Overt Behaviour Scale (OBS)

Glenn Kelly, Jenny Todd, Grahame Simpson, & the ABI Behaviour Consultancy team (Suzanne Brown, Samantha Burns, Kathryn Hoskin, Jan Loewy, Ann Parry, Robyn Bittner)

Guidelines for administration

These guidelines supplement the routine administration instructions on the first page of the OBS.

Overt Behaviour Scale (OBS)

Overt behaviours

The scale is designed to rate overt challenging behaviours that can occur following acquired brain injury (ABI). It aims to minimise inferences about what causes behaviour (such as the intention behind it or the aetiology). As much as possible, score what is seen rather than the presumed intention behind the behaviour. Sometimes this is not easy and clear cut, and some discretion is required.

> For example, if someone has little initiation and needs much prompting, code **Lack of Initiation** even if the reason appears to be problems with memory rather than drive

The scale is intended to be relatively straightforward. These instructions provide some guidelines for how to score more difficult behaviours/situations, but do not let this detail 'tie you in knots' with regard to using the scale. Most behaviours should be easy to rate.

Application

The scale is designed for people whose primary diagnosis is ABI. It is not designed as a psychiatric or addiction scale, even though there is some overlap in behaviours. Furthermore, although it has also been used in inpatient settings, it has been developed primarily to assess overt challenging behaviours in community settings.

The scale has been developed at clinical services where clients are adults. The target population can be thought of as people aged more than 16 years and who are not in school.

It is recommended that behaviour that has occurred over the most recent 3 months be rated. Other more brief periods, such as one month, could be employed to suit a clinical situation. This provides better behaviour information than is gained from an observation session in a 'one-off interview'. It also enables scoring of behaviours that are current but of low frequency, and those that occur in some settings but not others. The scale is not intended to be used to score more historical behavioural events.

Collecting information

Who rates behaviours?

The OBS is not a self-administered scale. A clinician administers the OBS in one of two ways: (a) direct observation – such as when an allied health practitioner knows a client well, or (b) using the OBS in a semi-structured interview with an informant who has a thorough knowledge of the client. More than one knowledgeable informant, such as a spouse or case manager, can contribute.

Using the OBS as a tool to guide a semi-structured interview ensures that the entire range of behaviours in the scale is considered. Often informants report only the behaviours most salient to them rather than all the behaviours that occur. When this happens, limited information is received, and this can compromise hypotheses about what causes the behaviours, and plans for management of the behaviours. The OBS is a tool to elicit information.

If a displayed behaviour is represented in the OBS, then record it. Beware of assuming that a behaviour is not much of a problem, and therefore does not need to be recorded. If a behaviour seems to not have much impact, then it can be rated IMPACT=1 (no impact). Remember, the tool is to describe overt behaviours, not interpret intentions.

Categories of behaviour

There are 9 categories of behaviour listed in the OBS:

- verbal aggression (VA)
- physical aggression against objects (PA objects)
- physical acts against self (PA self)
- physical aggression against other people (PA people)
- inappropriate sexual behaviour (SEX)
- perseveration / repetitive behaviour (PER/REP)
- wandering / absconding (WAN/ABS)
- inappropriate social behaviour (SOC)
- lack of initiation (INI).

It is important to rate behaviours using the categories in the order in which they are presented. Verbal aggression is first, physical aggression next, etc. This is to avoid confusion and scoring behaviours more than once. For example, masturbating in public could be considered relevant to both the **Inappropriate Sexual Behaviour** and **Inappropriate Social Behaviour** subscales. The sexual behaviour descriptors are present in the sexual subscale, however, which is listed before the social subscale. Hence, the need to follow the order of categories as presented in the OBS.

Inappropriate Social Behaviour is the last 'positive' behaviour category to be completed and incorporates behaviours that do not clearly fit into the other categories. **Lack of Initiation** is more a lack of outward behaviour; it has a different rating key and is therefore the final subscale.

Rating behaviours

Illustrative examples

The clinical descriptions under each behaviour category provide the theme and 'flavour' for that category. The examples have been derived from actual cases, and are designed to represent the most common behaviours. Nevertheless, **the examples are illustrative, not comprehensive**.

You will probably want to rate particular behaviours that are similar to what is provided on the scale, but not exactly the same. Here, you should check which level or levels of a behaviour category are of a similar theme or flavour to what you observe and rate at that level.

> For example, the exclamation "F*** off and leave me alone!" is a use of foul language that fits **Verbal Aggression – Level 3** and should be rated there even though it is not exactly the same as the example given.

Indices

The OBS uses 3 main indices: Severity, frequency, and impact.

Severity

Each category of behaviour is divided into multiple levels and these levels are ordered in increasing severity. For example, Verbal Aggression has 4 levels of severity beginning with "Makes loud noises, shouts angrily, …", and ending with "Makes clear threats of violence…".

Severity is considered to be an objective measure because the order of behaviours is based on consensus ratings from people experienced in ABI and challenging behaviour. It provides a calibration – how severe these behaviours are according to other people working in the field.

Severity scores

For some behaviours, Severity scores printed on the OBS are repeated. For example, **Inappropriate Social Behaviour** has 5 levels that are assigned Severity values of 1, 2, 3, 4, 4. This is not an error. It indicates that when the scale was calibrated respondents considered two levels of behaviour to be equally severe. However, they have not been combined because they provide different and important clinical information.

Frequency

Scoring frequency of behaviour on the OBS is different from more traditional approaches of recording each instance of a target behaviour. In community settings there is often no one available to observe and record each behavioural instance.

The following approach is used in the OBS. Rate how frequently the behaviour occurs using a number from 1 to 5 with the following definitions:

1 = less often than once per month
2 = once a month or more
3 = once a week or more
4 = once a day
5 = multiple times each day

In clinical usage, we have found that informants can readily provide a rating that characterises the behavioural frequency over the most recent 3 months.

Impact

Impact is considered to be a subjective measure:
It records the emotional distress and/or practical disruption that a challenging behaviour causes. There is not necessarily a direct linear relationship between Severity and Impact. Low severity behaviours (e.g., interrupting another's conversations) can have a large negative impact (especially in families, and when it is very frequent), whereas high severity behaviours (e.g., punching holes in walls) can have a low impact (such as when it occurs in facilities with staff experienced with such behaviours).

Impact reflects the view of the social network; it is the distress or disruption they experience.

Subscales

Feedback on the OBS has shown that most subscales can be completed in a straightforward manner, but that 'fitting' some behaviours to a subscale needs some elaboration – which is provided here.

Physical aggression

There are three types of physical aggression on this scale. Typically, a behaviour to be rated fits readily into the existing categories and levels. Sometimes, however, it appears that a behaviour fits into more than one category:

> For example, a client may punch a wall, drive a wheelchair into a wall, or bang his/her head into the wall. These behaviours could be argued as **Physical Aggression against Objects** (the wall) or **Physical Acts against Self**.
>
> In this case, we would consider that if the behaviour is causing damage predominantly to an object (punching a hole in the wall) then it is **Physical Aggression against Objects**, but if the behaviour is causing damage primarily to the person then it is **Physical Acts against Self** (e.g., banging head into wall).
>
> Keep it simple. Ask yourself, "is this behaviour harming the person or something else?"

Physical Acts Against Self

The **Physical Aggression Against Self** subscale as it is labelled on the original Overt Aggression Scale (Yudofsky, Silver, Jackson, Endicott, & Williams, 1986) has been renamed **Physical Acts Against Self**. This avoids the assumption that self-harming behaviours are due to inwardly-turned aggression (these theoretical issues are articulated in Simpson, 2001).

Perseveration / Repetitive behaviour

The **Perseveration / Repetitive** subscale does not reflect behaviours that occur 'regularly' as part of a routine like going shopping each Monday morning. This subscale is intended to capture ABI-related perseverative behaviours. An important aspect of these behaviours is that the person gets 'stuck' – they get caught in a 'loop' of action, and can not stop.

> For example, one client once ran on a treadmill at a gym for 2 hours and only stopped when they fell from exhaustion. The treadmill was not faulty; but the client could not stop themselves from the behaviour once it was occurring.
>
> Another client would go for daily walks but would not stop; without cueing, this person walked until their feet were very blistered.
>
> Another client engaged in persistent head scratching that caused bleeding – which fits descriptions of both **Physical Acts against Self** and **Perseveration / Repetitive** behaviours. In this case, scoring required some informed discretion: Because the perseverative nature of the behaviour seemed more prominent than the self-harming aspect, it was scored under Perseverative / Repetitive behaviours.
>
> An example of repetitive verbal behaviour is repeatedly asking questions such as "Where are my shoes? Do you know where my shoes are? Do you think my shoes are missing?"

Addiction

Some repetitive behaviours occur due to addiction (e.g., gambling, alcoholism). The OBS, however, is related to brain injury NOT addiction, and is not intended to score behaviours due to addiction. There are more appropriate scales for addictive behaviour.

Nevertheless, there are many persons with alcohol-related brain injury who display challenging behaviours and who drink regularly enough to place their health at risk. If the concern is that the client's alcohol or cigarette consumption is such that it is leading to serious health or property risk (from fire), then the behaviour can be scored under **Inappropriate Social Behaviour – Danger/ Risk**.

> For example, a client may drink to drunkenness and then stumble onto a busy road. This may happen daily. This behaviour is a salient part of their brain-injury presentation, and presents a truly dangerous situation for the client and others – it would be scored as **Inappropriate Social Behaviour – Danger/Risk**.

Rating difficulties

What if a behaviour can be scored on more than one scale?

Following the order of categories as presented in the OBS helps to avoid 'double dipping' – that is, rating a behaviour more than once. It also means that specific information is collected about behaviour categories, and the potential problem of classifying all inappropriate or challenging behaviours under a unitary heading such as 'inappropriate social behaviours' is avoided.

> For example, touching a stranger on the breast in a train is socially inappropriate (and illegal). It would, however, be scored on the **Inappropriate Sexual Behaviour** subscale only. This is the earliest relevant subscale to which the behaviour applies.

What if the behaviour to be rated is not specifically mentioned in this scale?

1. If the particular behaviour you wish to score is not listed among the descriptions but is similar to them, then match it to the category and level that has the same theme or 'flavour'.

   > For example, "What the F*** are you looking at?" is not shown on the OBS, but it could be rated as **Verbal Aggression – Level 3**.

   Furthermore, if the specifics of the behaviour need to be recorded for clinical practice, they can be written next to the examples provided.

2. Some behaviours do not easily fit into the scale because situations in community settings can be tricky. Use the guidelines and examples presented under the specific behaviour headings in these instructions.

3. Very occasionally we have had clients who harm animals, and we have rated this under **Physical Aggression Against People** accompanied by some appropriate notation

4. Some behaviours do not fit within the scope of the OBS. e.g., sex with animals.

Suicide

Suicidal behaviours have been included in this scale because of their importance rather than their prevalence; they can be particularly serious and distressing. In one Australian sample suicidal ideation was reported by more than 22% of clients with a traumatic brain injury, and suicide attempts occurred in approximately 18% of those clients (Simpson & Tate, 2002). To avoid creating another behaviour category, suicidal behaviours have been added to the existing aggression categories.

Suicidal threats

The **Verbal Aggression – Level 4** subscale has been modified to clearly include suicide threats.

Suicide attempts

There are a range of behaviours that may be reasonably considered to be suicide attempts: Dangerous, possibly life-threatening behaviours such as cutting self, hanging, and carbon monoxide poisoning. These should be rated as **Physical Acts Against Self**.

Overdoses

Many clients with ABI have difficulty managing their medication. Nevertheless, there is a difference between someone making a mistake with their medication (which could be rated **Inappropriate Social Behaviour – Danger/Risk)**, and someone who consumes 10 times their prescribed medication. The difference is more apparent if, in the latter case, there are other behaviours indicative of suicidal intention (e.g., verbalising suicidal distress, written notes). If there is a clear attempt to self-harm then rate the behaviour **Physical Acts Against Self – Level 4**.

These behaviours need to be evaluated further; from a suicidality perspective.

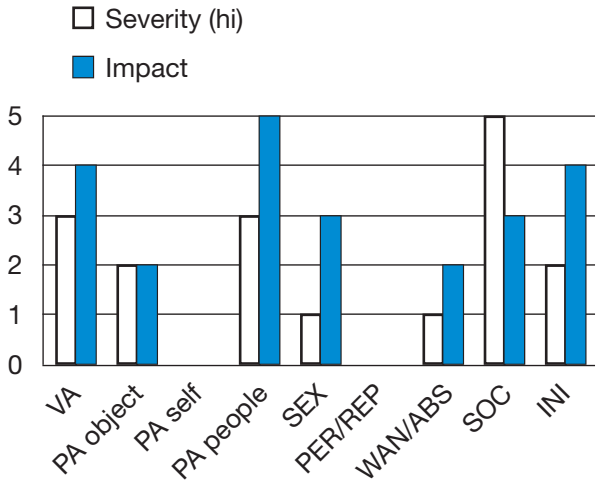
Psychometrics & Scoring

Psychometric data for the OBS are available in: Kelly, Todd, Simpson, Kremer, & Martin (in press). The Overt Behaviour Scale (OBS): A tool for measuring challenging behaviours following ABI in community settings. *Brain Injury*.

The OBS produces 3 key indices. The first, "Cluster" (range 0 - 9), comprises the sum of the number of categories for which challenging behaviours have been observed (present = 1, absent = 0). Similarly, the second "Total Levels" (range 0 - 34), comprises the sum of the number of individual severity levels endorsed (behaviour present = 1, absent = 0). The final score represents the "Total Clinical Weighted Severity" score (range 0 - 77). In contrast to the Total Levels score in which every behaviour that is observed scores the same value, the weighted severity score reflects clinical opinion that some behaviours within each category are more severe than others.

The following example illustrates the scoring of these three indices. A client displayed three different types of verbally aggressive behaviour (VA level 1 "shouting", VA level 2 "swearing", and VA level 4 "verbal threats"), but no other type of challenging behaviours. In this case, the person would be rated as 1 on the Cluster score (1/9), 3 on the Total Levels (3/34) and 7 (1 + 2 + 4) for the Total Weighted Severity (7/77). The two other indices, frequency of behaviour and the impact on others (each rated on a 5-point Likert scale), provide additional clinical data. In the case of the INI (Lack of Initiation) subscale, because there is only one severity level, the frequency measure can be used as a proxy for Severity levels.

It is also possible to construct simple visual presentations of aspects of the data. The graph below was constructed in a spreadsheet, and shows the severity and impact data for the most severe level of behaviour endorsed in each category. This graph shows a 'snapshot' of a client's behaviour profile; the client showed a cluster of behaviours (verbally aggression, physical aggression against objects and other people, inappropriate sexual behaviour, wandering, inappropriate social behaviour, lack of initiation). Verbal and physical aggression against people, and lack of initiation, are having the greatest impact on the informant.



References

The reference for the OBS is:

Kelly, Todd, Simpson, Kremer, and Martin (in press). The Overt Behaviour Scale (OBS): A tool for measuring challenging behaviours following ABI in community settings. *Brain Injury*.

The reference for the OBS Administration Guidelines is:

Kelly, Todd, Simpson, & the ABI Behaviour Consultancy team. (2006, February). Overt Behaviour Scale (OBS): Guidelines for administration. Retrieved [date] from http://www.abibehaviour.org.au/research/OBS_guidelines

The OBS is available at:

http://www.abibehaviour.org.au, and by contacting the authors.

The OBS incorporates modified forms of the verbal and physical aggression scales of the Overt Aggression Scale.

Yudofsky, S.M., Silver, J.M., Jackson, W., Endicott, J., & Williams, D. (1986). The Overt Aggression Scale for the Objective Rating of Verbal and Physical Aggression. *American Journal of Psychiatry, 143,* 35-39.

Alderman, N., Knight, C., & Morgan, C. (1997). Use of a modified version of the Overt Aggression Scale in the measurement and assessment of aggressive behaviours following brain injury. *Brain Injury, 11,* 503-523.

For more information regarding suicidality:

Simpson G.K. Suicide prevention after traumatic brain injury: A resource manual. Sydney: South Western Sydney Area Health Service, 2001.

Simpson G.K., & Tate R.L. Suicidality after traumatic brain injury: Demographic, injury and clinical correlates. *Psychological Medicine*. 2002; 32: 687-697.

Feedback is welcomed by the authors:

glenn.kelly@abibehaviour.org.au

jenny.todd@abibehaviour.org.au

grahame.simpson@swsahs.nsw.gov.au