

# Response to Psychology Board of Australia Consultation paper

*“Options for the protection of the public posed by the  
inappropriate use of psychological testing”*

Response supplied by:

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## Executive Summary:

The consultation paper released by the PBA outlined various areas of issue that were available for comment.

They included:

- Understanding the nature and magnitude of the problem
- Analysis of possible responses

This response relates to the specific context of neuropsychological assessment. This type of evaluation has serious implications in both the forensic and health/welfare systems. To a lesser extent it impacts upon vocational testing (although there is a small role, it is not the focus of this response).

Psychologists traditionally rely heavily on their psychometric tools, and none more so than neuropsychologists. Neuropsychology is a speciality of psychological practise that combines knowledge about neurological/neuroanatomical information and psychometric assessment of behaviour.

In summary, it is our view that as a profession we rely heavily on the integrity of our test materials, in order for them to retain their diagnostic utility. If they are used/misused by non-psychologists they would constitute a grave harm to the public in a number of areas. In general there may be a misuse of the diagnostic nature of some of the tests, causing under or overdiagnosis, thus burdening people with an incorrect diagnosis (e.g.: dementia) or failing to make a correct diagnosis when one exists (e.g.: mild traumatic brain injury). The tests themselves are not diagnostic; the conclusions reached by neuropsychologists take into account the complex tapestry of clinical history, neurological events, test results and psychometric issues. In addition complex features such as personality and behaviour also inform our decisions. If people are not trained in the complex interplay of all of these areas, then their conclusions using the tests alone will be superficial at best, and incorrect (and harmful psychologically) at worst.

It is the experience of both the author and the majority of members of the Old CCN that misuse of test procedures and materials already occur, and by reducing the stringent requirements of protected tests, serious harm will be done to the public and the practise of our profession.

## Current situation:

At the current time, the Wechsler scales (memory, intellect, academic achievement) are amongst the protected tests; that is in order to purchase them one must demonstrate that they are a psychologist. However, in Queensland, Guidance Officers (who are not necessarily psychologists) also administer the WISC (Wechsler Intelligence Scale for Children). The CCN has raised concerns about this on previous occasions.

A number of neuropsychological tests, however, are available in "public domain". They include older tests that are no longer protected by copyright (e.g. Trail making test) and others which have been published in text books. It is the experience of many members that non-psychologists often use these tests. We will rely mainly on our experience with misuse of these tests, as they are readily available to non-psychologists.

## Access to tests:

Currently, it appears that non-psychologists can have access to tests through the following means:

- Public domain materials (such as tests reprinted in text books) For example, the Rey Complex Figure can be found in some text books.
- Test companies not monitoring the qualifications of purchasers (this was indicated in some American literature, but is not currently our experience)
- Institutions: for example a senior psychologist (who has the necessary qualifications) may purchase the restricted test, but leave the institution or fail to supervise the equipment properly, leaving it open to use by non-psychologists (this may occur inadvertently)
- Ebay. Lobello & Zachar (2007) recounted the disturbing data that over a three month period of monitoring ebay in 2005, 82 psychological tests (or part thereof) were offered for sale on ebay. These included current versions of tests (e.g.: MMPI-2) and test manuals and equipment (WAIS-R, WISC-R, WISC-IV). Some of the sellers indicated that they required evidence of credentials, but not all did. In addition, some of the photographs clearly demonstrated the test materials and instructions. They noted that although some tests were outdated, many of the materials and questions have substantial overlap with current versions. They therefore suggested that regulatory bodies needed to include a stipulation about disposal of test materials (e.g.; from estates) or when they become outdated
- Internet sites. There are some internet sites that provide details regarding tests and suggestions about how best to perform on them. It is the experience of this author that some years ago there was so much coverage on the internet of a malingering test, that a warning was issued to clinicians (who had purchased the test) instructing them to remove the cover of the test that stated its name, in order to avoid clients realising what test they were doing and applying this knowledge obtained from the internet as to how to avoid detection.

Whilst it is acknowledged that some psychologists make errors in test administration, scoring and interpretation (as illustrated by complaints to the registration board), it is noted that the registration board has the opportunity to discipline them and insist that they undergo remedial training. The problem with non-psychologists having access to psychological tests is that they are not under the scrutiny or jurisdiction of any body, and therefore the necessary standards of practise cannot be enforced.

In the experience of our members, there are a number of non-psychologist groups who engage in assessment of cognitive function, often using tests obtained from the public domain (or other methods).

They include: Occupational Therapists  
Speech Therapists  
Guidance Officers

It is noted that by providing examples of misuse of these by these professions, we are merely trying to illustrate our concerns, rather than discredit them.

Many of our members have observed situations including these health professionals misusing tests. Fundamentally, they relate mainly to problems in administration and interpretation.

### **Administration of tests in a fashion that violates the standardised procedure:**

- Repeated administration of the test over an extended period of time without application of appropriate statistics or current standards for delays between assessments. There have been instances where these tests (for example the Rey Complex Figure) have been given so frequently (e.g.: weekly) in order to monitor recovery from brain injury. This is not the manner in which the test was designed to be used. The way that the interpretation of the test was conveyed to the client was that they had improved, without any real understanding of the impact of practise effects. This meant that the client was very practised at the test, and performed extremely well when it was (correctly) administered as part of the formal neuropsychological battery, rendering it of no use. In fact, it created a spuriously good result that had to be explained in a forensic context. This inappropriate use of the test materials by Occupational Therapists has been repeatedly reported to this author over a period of some years by many different patients, and thus it seems likely to be occurring.
- Modifying test materials, or only giving parts of a test, or administering a test in a non-standard fashion. An example that has been observed by this author is of a health professional drawing a non-standard version of the trail making test part B in a hospital chart and asking the client to complete it. This was not presented in the standard format, and thus it is doubtful that it would have yielded any reliable information for that examiner. When that client underwent neuropsychological assessment, they had already been exposed to the concept, and had practised the response (albeit in the non-standardized fashion) so that it was no longer novel, and this meant that the test could not be relied upon to measure what it was intended to.
- Administering tests in a non-standard manner – additional prompting and providing answers. There are very specific rules about the level of prompting and assistance that can be provided on standardized tests, and psychologists are trained to adhere to these rules. Unfortunately, it is the experience of our group that when non-psychologists administer public domain tests they often do so in a non-standardized manner. Thus they may give extra time or hints and prompts to assist the client to get the answer right (or even tell them the answer, or how to arrive at it). This may not be motivated by negative intentions, i.e. they may want to help the patient to show that they are improving, but the effect is that it renders the test uninterpretable. What is of greater concern is that when tests are administered in this way they are often interpreted with the weight that would be accorded a correctly administered and scored test. That is, non-psychologists rely heavily on the test

results, regardless of the fact that they mean little because the test was incorrectly administered.

## Issues in Interpretation

- Providing test results without reference to norms. It is commonly encountered that Occupational Therapists record raw scores on certain tests (for example the Grooved Pegboard) in hospital charts (observed repeatedly by this author). On their own these scores are not useful, as the normative data set takes into account age, education, gender and handedness. Thus in this situation the client has been exposed to the test to obtain no meaningful data. Again, when they undergo neuropsychological assessment they are already practised at the test which may inflate their score. Reporting scores in this fashion carries with it the implicit assumption that the consumer of the report knows the range of normal that applies in this situation (this is not possible, because as an experienced user of these tests it is evident that this type of data cannot be simply recalled, as it is so complex). Psychologists know that they must compare the results to the normative data in order to make the data interpretable. In our view this is confusing for consumers of the reports (e.g.: treating doctors) and violates our tests without providing any useful data, and decreases the utility of the test itself (or assessment generally) in the eye of the consumer. This is not a good thing for the practise of psychology, having test results reported in such a way means that our contribution is devalued, and the utility of the test cannot be seen.
- Simplistic interpretation: i.e.: Lack of understanding the complexity of conditions when interpreting test results. Unfortunately, even after all of the above problems, it is often our experience that the results are then interpreted in a fashion that fails to acknowledge the complexity of the situation. For example a poor result on the trail making test part B is often blindly interpreted as an indicator of impaired executive (or frontal lobe) function. Another member reported that they have observed a poor trails A result being reported by Occupational Therapists as indicating impaired visuospatial abilities. It is our observation that often other confounding issues (e.g.: reduced processing speed, reduced attention/working memory or poor literacy) are not taken into account. This leads to incorrect labelling and potentially incorrect treatment of the client, which is unsatisfactory. This situation has again been repeatedly experienced by this author in the public health system.
- Over interpretation of screening measures. One member reported a situation in the health system where an occupational therapist told a patient that they have no long term memory and would never be able to form new memories. This diagnosis was based on a screening measure performed 24 hours after a motor vehicle accident. Notwithstanding the lack of understanding of the possibility that the patient could have been in a state of post traumatic amnesia (PTA, a transient state following head injury) this is an extremely dramatic conclusion to draw from a screening test, and only served to distress the patient and their family. It is also noted that this could also trigger abnormal illness behaviour, if having been told that they will never make memories again, the patient may come to believe this and act according, again further burdening the health system. It may also mean that appropriate evaluation of PTA and intervention (e.g.; psychoeducation to mitigate the development of the post concessional syndrome) would not be carried out (or may not be positively received by the patient) due to the strength of that first diagnosis.
- Lack of understanding of low base rate conditions. In some work situations (for example a "memory clinic") certain diagnoses are encountered with such a high frequency that

regardless of the test result, that diagnosis is likely to be correct a very large percentage of the time. In individuals who use tests blindly, without reference to more complex aspects of cognitive function, history and neurological syndrome, this diagnosis will be correct a good percentage of the time, and they are likely to feel confident in their abilities based on this (and the use of a test). However, typically, when low base rate conditions are encountered, they are not considered, because the test users are typically not educated about the complexity of alternative hypotheses. Errors may not occur often, but when they do they have serious implications for treatment and decision making (for patients and their families).

- Lack of sophistication in understanding complex behaviours. Poor performance on a psychological test can occur for a variety of reasons. Neuropsychologists are trained to consider many possible alternative hypotheses. It is our view that many non-psychologists tend to interpret tests in a simplistic fashion, (i.e. a client performed poorly on a memory test so they must have an organic condition causing them to have poor memory) rather than taking into account that there may be more complex issues at play (illness behaviour, malingering).

This causes a failure to consider the impact of psychological issues on test performance. An example is provided by a member below:

*A Guidance Officer assessed a child using the WISC-III. She did not inform the parent that the testing would be conducted and apparently the child had no warning either. The mother asked why her child was being placed in a Special Ed Unit and was told it was because the test results showed the child was "low IQ". The mother queried this - she was never given detailed feedback on the results (only overall IQ score) but I was able to obtain a details of the raw scores - it was apparent that the child's performance on the first 3 subtests was much poorer than his performance on the remainder of the tests - this seemed to me it may have been due to anxiety on the part of the child regarding the testing procedure or improper delivery of test instructions to the child (or lack of rapport being established etc. etc). On retesting I found no significant difference between the subtest scores - the child was Low Average in overall ability. He had a history of anxiety and this appeared to be affecting his progress at school.*

**Comment:** This case clearly demonstrated the dual issues of a person who is not fully trained using the tests and interpreting them in an incorrect manner, and the failure to appreciate the accompanying psychological condition. The child's placement was demonstrated by our member to be inappropriate, but had that intervention not occurred, this child would have remained in an inappropriate educational setting, and his underlying condition would not have been treated.

- Failure to appreciate the gravity and complexity of organic conditions, both on testing and in a wider sense. A further example is provided by a member below:

*Another child was assessed by a Guidance Officer - the child had a history of head injury but had never been referred to a neuropsychologist (the family lived in the far north). Only the WISC was administered and on the basis of this the parents and teachers were told that the child was of average ability and that the poor academic*

*performance post accident must be related to lack of effort. When I saw the child I readministered some subtests of the WISC as well as giving the WRAML. Testing showed that the child had significant deficits in attention and concentration (no comment was made by the GO about the huge discrepancy between DF and DB) as well as memory and learning. These deficits would have accounted for the decline in academic performance post accident. However, by the time I saw the child he was also depressed because despite actually putting a great deal of effort into his studies, he could not remember new learning at school.*

**Comment:** In this situation, again, there was serious mislabelling by the Guidance Officer. This indicated a failure to appreciate the nature of the organic injury, and its potential impact upon cognitive performances. This had again led to a situation where the child was viewed in an inappropriate manner, and was not receiving the support and assistance that he required as a result of the traumatic brain injury. As our member has illustrated, the consequence was that the child developed a serious psychological condition (i.e. depression) as a result of the situation. The initial misdiagnosis may well have contributed to the development of this condition, as he was not provided with appropriate resources. These types of cases have serious implications both in terms of the individual members of the public mental health, but also in future burden upon the health system.

In part some of these difficulties may have arisen due to reliance of some Guidance Officers (as reported by another member) on report writing software, rather than expert analysis and interpretation of the data, that is provided by neuropsychologists.

## Consequences

The result of these behaviours is that some of the tests that we rely upon (that have a strong research literature supporting their correct use) are rendered useless because clients have been

- Exposed to some or all of the stimuli
- Potentially exposed to the answers / strategy for completion
- All of the above in a non standardized fashion,

This means that even if neuropsychologists use the task and apply re-test statistics to it, we cannot overcome the problem of the client being shown how to complete the task, or been shown the task long (or often) enough for it to become very familiar/practised (and therefore easy).

## Consequences for the profession

For practitioners this means that there are fewer tests available for us to use. If the tests that are currently protected were allowed to be accessed by non-psychologists, these behaviours could potentially negate their utility, leaving psychologists NO objective measures to rely upon,

The way that our contribution is viewed by referrers is potentially diminished by this behaviour. They see simplistic conclusions drawn from brief assessments and wonder why we need to spend so much time on complicated tests and scores. They also are presented with a model of tests not providing any useful information, or any complexity of interpretation, which has serious implications for the treatment of consumers within the health system.

## Consequences for the public

There are a number of potential consequences (which have impact on the public) In relation to:

1. Neuropsychologists

2. Medical Specialists
3. Their health

**Neuropsychologists cannot perform their roles because of:**

Misdiagnosis – i.e.; not finding memory problems in an individual who has practised a memory test so many times they are good at, without the neuropsychologist knowing it. This may mean that subtle cognitive changes, such as the early stages of dementia, are missed (and therefore small windows of treatment opportunity are also missed) because some test materials have been used in an inappropriate manner. This prevents neuropsychologists from making the substantial contribution to diagnosis and treatment that they are trained to be able to.

If neuropsychologists cannot rely upon their tests, then they cannot assist the medical profession in making appropriate diagnoses, potentially resulting in misdiagnosis and mistreatment (e.g.: failing to detect early dementia through relying solely on a screening test, may mean that treatment is not undertaken at the earliest possible juncture and is therefore less likely to be successful).

**Medical Specialists**

It is confusing to consumers of psychological services, as they have no way of knowing if a test has been administered in a standardized fashion, scored and interpreted correctly according to the norms. Because they are used to psychologists doing this, they may place too much emphasis on unreliable information, and this may lead to:

- Misdiagnosis (and therefore treatment)
- Misinformation

**For the public the harm can come in the form of:**

Underdiagnosis often impacting on treatment – due to poor understanding of the complex issues that accompany psychological testing, i.e. subtle cognitive changes or low base rate conditions may not be correctly diagnosed, meaning that they do not obtain access to the appropriate treatment or rehabilitation they require. In some cases these should occur at a particular time (e.g.: early intervention for post-concussional syndrome, early treatment of dementia of the Alzheimer type). Once these important periods for intervention have passed, the opportunities for effecting change are reduced substantially.

Overdiagnosis or Incorrect diagnosis – due to applying tests in an incorrect fashion. Inappropriate labelling can have a serious impact upon self-esteem and can impact the way the person is dealt with by the educational, welfare, legal and health systems.

For example interpreting a poor memory test performance to imply poor memory and not taking into account motivation, education, premorbid ability etc, may lead the client to be treated (and labelled) as if they have one diagnosis (e.g.: brain damage) when in fact another may be appropriate (e.g.: learning disability). This means that people can be incorrectly labelled, both by the people around them, and in their own minds. There can be a stigma associated with certain diagnoses, and this may be incorrectly applied to the client.

It may also mean that the public do not receive appropriate treatment, for example characterising the underlying condition as not trying hard enough (as opposed to understanding the effects of brain injury) meant that appropriate treatment, support and rehabilitation was not provided.

Failing to understand alternative explanations of poor test performances (e.g.: anxiety) means that people do not receive the appropriate treatment they require, and they may be labelled with an incorrect diagnosis

Overall this results in health professionals not providing people with the quality service they deserve in terms of assessment and treatment, because there are no reliable assessment tools remaining.

Whilst it is accepted that in general misuse of tests is not life threatening, it is our view that the consultation paper overlooked the implications for the public within the health sector, and this response has sought to remedy this.

### Potential Models:

This group vigorously reject the suggestion (p. 30 of document) that much testing is relatively straightforward and routine and not something psychologists wish to be engaged in. We have illustrated, with our examples above that this is a serious matter and making tests available to non-psychologists is already having ramifications, and we do not wish this to be extended (or in fact continued).

In our view, the highest priority is retaining protection of the Wechsler and similarly complex tests (e.g.: MMPI-2). They are far too complex for non-psychologists to correctly administer and interpret, and our examples show that misuse can lead to harm.

The group does not have a clear preference at this stage as to a specific alternative model, but would be happy to provide information and opinions when necessary.

### Conclusion

This paper has presented a range of difficulties that have been observed based on the current situation, where there are some tests in the public domain and some currently protected tests. It is our contention that with the current high level of use of neuropsychological tests by non-psychologists, it is very likely that the problems illustrated here will increase substantially if access to the currently restricted tests were allowed. It would also, effectively, leave neuropsychologists with no tests that they can use with confidence.

### References:

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