lesion patients on retest who had no therapy. It could go either way from Order to Ear or vice versa. My interpretation of this is that the person used different strategies in taking the test.

Summary

Both boys were found to have APD 5 years before, but did not have therapy that specifically addressed the problems. They struggled and suffered both at school and socially. I think that we as a profession have been slow to recognize the importance of proper treatment for APD in a timely manner. But I am greatly encouraged by the number of audiologists and others who are taking the problem and its solution seriously.

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