SSW NEWSLETTER

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NO MORE A TEENAGED TEST --- HAPPY BIRTHDAY SSW

Even if you can't think of a single person whose birthday falls in August, you can still raise your glass and give a toast. The SSW is just 20 yrs. young this month. Let me propose one, "Here's to the SSW, a strange little test that made it to age 20; may it have 20 more." Or perhaps, "To the SSW, born short (15 min), grew shorter with age (10 min) and continues to grow in many ways."

Two-decade old tests are not very common in audiology--especially one that is still growing in both clinical and research endeavors. Although, the SSW was not an immediate success neither has it been a flash in the pan. There is so much to this brief procedure that it took a long time for me and others to understand it sufficiently. Once it is understood it is a sensitive and versatile tool for the study of CANS disorders.

On this 20th anniversary I'd like to mention some of the many significant landmarks in the development of the SSW test. This is not to slight any of the other excellent and numerous contributions that I won't mention. As I think of them now, these studies and events seem to have shaped the direction of the SSW.

In 1963, Dr. William Hardy was a site visitor on an NIH grant application. He told me that it would be much better to evaluate a small number of patients with small, well localized lesions than many patients with widespread or unknown sites of lesion. That was extremely important advice. In this way we have learned about the abnormal responses that we can look for when there is pathology in various regions of the brain. Other than the AR centers it is often difficult to distinguish R from L hemisphere lesions. Therefore, we might have given up and never discovered that the SSW was looking at both intra and interhemispheric differences.

In 1964, Dr. Arthur Epstein, a neurologist at Tulane Medical School pointed out that the SSW is not equally sensitive to all lesions of the temporal lobe. It was particularly sensitive to AR lesions. The very first case with a CNS problem (Mr. BW) had at least 1 reversal. Two years later Marie Olroyd noted as she tested an aphasic patient that he repeated back the words correctly but out of order. At this point we began to number the word sequence. This led to the diagnostic significance of reversals and other response biases. The response bias information on the SSW test has turned out to be its most unique contribution.

In 1969, Ellery Young and Sharon Hadaway evaluated mentally retarded adults using the SSW. The lower the IQ group the poorer the mean SSW score. However, at each IQ level there were some cases that demonstrated normal C-SSW or A-SSW scores. This showed that IQ in MR cases was not the only factor influencing the SSW results nor even the most important one. It appeared that the errors were primarily associated with the site of lesion. This served as a model later on in understanding the performance of elderly subjects and young children.

In 1977, Emily White noted that LD children did not differ qualitatively from normal youngsters. Rather, they just had poorer SSW scores and more extreme response biases. She proposed an age correction for response bias to help differentiate normal from abnormal performance.

Most recently, Amy Miller studied autistic children on the SSW test and compared their results with language test scores and echolallic behavior. She found that anterior and posterior SSW signs were associated with corresponding language disturbances and echolallia. This and other studies have begun to show the connection between language function, anatomical localization and SSW results. Be on the lookout for Amy's article in JSHR.

The landmarks cited above as well as numerous other

(Cont. on pg. 4)

A Record Order Effect: 71/8

Floyd Rudmin
McGill University

Learning disabilities are said to be heterogeneous. Here's a case in point. JG, a 7 year old American boy was referred for an LD eval. He comes from a well educated family and is being taught in both French and English at school. He is performing below expectations in math and reading.

Hx: Forceps delivery, doctors noted a high pitch cry "indicative of brain damage." The cry normalized within a few days and development has been apparently normal since.

Audiologic Results: Normal peripheral hearing (Sp. Avgs.=0dB), WDS=RE 92%, LE 88%.

On the first 20 items of the SSW, JG omitted the 1st spondee. This was also true on the binaural practice items (C & D). He was then encouraged to guess and periodically reinforced with but small change in behavior. On 3 occasions he said the 1st spondee but omitted the 2nd. The OE 71/8, was certainly significant, even for a child of 7.

How to interpret this? This would appear to represent frontal dysfunction. At first glance the OE might appear to be the result of a very conservative strategy, but JG was very earnest in responding and his history of neurological involvement supports an organic explanation. The problem might reflect a severe memory dysfunc. in which he has difficulty transferring info from echoic to short term memory.

Well, is that a record Order Effect or not? Any other hypothesis or suggestions for follow-up testing/rehabilitation?

The Case of BW --- J. Katz, SUNYAB

Who is BW? And why is he of interest at this time? BW was one of the first people to be tested using the SSW and was the first one with a CNS disorder. I thought that it would be of interest to re-evaluate his results and see if we have any insights into his disorder, 18 years later. (I doubt that we knew enough about what to expect to have written a report of any sort, originally.)

This person was tested on June 23, 1962 by 2 graduate students, Joan Smith and Rocky Basil. At that time BW was 34 years old. He was injured in a traffic accident when he was 4 years of age. We didn't do too badly in our questions and scoring, considering how little we knew at that time. I was able to glean the following instructive information from the primative scoring and history sheets.

BW was unconscious for 2 days and for a while was in critical condition. He had a fractured skull,complete paralysis on the L-side and a memory loss for earlier events. Presumably he recovered in the years that followed as he was in the army in WWII (exposed to the noise from heavy cannons). We don't know how he performed in school nor his occupation.

When tested he had normal hearing for speech, excellent WDS (unfortunately given LV, which we find gives consistently better scores than recorded materials in our central cases) and no tone decay. There was 10-15 dB variability about threshold for puretones (this notation was made by the student but would have meant nothing to us at that time).

His 8 CN's were 3 4 5 3 7 10 1 3. If you work this out with 96 and 100% WDS for R&L you will find C-SSW to be Mo but the A-SSW Mi. One reversal was shown (by arrows) on the SSW form.

I would interpret the results to show a R-hem disorder anteriorly (E 15/21, O 24/12). The effect may have been felt up to Heschl's gyrus and perhaps mildly effected the AR center on that side. The difficulty with getting reliable P.T. thresholds might be explained by the R-hem lesion. That is, the R-hem is primarily responsible for handling music (which tones are). Thus in this case as in others with R-hem involvement we can see abnormal results on various puretone tests.

BW would be 52 now. It would be interesting to retest him. It could be that aging effects that are not noted until the later 50's would show up in him because he didn't have enough internal redundancy as a result of his injury. Or perhaps BW is doing just fine having learned to use more of his grey cells than most of us have learned to use.

Socrates and the ΣΣΥ Test

The scene is Athens,Gr., the yr is 402 BC. We see the philosopher Socrates deep in meditation, sitting on a cold bench. He is surrounded by students colleagues and lots of slaves. There is complete silence with all eyes toward the master. In one moment Socrates whips out his handkerchief & lets out with a loud sneeze. Faintly from the perimeter of the crowd one can just discern the words, 'gazunt heit.' Socrates suffers the same fate as everyone who sits on cold stone benches--eyes & nose that are red & swollen.

You the 1980 reader might wonder what possible connection there might be between this foolish story and the SSW test. You probably have not heard of the ΣΣΥ (Sigma Sigma Upsilon) test, the ancient ancestor of the SSW.

They All: Hush the master speaks.
Anonymous(a famous Greek who wrote lots of poetry): He is about to utter a profound thought.
Finkelstein: Nay, he is about to sneeze again.
Socrates: Ah, ahh tcheww!
Faint Voices(from here & there): Gazunt heit.

From one report Socrates (S) asked for a little decorum at this point. This confused us because it was already so quiet & orderly. We later found out that Decorum is a Gr. wine.

Socrates: Friends! Hail! Me thinks we should discuss the ΣΣΥ test this day. What say ye?
They All(TA): No, nay, never, not me...
S(Blowing fiercely into his hankerchief & apparently oblivious to the negative response): Fine my comrades, the ΣΣΥ it will be. But, I pray thee speak up as this is August allergy season in Athens and my ears are swollen shut. Let me start off with a profound question. What do we need to be happy? (Don't be taken in by the apparent simplicity of my question,altho I know you will.)
TA: Wine, whisky, women, Greek hymns...
Finkelstein(F): He refers to the BRAIN, the team captain, the big computer, It with a capital I. Right Soc? Right?
S: Right Fink. By my question I imply much more than any 1 sensation. Happiness requires something common to many sensations... the BRAIN.
TA: The brain, the brain.
Innocuous: I was sure he meant women.
S: Since the brain takes in all senses,must it not also decide if the experience is enjoyable?
TA: Yep, Socrates.
S: How can one go about studying the CANS?
TA: Hearing tests.
S: No nothing so obvious. Try again.
TA: The Sigma Sigma Upsilon test.
S: Hey, this Socratic method really works. Yes, the ΣΣΥ test. And why do people say that you need a 3-day workshop to learn this test?
Innocuous: 3 days because the boss won't pay for more.
S: Good. By your Innocuous response you imply that there's more than 3 days worth of material and that's true. But why, oh why is there so much on the and not on the(bleep) test and the (bleep) battery???
F: They are not as complex as the .
S: Oh, but I thought that the ΣΣΥ is so simple--just 2 spondees.
F: Simplicity makes it only more complex! It is just that much more applicable to different populations & problems.
S: Way to go, Fink! But why does that apply to the ΣΣΥ alone?
TA: Because its short.
S: Hold on right there, Busters. We Athenians might discriminate against women, children & non citizens but we have never held a person's height against them.
TA: Not because it is short!
S: Now that you have succeded in correcting your foolish error,pray tell, what the heck is the answer I seek?
F: May I ask Soc's leave to test my sinews in a glorious effort.
S: Well if you must and don't mind making a spectacle of yourself.
F: The ΣΣΥ is already 20 yrs old(2398 yr for the current reader). Much clinical experience & research enrich us lending both deapth & breadth to our diagnoses.
S: For a rather pathetic

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(CONT.) NO MORE TEENAGER

studies and clinical observations have contributed importantly to our present knowledge of the SSW. A stream of SSW studies have been hitting the presses and it is growing clinically in both number and applications. Currently, advanced workshops, the SSW Newsletter and the SSW Study Group all play an important role in diseminating new ideas and findings.

The job of understanding the central nervous system is unending. Fortunately, the job of locating central auditory dysfunction is not quite so massive a task. By a series of coincidences and the contributions of many people, we now have a refined test (by today's standards). The SSW is brief, widely applicable to many populations, is quite sensitive and very reliable. It is not inconceivable that it will serve as a standard for other central auditory tests, if it is not already. But unlike the other tests that are less complex or have a more limited scope, the SSW requires a core of dedicated, up-to-date professionals to teach it, research it and to apply it.

"So here's a toast to you who teach it, research it and especially to those of you who apply it clinically --- thanks, good luck and let's do this again in August in the year 2000."

Even the most experienced SSW user will find the following response difficult to score. Try it in the space below. Then see how you can always get them right using the foolproof method. RESPONSE: " rup stairs up town."

up stairs down town	R

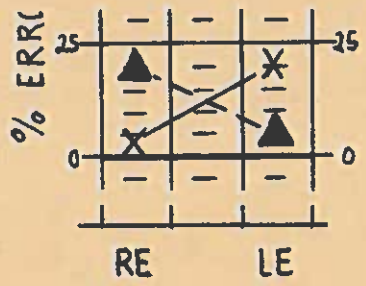
Did you try it? There was 1 error and 1 Rev.:

up stairs ~~down~~ rup town 3 2 1 4	(R)

The RULE to follow is:
1- Consider each word as correct/not(eg, did he say up? stairs? etc)
2- If NO draw a line thru word.
3- When all 4 are marked then fit in the remaining word/s 'appropriately.'
4- See if response can be read properly from L to R.
5- If NOT renumber below.
6- Enter # wrong & rev.

ASHA PREVIEW

Katz, Avellanosa & Aguilar -- Medians for R-SSW (x) & CES (▲) in 9 cases with verified corpus callosum tumors.



⟨⟨ONT. ξξϒ⟩

looking Athenian you do quite well, Finkelstein...or are you one of the slaves?

F: In order that I may find favor in your(allergy reddened) eyes I want to improve on my answer. I...I think that CANS tests can be twisted & turned by dysfunction at various levels of the system (this goes for & the SSW as well).

TA: So say we all.

F: So why then is it just the ξξϒ that you hear has all of these conditions and explanations to contend with? And why is this not true on so many of the other tests?

S: Let me see if I can answer that one, Fink.

F: There were 2 questions not one, Socrates.

S: I'll take the easy one & let They All have the other one. After so many yrs we have found out the test's capabilities & exceptions. It is because of our knowledge about the test that we have so many details to deal with.

F: That's enough Soc. How about the rest of you?

TA: The other tests can also be influenced by many factors. But at this point they are not well worked out, we think.

Anonymous: Oy vei! Socrates has fallen. He's in seizure. A Spartan trick. Get the ξξϒ tape.

F: Soc this is for your own good. Repeat the wds you hear, ya hear?

S: ...'grape leaf, toga string. Did I get it?'

THE ξND

SEVEN SEMI-DEADLY SINS

Jack Katz

If you've taken a recent SSW Workshop the chances are that you use the test accurately & effectively. Nevertheless due to my own limitations in teaching or to some misunderstanding you might be making 1 or 2 of these semi-deadly errors. Actually no one has died from these little sins but it would be best to phase them out. If you disagree please let me know.

1- Interpreting children's results as though they were adults. TEC categories and the data in the Category Table are based on adult performance and do not apply to children. Use the Katz & Illmer (1972) figure and associated data for analyzing the results of children (esp. under 11).

If the child reaches or excedes his age curve it is appropriate to say "... abnormal performance, significant auditory perceptual dysfunction, below normal on a dichotic listening task" or "relatively/extremely poor results on the SSW test." The terms O, Mi, Mo, S tend to mislead as these have not been worked out for children of different ages.

2- Assuming that less than normal SSW results are evidence of a LESION. The SSW has been validated and crossvalidated on pts with known CNS lesions. However, we can not tell if the person we are testing has an actual lesion or some other form of dysfunction. The term lesion could be misconstrued as a medical diagnosis. Since lesion implies tumor etc. it is best to avoid it. "Dysfunction, problem, disorder, etc." would be preferrable.

3- Assuming that Mo/S scores indicate an AR problem and no other. Our first consideration for Mo/S results is an AR involvement, but corpus callosum or hi brainstem disorders can also produce such scores. Look for retrocochlear signs (even subtle ones) in hi stem cases and the crossed pattern for SSW and CES in disorders of the corpus callosum.

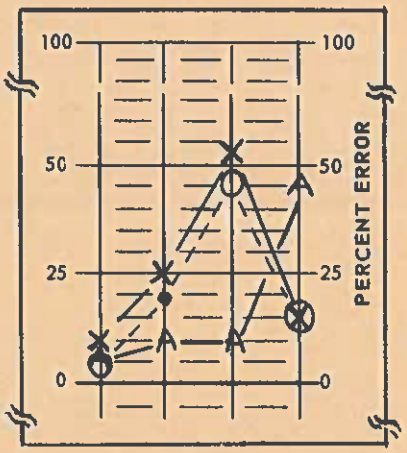
4- Using live voice WDS to compare with the SSW. In my experience WDSs are higher when given LV to pts with the CNS disorders (compared to the Hirsh W-22s). This can throw off the SSW analysis. I have seen it more times than not but do not have a good explanation as yet. Perhaps it is the slightly lowered redundancy of recorded materials that make them more compatible than LV on one test and tape for the other.

5- Showing errors for words that are out of sequence. This error is very common among those who have not attended an SSW workshop. The pt says "work town stairs down" for item #1. This constitutes 1 error and 1 Rev and not 4 errors.

6- Making an error into a reversal. The SSW tempts the listener to reuse one of the monosyllables. When he uses it instead of another word it is simply a substitution. Don't show 2 numbers under the word that was repeated because it will look like a reversal. Rather show the substitution above the error word and save the renumbering for when you can't read the response from L to R.

7- Assuming that the SSW is simply a test of temporal lobe function. The SSW is both more than a temp. lobe test and less. Often people who have not attended a workshop assume that many errors indicate "temporal lobe involvement" and few/no errors show that the temporal lobe is normal. The SSW is highly sensitive to lesions of the AR center in the posterior-superior part of the temporal lobe. Anterior dysfunction (unless it involves the anterior commissure) should yield relatively good SSW scores. The anterior locus is often revealed by response bias (E L/H, O H/L or 2-6 revs).

The SSW is also more than a temporal lobe test because it can show evidence of brainstem, frontal, corpus callosum and other sites of involvement when taken together with other tests. To use just the quantitative score and not the response bias is a DEADLY SHAME (not quite a sin).



Find 3 Errors ↑

_SSW_Newsletter_

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