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# A Rejoinder on the PSW Model for SLD Identification: Still Concerned

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**Abstract**

We address Christo, D'Incau, and Ponzuric's response to our original contribution to this journal "When theory trumps science: A critique of the PSW model for SLD identification." Christo and colleagues stated that there is empirical support for PSW procedures as a component in the identification of specific learning disorders and raised concerns regarding our critique of the PSW model. We present further research to support our perspective and maintain that empirical data are lacking for PSW assessment in the identification of SLD. School psychologists are cautioned to consider the evidence regarding the practice of PSW-related procedures.

*Keywords*: Evidence-based practice, specific learning disability, PSW

**A Rejoinder on the PSW Model for SLD Identification: Still Concerned**

The purpose of this article is to provide a rejoinder to the response by Christo, D'Incau, and Ponzuric (2016) to our article "When theory trumps science: A critique of the PSW model for SLD identification" (2016) published in *Contemporary School Psychology.* Apropos of the response, we first address counterarguments and then provide a different perspective on the future of specific learning disability assessment in school psychology. Before continuing, we note that we are aware that our critique may have sparked lively debate and conclusions about our purpose. We did not set out to distort our colleagues' intentions nor to take those intentions out of context—any such perception was the fault of our presentation rather than our intent.

As a backdrop to this rejoinder, we remind readers that the goal of evidence-based practice (EBP) in school psychology is to provide practitioners with a framework from which to distinguish between scientific and otherwise questionable clinical practices (Kratochwill, 2007). Indeed, although our business focuses on evidence-based interventions, *evidence-based assessment* plays an equally important role. From this perspective, procedures such as the pattern of strengths and weaknesses method (PSW) for the identification and treatment of specific learning disability (SLD) must be supported with appropriate scientific evidence *prior* to implementation (Dombrowski & Gischlar, 2014; Kranzler, Floyd, Benson, Zabosku, & Thibodaux, 2016b). Unfortunately, the SLD assessment and identification literature is replete with questionable and un-validated claims (Dombrowksi, Ambrose, & Clinton, 2007; Dombrowksi et al., 2006; McGill, Styck, Palomares, & Hass, 2016). As stated by Lilienfeld, Ammirati, and David (2012), "all school psychologists, regardless of the setting in which they operate, need to develop and maintain a skill set that allows them to distinguish evidence-based from non-evidence based practices" (p. 8).

Despite the intuitive appeal of PSW procedures, empirical support for the method has been questioned (see McGill et al., 2016 for a comprehensive review). There is an accumulating body of empirical literature that raises strong concerns about the psychometric integrity of the scores used in these analyses and the potential diagnostic utility of the various approaches as a whole (e.g., Kranzler, Floyd, Benson, Zaboski & Thibidoux, 2016a; Miciak, Fletcher, Stuebing, Vaughn, & Tolar, 2014; Miciak, Taylor, Denton, & Fletcher, 2015; Miciak, Williams, Taylor, Cirino, Fletcher, & Vaughn, 2015; Steubing, Fletcher, Branum-Martin, & Francis, 2012; Taylor, Miciak, Fletcher, & Francis, 2016).

## Aims of This Rejoinder

We are grateful for the opportunity to address the concerns raised by Christo, D'Incau, and Ponzuric (2016). The original CASP position paper and response from our colleagues greatly contributed to the conversation about appropriate SLD assessment and identification procedures. Our intention with the original article was to spark dialogue about the PSW model in specific as it has taken hold in our business and we chose to use the CASP position paper as a scaffold for that conversation. The authors noted several perceived limitations in our critique. We hope to address these concerns.

## Reflections on the Rebuttal to Our Manifesto

Christo and colleagues (2016) stated that several statements we extracted from the CASP position paper were taken out of context so as to distort their original meaning. Again, we want to clarify that our goal solely was to address the PSW model and the imbedded, albeit not explicitly stated, assumptions regarding the PSW approach. Specifically, the authors expressed that we overlooked the importance stressed in the position paper of a *comprehensive assessment*

process. We are completely in favor of a comprehensive assessment—that is best practice. Our goal was to challenge the use of PSW procedures as part of that process.

It should be noted that proponents of the PSW model frequently invoke the term *comprehensive assessment* in response to critiques in the professional literature (e.g., Flanagan, Alfonso, & Mascolo, 2011; Hale et al., 2010). However, it has long been shown that assessment teams disproportionally weigh certain pieces of information at the expense of others when making the yes/no decisions required in the SLD identification process (see Peterson & Shinn, 2002). We caution against giving primacy to a confirmatory PSW pattern as the *de facto* inclusionary factor for determining SLD eligibility/diagnosis (albeit within a comprehensive evaluation). Given the potential critical role of PSW assessment within this process, it is our position that the concerns we raised in our review are valid.

To support the use of PSW procedures, several studies were cited in the rebuttal regarding different ways that children can have discrepant cognitive profiles and achievement. However, as noted by Miciak et al. (2014), "evidence for the existence of distinct disability subtypes is not *ipso facto* evidence for the reliability, validity, or utility of PSW methods for LD identification," (p. 23). Furthermore, these citations do not obviate the measurement issues we raised in our review about concerns regarding SLD classification using these methods.

A growing corpus of the psychometric literature indicates that the broad ability scores that are the focal point of PSW analyses from popular cognitive tests such as the WISC-V and WJ-IV lack the necessary construct integrity to be used for individual decision-making (e.g., Canivez, Watkins, & Dombrowski, 2016a, 2016b; Dombrowski, Canivez, Watkins, & Beaujean, 2015; Dombrowski, McGill, & Canivez, 2016). For example, Canivez, Watkins, and Dombrowski (2016b) recently conducted an independent confirmatory factor analysis and found

that a four-factor model best fit the WISC-V normative data. Of concern, specification of the publisher's five-factor CHC-based model may have resulted in an improper solution indicating that model was not tenable in light of the data. Canivez et al. (2016b) and Beaujean (2016) also noted discrepancies in the statistical information reported in the technical manual and questioned the procedures used to validate the instrument by the test publisher.

As a result of these findings, it is not surprising that recent diagnostic validity studies of PSW methods (e.g., Kranzler et al., 2016a; Miciak et al., 2014; Steubing, Fletcher, Branum-Martin, & Francis, 2012) indicate that use of these procedures in SLD classification may result in an undesirable Type I error rate (false positive), leading Kranzler et al. (2016a) to conclude that "clinicians will spend a great deal of time conducting assessments that have a very low probability of accurately identifying true SLD" (p. 11). As we noted in our critique, clinicians who evaluate idiographic strengths and weaknesses tend to overlook the fact that significant variability is widespread in the population (McGill, 2016; Watkins, 2000). To buttress this point, we utilized the R code provided by Schneider (https://assessingpsyche.wordpress.com) to simulate 1,000,000 cases of WJ-IV Cognitive data using the multivariate normal distribution to estimate the prevalence rate of having a cognitive weakness. As illustrated in Figure 1, using Flanagan, Alfonso, and Mascolo's (2011) criteria for documenting a cognitive weakness in the D/DC model, over *half of all* individuals ages 9-13 presented with at least one cognitive weakness and 1 in 4 presented with two or more. Unfortunately, these psychometric issues have received scant attention.

Finally, the authors object to our use of the term *aptitude-treatment-interaction* (ATI). However, we suggest that the term is not a *magical incantation*—wherein one is referencing the general idea that cognitive assessments can be used for treatment planning *if and only if* the term

is invoked as ATI is a major assumption of the PSW model (Fletcher, Stuebing, Morris, & Lyon, 2013). As we indicated in our review, empirical evidence to support this position has been unavailable (see Burns et al., 2016; Elliott & Resing, 2015 for recent reviews).

## Conclusion

In our review and in this rejoinder we raised pertinent questions about the psychometric integrity of the scores used in PSW analyses and the potential diagnostic utility of the method as a whole. Although Christo et al. (2016) have provided an articulate defense of the position paper model, we believe that the more substantive psychometric and conceptual concerns that we raised about the PSW assessment methods remain unaddressed. Regardless of our theoretical differences, we have profound respect for the position paper authors and their commitment to the field. Nevertheless, we continue to caution against wholesale endorsement of the PSW methods for use in practice as described in the position paper until appropriate evidence is furnished to support and defend their use.

We stipulate that the debate about correct procedures for SLD identification and treatment invokes strong opinions. Debates on the merits of PSW assessment likely will remain dispositive until additional data are provided in the professional literature. Nevertheless, PSW methods and techniques continue to proliferate and expand (see Schultz & Stevens, 2015 for a recent example using selective WJ-IV subtests) in spite of this lacuna. While researchers and trainers encouraging practitioners to adopt these procedures are well intentioned, the empirical evidence we have reviewed suggest these approaches may not be psychometrically defensible. Relatedly, it is worth pointing out that empirical support for previous incarnations of profile analysis has long been found wanting (e.g., Macmann & Barnett, 1997; McGill, 2016; McGill, et al., 2016; McDermott, Fantuzzo, & Glutting, 1990; Watkins, 2000; 2003). Whether PSW

implementation represents another journey down ‘a blind alley’ such as the discrepancy model or ultimately advances the cause of scientific school psychology remains to be seen.

**Ruminations on the Continued Search for a Diagnostic Gold-Standard**

On a final note, Christo et al. (2016) are correct that we did not outline our viewpoint on what we believe should be the direction of this important debate. As noted, our original intent was to challenge the espousal of the PSW model without adequate data to support its use in our business rather than champion a preferred diagnostic model. Christo et al. (2016) correctly stated that the discrepancy model is not tenable. In contrast, they supported the use of MTSS/RTI methodologies as essential but not singularly sufficient for SLD identification and appropriately noted the problems with these approaches. Though *third-way* approaches that seek to marry MTSS/RTI with traditional cognitive assessment are appealing, the measurement concerns that we have raised suggest that the inclusion of these data may only further complicate the matter of SLD classification.

Whereas we stipulate that learning disabilities are legitimate neurobiological phenomena, we do not believe the present data support that clinicians can *consistently* and *validly* differentiate an individual with a learning disability vs. low or under-achievement using any of the cognitive discrepancy models (e.g., PSW) posited in the professional literature (e.g., Fletcher & Miciak, 2016; Francis et al., 2005; Kranzler et al., 2016a; Taylor, Miciak, Fletcher, & Francis, 2016). Indeed, SLD as a construct remains ill-defined and there are numerous classification methods used within and between states, illustrating well the problem our field faces with regard to consistent and accurate identification (Williams, Miciak, McFarland, & Wexler, 2016). As Fletcher et al. (2013) argued, “It is ironic that methods of this sort [PSW models] continue to be proposed when the basic psychometric issues are well understood and have been documented for

many years" (p.40). Until appropriate technologies are developed to adequately identify latent constructs such as SLD, we are left to make decisions based upon theories and techniques with questionable verisimilitude (Kranzler et al., 2016a, 2016b; McGill & Busse, 2016; McGill et al., 2016).

Since the term *learning disability* was first introduced into the educational lexicon by Samuel Kirk in 1963, researchers have yet to agree on a diagnostic *gold standard* method of SLD classification. Apropos of this dilemma, we are again debating whether to implement another complex theoretical model (PSW) of classification/diagnosis to comport with anticipated changes in IDEIA and state regulatory criteria. Until or if our technology allows for much better assessment, perhaps we would be better served if we acknowledged the psychometric limitations that have long plagued SLD classification and instead embraced more parsimonious ecologically valid methodologies aimed at bolstering the functional and academic skills of our charges such as problem solving and needs-based direct assessment for intervention (e.g., Floyd, 2010).

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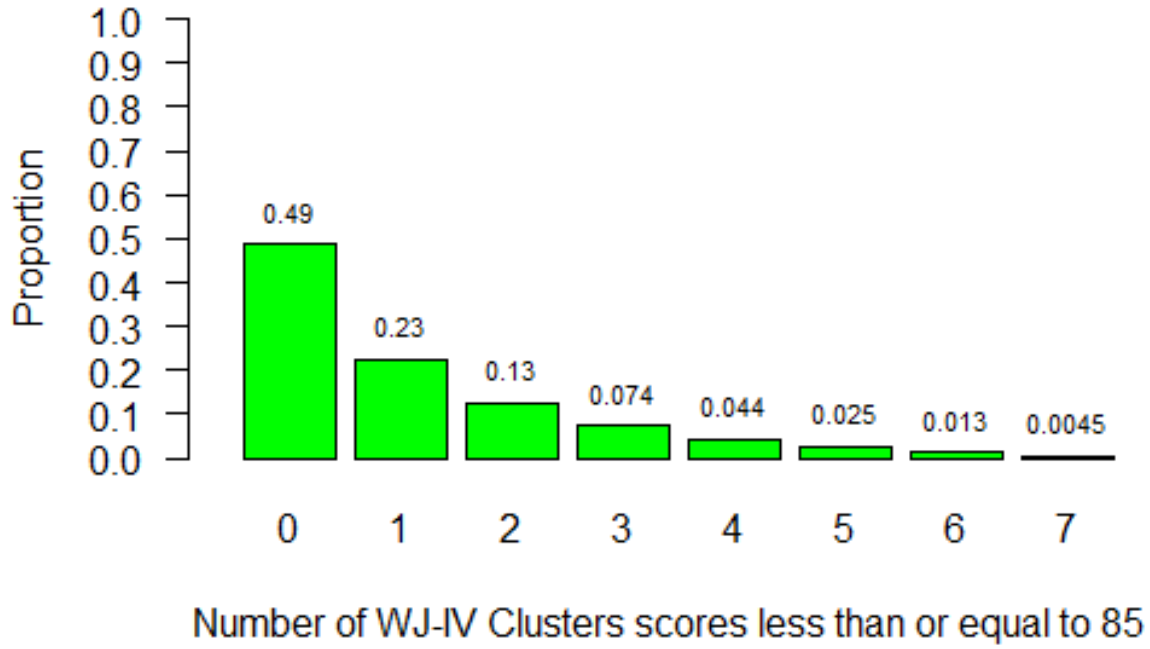


*Figure 1*. Simulation results of the prevalence rate of having a normative cognitive weakness in a CHC broad ability cluster score on the WJ-IV COG at ages 9-13.