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**Theory Advanced by the Study:** Institutional betrayal exacerbates the negative psychological effects of sexual trauma.

**Conclusion:** The study is reliable under both *Frye* and *Daubert* standards.

**IMPORTANT DISCLAIMER:** To be admissible as evidence in a court of law, a study, or a theory advanced by a study’s findings, must be analyzed to determine its reliability. *Daubert* standards apply in all federal courts and in some state courts. *Frye* standards apply in many state courts. Most states apply some version of *Daubert* or *Frye,* though many have adapted their own criteria in a modified version of one or the other. This analysis is meant only as the opinion of the authors as to how *Daubert* and *Frye* would be applied to a particular study and is not intended as legal advice for any specific case or an analysis of law in a particular jurisdiction. It is meant only as general guidance on legal principles involving the admissibility of the identified specialized/scientific evidence identified above. Litigants should consult with an attorney to determine whether the analysis here is applicable and sufficient in a particular jurisdiction.

### 1. DAUBERT ANALYSIS

An analysis under *Daubert* examines whether 1. a study is capable of being tested and replicated, 2. whether a study was subject to peer review and publication, 3. what the known or potential error rate is, 4. the existence and maintenance of standards and controls, and 5. the degree to which a study has been generally accepted. The study analyzed here does meet the requirements of reliability and should be admissible as independent evidence and as the basis for the admissibility of specialized/scientific expert testimony advanced by the study’s findings.

**A. Empirical testing and replication of the study:** A study is reliable under this factor if it has been tested and the results can be replicated. Replication is the process of

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3. It is critically important to determine the applicable standards in a particular jurisdiction before submitting an analysis in court. Every state has a rule or case that explains how a *Daubert* or *Frye* analysis works in a particular jurisdiction. A simple internet search for “[STATE] admissibility of scientific evidence” should provide ample information about the factors to be applied.
repeating a study using the same methods by different subjects and researchers. If the study has not been tested or is incapable of being tested, then it cannot meet the requirements of this factor.

The study’s claim is that institutional betrayal exacerbates the negative psychological effects of sexual trauma. The claim is testable as each of the three components is readily operationalized (e.g., general ideas such as ‘betrayal’ turned into concrete, measurable items such as ‘Has an institutional responded poorly to your reports of sexual assault?’) and falsifiable (e.g., it’s clear what a ‘null’ finding would be). It is testable and has been so tested.5

B. Whether the study was subjected to peer review and publication: A study is reliable under this factor if it has been subject to peer review and publication. In order to fit the definition of “peer reviewed,” a study must be subjected to meaningful quality control oversight by unbiased outside reviewers.

The study was published after going through two rounds of peer review in the Journal of Traumatic Stress.6 This is the official journal of the International Society of Traumatic Stress Studies. It has an impact factor of 2.72 which is a metric of a journal’s relevance, particularly in the short term. This number is calculated by dividing the number of citations by the number of articles published in the journal over the past two years (so, each article this journal published in the last two years was cited an average of 2.7 times in that same time period). The study was published in February 2013, and has been cited in two published articles since then.

The particular edition of the journal in which the study was published was a regular issue and was handled by the regular editorial staff. The peer review process was “unmasked” in that the authors did not know who the reviewers were, but they knew who the authors were. The Journal explains the unmasked review process as follows:

“The Journal uses a policy of unmasked review. Author identities are known to reviewers; reviewer identities are not known to authors. During the submission process, authors may request that specific individuals not be selected as reviewers; the names of preferred reviewers also may be provided. Authors may request blind review by contacting jots@ucsf.edu prior to submission in order to provide justification and obtain further instructions.” Unmasked review is an established method of determining a study’s fitness for publication.7

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4 http://www.experiment-resources.com/validity-and-reliability.html
5 http://mailer.fsu.edu/~slosh/MethodsGuide2.html,
6 http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1573-6598/homepage/ForAuthors.html
C. **The known or potential error rate of the study:** A study is reliable under this factor if there is a known or potential error rate and that the known error rate is low enough to substantially reduce the possibility that the results were reached due to an accident or fluke.\(^8\)

Researchers of this study conducted statistical testing and found a 5% error rate. Thus, results were accepted as significant when they would have only occurred by chance when in fact no relationship existed among the variables less than 5% of the time.

D. **The existence and maintenance of standards and controls concerning the operation of the study:** Under this factor a study is reliable if standards and controls were used to prevent unaccounted for variables from undermining the reliability of the results.

The “controls” here are a bit different than the idea of a traditional control group. For example, study participants did not choose to participate in the study based on their interest (e.g., women with a trauma history did not seek out the study). Rather, they chose to participate in a general study in the psychology department called something generic like ‘Elm.’ This is a practice specifically implemented by University of Oregon as a way of preventing participants from self-selecting into studies based on the topic. Also, during their participation, study subjects were unaware of researchers’ hypotheses and as such would have had little reason to misrepresent their experiences. Preventing participants from self-selecting into the study and barring subjects’ knowledge of the study’s purpose enhances a study’s methodological reliability.\(^9\)

E. **The degree to which the theory and technique of the study is generally accepted by the relevant scientific community:** To be reliable under this factor, the theory or technique at issue regarding a study must be generally accepted by its relevant scientific community. (See Frye analysis in Section II below). Even if the theory advanced by the study is novel, the degree of acceptance indicates whether the study is more or less reliable.

The larger theory on which this work was based, Betrayal Trauma Theory, was first introduced in 1994 and is not without controversy, but is generally accepted and very well supported empirically (e.g., a list of some articles here). The measure of sexual assault used in the study is also well validated and unmodified from its original generally accepted version.\(^10\) The outcome measure used to assess post-traumatic functioning is also well-validated and measures symptoms congruent with the DSM-IV and V descriptions of PTSD or trauma-related outcomes.\(^11\)

\(^8\) http://www.fgse.nova.edu/edl/secure/stats/lesson4.htm.
\(^9\) http://srmo.sagepub.com/view/encyclopedia-of-survey-research-methods/n526.xml
II. FRYE ANALYSIS

To be admissible as reliable evidence under Frye, a study or theory advanced by a study must be generally accepted by its relevant scientific community. To gain general acceptance in the scientific community a study need not be free of criticism, rather, it must be deemed valid and reliable by most of the relevant scientific community. When determining whether a study is generally accepted, courts consider criticisms of the study, as well as information in manuals, encyclopedias or other publications that are respected or endorsed by its relevant scientific community.\(^{12}\)

There has been no published criticism of this article or its methodology.

Frye is simpler to apply than Daubert and focuses on whether a particular study or theory advanced by a study is generally accepted as valid and reliable by the scientific community. If the study is not generally accepted then it is not admissible as evidence.

One criticism of the Frye test is that it excludes potentially useful evidence until enough time has passed for a consensus to develop among the scientific community.\(^ {13}\) The Daubert standard is more flexible in that general acceptance is relevant but not dispositive.

A. General Acceptance of Institutional Betrayal

The concept of Institutional Betrayal as a measurable harm to psychological and physical health following institutional mistreatment is not controversial. Campbell and Raja (2005) measured mistreatment female veterans encountered in the legal system (e.g., personnel encouraged them not to file a report, personnel refused to take their report, personnel asked about their sexual history) and the medical system (e.g., personnel did not explain the risk of STDs from the assault, personnel rushed medical care and were not attentive to emotional states) following the report of a sexual assault. These researchers found that experiencing these types of institutional reactions was associated with increased symptoms of post-traumatic stress disorder as well as decreased trust in others and reluctance to seek further help. Other researcher documented the specific ill effects on physical health following a military sexual assault as compared to a civilian sexual

\(^{12}\) For example some courts have held that publication of a disorder in the DSM is sufficient to establish its general acceptance. Commonwealth v. Frangipane, 433 Mass. 527, 538 (2001).
assault (differing, presumably, in the institutional context). Military sexual trauma is associated with a nine-times greater risk of developing PTSD as compared to civilian sexual trauma (Suris et al., 2007). Physical illnesses (e.g., chronic pain, gastrointestinal distress, and pelvic floor pain), physical disability, and decreased well-being are also more common following military sexual trauma than civilian sexual trauma (Suris et al., 2007). This pattern has also been established in civilian settings, with women seeking legal recourse experiencing increased psychological distress when they were subjected to repeated questioning or asked to describe a sexual assault repeatedly, had their case dropped by police (i.e., not referred to prosecutors), had their case dismissed by prosecutors, or participated in court proceedings for which they felt underprepared (Campbell, 2006). Other researchers have documented the long-term psychological impact of childhood institutional abuse, which include shame, distrust of authority, symptoms of PTSD and decreased social involvement (Wolfe, et al., 2003). Importantly, each of these studies discuss the important role that violations of trust, unmet expectations of services or treatment, and lack of safety in settings previously thought to be secure played in the various harmful outcomes documented.

REFERENCES


