

VIRGINIA:

IN THE CIRCUIT COURT FOR FAIRFAX COUNTY

COMMONWEALTH OF VIRGINIA

v.

Crim. No. 98321

STEVEN JOHNSTON,
Defendant.

**NOTICE AND MOTION *IN LIMINE* TO EXCLUDE OPINION TESTIMONY OF
SUZANNE BROWN AS SCIENTIFICALLY UNRELIABLE**

COMES NOW the defendant, Steven Johnston, by counsel James G. Connell, III, Thomas H. Estes, and Kelly H. Bennett, and moves this honorable Court for an order *in limine* excluding the opinion testimony of Suzanne Brown on the ground that it is scientifically unreliable in violation of Virginia evidence law and the Due Process Clause of the Fifth and Fourteenth Amendments. PLEASE TAKE NOTICE that Mr. Johnston, by counsel, will present evidence and argue his motion to the Court prior to trial on October 27, 2000.

MEMORANDUM OF LAW

Commonwealth's witness Suzanne Brown, a nurse, has advanced the following hypothesis:

The "human sexual response" is an automatic, immediate, and involuntary physical change that women go through in anticipation of consensual intercourse.

When the "human sexual response" occurs, the labia becomes engorged with blood and changes structurally to avoid genital injury. Because the "human sexual response" protects against genital injury during consensual sex, the presence of

genital injury demonstrates that sexual activity took place without the woman's consent. Because the "human sexual response" is automatic, immediate, and involuntary, factors such as the length of the foreplay period, the influence of drugs or alcohol, sexual technique, and the lack of lubrication do not affect the conclusion that genital injury demonstrates sex without consent.

The Commonwealth is expected to present opinion testimony from Ms. Brown based on this hypothesis. This opinion testimony has no foundation in science or medicine, and is impermissibly unreliable.

In Virginia, "When scientific evidence is offered, the court must make a threshold finding of fact with respect to the reliability of the scientific method offered, unless it is of a kind so familiar and accepted as to require no foundation to establish the fundamental reliability of the system, such as fingerprint analysis, or unless it is so unreliable that the considerations requiring its exclusion have ripened into rules of law, such as 'lie-detector' tests, or unless its admission is regulated by statute, such as blood-alcohol test results." Spencer v. Commonwealth, 240 Va. 78, 97, 393 S.E.2d 609, 621 (1990) (citations omitted). "In making the threshold finding of fact, the court must usually rely on expert testimony." Id.

Although no majority of a Virginia appellate court has addressed the issue, the Virginia reliability standard precisely tracks the federal standard for admission of expert evidence set forth in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993).¹

¹ Many other states have adopted the Daubert framework. See. e.g., State v. Porter, 698 A.2d 739, 746 (Conn. 1997); Mitchell v. Commonwealth, 908 S.W.2d 100, 101 (Ky. 1995); State v. Foret, 628 So. 2d 1116 (La. 1993); State v. Moore, 885 P.2d 457 (Mont. 1994); Taylor v. State, 889 P.2d 319, 328 (Okla. Ct.

See Cotton v. Commonwealth, 19 Va. App. 306, 321-22, 451 S.E.2d 673 (1994) (Benton, J., concurring in part, dissenting in part, and concurring in the judgment). Under Daubert, “the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.” Daubert, 509 U.S. at 589.

Like Spencer, Daubert analysis “entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid.” Id. at 592. The Supreme Court outlined four nonexclusive factors worthy of consideration in determining the reliability of expert testimony: (1) whether a theory or technique can be and has been tested; (2) whether it has been subjected to peer review and publication; (3) whether, in respect to a particular technique, there is a high known or potential rate of error and whether there are standards controlling the technique’s operation; and (4) whether the theory or technique enjoys general acceptance within a relevant scientific community. See Kumho Tire Co. v. Carmichael, 526 U.S. 137, 149-50 (1999) (citing Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 592-94 (1993)).

The opinion testimony of Brown is not reliable as required by Virginia law. Brown’s theory that certain injuries are consistent or inconsistent with consent because the “human sexual response” protects the perineal area is not supported by scientific or medical theory. No peer-reviewed or otherwise valid scientific or medical publication has endorsed the theory. There is no quantification of the error rate of the theory, and certainly no general acceptance by the scientific or medical community.

Crim. App. 1995); State v. O’Key, 899 P.2d 663, 680 (Or. 1995); E.I. du Pont de Nemours & Co., Inc. v. Robinson, 923 S.W.2d 549, 556 (Tex. 1995); Wilt v. Buracker, 443 S.E.2d 196, 203 (W. Va. 1993).

The medical and scientific literature directly contradicts both Brown's theory in general and its specific underpinnings. Initially, Brown's theory that the lack of "human sexual response" causes genital injury is contradicted by the fact that relatively few sexual assault victims show genital injury. "[I]t is clear that genital or nongenital injury is not an inevitable consequence of a sexual attack." Peter S. Cartwright et al., Factors that Correlate with Injury Sustained by Survivors of Sexual Assault, 70 Obstetrics & Gynecology 44, 46 (1987).

The vast majority of the studies find that less than one-third of alleged rape victims show genital injury. "Several reports have indicated that only 5-8% of alleged sexual assault victims have detectable genital trauma and 11-29% have extragenital trauma. However, Solola et al. noted extragenital injuries in 25% and genital injuries in 22% of 621 rape victims." Susan M. Ramin, Sexual Assault in Postmenopausal Women, 80 Obstetrics & Gynecology 860, 863 (1992).² One authority has summarized the state of the literature: "Although some authors state that signs of genital trauma are found in as many as 78% of sexual assault victims, most authors state the percentage to be approximately 20%." Jeanne McCauley et al., Toluidine Blue in the Detection of Perineal Lacerations in Pediatric and Adolescent Sexual Abuse Victims, 78 Pediatrics 1039, 1042 (1986).

² See also, e.g., Joyce A. Adams & Sandra Knudson, Genital Findings in Adolescent Girls Referred for Suspected Sexual Abuse, 150 Archives Pediatric & Adolescent Med. 850, 856 (1996) (finding that "[o]nly 32% of sexually abused girls had abnormal genital findings"); Laura Slaughter & Carl R. V. Brown, Cervical Findings in Rape Victims, 164 Am. J. Obstetrics & Gynecology 528, 528 (1991) ("The medical literature to date establishes that genital examination in rape victims yields results in 10% to 30% of cases."); Cartwright, 70 Obstetrics & Gynecology at 44 (finding genital injury in 16% of 440 rape victims studied); Peter S. Cartwright et al., Genital Injury and Implied Consent to Alleged Rape, J. Reprod. Med. 1043, 1044 (1986) (same); Judith E. Tintinalli & Marion Hoelzer, Clinical Findings and Legal Resolution

Conversely, women who have engaged in consensual intercourse often show genital injury. “[E]ven with full consent[,] intercourse can result in lesions like bruises, scratches and bites.” A. Penttila et al., Medicolegal Findings Among Rape Victims, 9 Med. & L. 725, 731 (1990).

The rate of women engaged in consensual sex showing genital injury is especially high when examined using a colposcope, as SANE nurses typically do. One significant study compared genital injury in women shortly after voluntary, consensual intercourse with genital injury in women who abstained from sex. Mark K. Norvell, Investigation of Microtrauma After Sexual Intercourse, 29 J. Reprod. Med. 269 (1984). The study found that 61.1% of the group having consensual sex showed genital injury visible with a colposcope, compared to 11.1% of women in the abstinent control group. Id. at 270.

This figure of 61.1% genital injury among women having consensual sex examined by a colposcope is not significantly different from the result in studies using a colposcope to examine alleged rape victims. For example, one study found 53% of documented sexual assault victims to have microtrauma visible through a colposcope, but only 6% of the victims to have trauma visible to the naked eye. See Leland C. Lenahan et al., Colposcopy in Evaluation of the Adult Sexual Assault Victim, 16 Am. J. Emergency Med. 183, 183 (1998). Another study found 87% microtrauma in alleged rape victims, although the study did not compare that figure to naked eye examinations or a consensual sex control group.³ See Laura Slaughter & Carl R.V. Brown, Colposcopy to Establish

in Sexual Assault, 14 Annals Emergency Med., 447, 452-53 (1985) (“[V]aginal/perineal injury is absent in the vast majority of sexual assault victims.”).

³ Authorities at the prestigious Royal London Hospital have criticized the Slaughter & Brown study for its lack of controls. See H.C. Patel et al., 168 Am J. Obstetrics & Gynecology 1334, 1334 (1993).

Physical Findings in Rape Victims, 166 Am. J. Obstetrics & Gynecology 83, 84 (1992). In reaching their 87% figure, Slaughter & Brown “included tiny lacerations, abrasions, bruises and swelling” in the classification of genital injury. Lucy Bowyer & Maureen E. Dalton, Female Victims of Rape and Their Genital Injuries, 104 British J. Obstetrics & Gynecology 617, 619 (1997).

The McCauley study compared the incidence of genital injury in sexually abused adolescents (ages 11-18) with adolescents participating in consensual intercourse. See McCauley et al, 78 Pediatrics at 1042. The study concluded that, “In adolescents, posterior fourchette lacerations are not diagnostic of sexual abuse as they were equally common in sexually abused adolescents and sexually active control adolescents.” Id. at 1043; see also Manfred N. Hochmeister et al., Effects of Toluidine Blue and Destaining Reagents Used in Sexual Assault Examinations on the Ability to Obtain DNA Profiles from Postcoital Vaginal Swabs, 42 J. Forensic Science 316, 317 (1997) (explaining McCauley study).

Brown’s hypothesis that the “human sexual response” makes factors such as lubrication or sexual technique irrelevant is also contradicted by the literature. Some studies, of course, have reported findings of injury to the posterior fourchette, labia minora, hymen, and fossa navicularis after sexual assault. One recent study of a false rape allegation with similar injuries “confirmed the possibility of similar lesions following consensual relations owing to insufficient lubrication, vigorous intercourse, or the inexperience of one or both of the partners.” Laurent Fanton et al., False Rape: A Case Report, 20 Am. J. Forensic Med. & Pathology 374, 376 (1999). Another study has

observed that “improper coital technique may be responsible for superficial lacerations in willing participants in intercourse.” Hochmeister et al., 42 J. Forensic Sci. at 317.

Finally, Brown’s hypothesis that she can distinguish consensual from non-consensual sex by genital examination is simply false. Vaginal bruises and abrasions “can occur during consenting sexual intercourse as well as during acts where there has been no consent, and it is almost impossible to differentiate between the two causes.” D. Paul, Medico-Legal Examination of the Living, in Taylor’s Principles and Practice of Medical Jurisprudence 64, 76 (A.K. Mant, ed. 1984). The same is true for vaginal lacerations. Id. Far from showing a general scientific consensus, “interpretation of lesions observed after sexual assault remains one of the most difficult and controversial domains in forensic medicine.” Fanton et al., 20 Am. J. Forensic Med. & Pathology at 376 (1999).

Ultimately, the scientific community has rejected Brown’s conclusions as well as her assumptions. An international team of researchers has explained, “consent for coitus does not preclude trauma, just as absence of trauma does not provide proof of consent.” Hochmeister et al., 42 J. Forensic Science at 317. After reviewing the literature and his own research, Dr. Cartwright of the Vanderbilt Medical center concluded, “Thus, the presence of genital trauma only suggests that penetration has occurred and implies nothing about consent.” Cartwright et al., 31 J. Reprod. Med. at 1044.

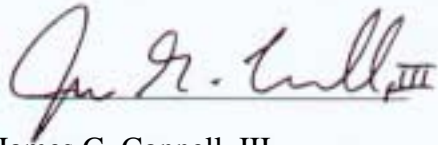
Nothing in the scientific literature support Brown’s theory of relationship between genital injury and consent to sex. To the contrary, the vast majority of published scientific work rebuts her hypotheses. Accordingly, this Court should find that Brown’s opinions are not reliable as required by Virginia law, and exclude her from testifying to her

opinions at trial. See Shooltz v. Shooltz, 27 Va. App. 264, 274, 498 S.E.2d 437 (1998).

WHEREFORE, Mr. Johnston respectfully requests that this honorable Court take evidence on the issue of the reliability of Brown's proposed expert testimony, and order the proposed testimony excluded on the basis of its unreliability.

Respectfully submitted,

Steven Johnston
By Counsel

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James G. Connell, III

Certificate

I, James G. Connell, III, hereby certify that on this 20th day of October, 2000, a true copy of this Notice and Motion was hand-delivered to the Office of the Commonwealth's Attorney, 4110 Chain Bridge Road, Fairfax, VA 22030.

A handwritten signature in dark ink, appearing to read "James G. Connell, III", written over a light blue rectangular background.

James G. Connell, III