

Chapter 21

ETHICAL CHALLENGES WITH THE USE OF INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS IN NEUROPSYCHOLOGY, PART II

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Scenario 1

A licensed psychologist has a background in clinical psychology, neuropsychological assessment, and teaches within an undergraduate and Master's program in psychology at a small 1500 student, private University with an NCAA Division I athletic program. The Head Athletic Trainer (ATC) invites the psychologist to a meeting with the Team Physician, an M.D., who oversees and is responsible for all medical decisions related to the varsity athletes' participation in athletics program. This Team MD is essentially a consultant to the University who holds "office hours" two days per week in the school health center, during which he sees students for either scheduled examinations or walk-in visits. The Athletics Program and Head ATC have recently purchased computer-based assessment software and are planning on baseline testing all the varsity athletes as part of a new concussion management program. The Athletics Program is interested in monitoring baseline and post-concussion testing data in an effort to assist or guide return to play following concussions.

The psychologist agrees to participate in the project on a consultative basis, in order to assist the Team MD in evaluating the effects of concussion and determining fitness to return to play. The psychologist, along with the Head ATC, attends a workshop on the use and interpretation of the assessment software, and familiarizes himself with the operation and utilization of the software, as well as the psychometric data available in the literature. The Information Technology Department arranges for the psychologist, the Head ATC, and the Team MD to have password-protected access to the raw data, which is stored on a mainframe computer. Throughout the fall semester, when an athlete is suspected of sustaining a concussion, the ATC administers the computer-based assessment, and the psychologist is called. He accesses the data according to the athlete's name, interprets the raw data in the context of comparing it to baseline pre-season performance, and then advises the Team MD as to any preclusion to continued athletic participation. At times, the psychologist discusses cases with colleagues, either by phone or e-mail, prior to making his recommendations.

During the mid-semester break, the Women's Basketball team was on an extended road trip and participated in an evening game during a nationally televised Holiday tournament. During this game, the star athlete on the team was in a severe collision, in which she fell hard, hit her head on the floor, lost consciousness, and was suspected of having sustained a concussion. The student athlete was not permitted to participate for the remainder of the game, and after the game, the traveling ATC administered the tests on a laptop computer, posted the data on the server, and called to discuss the case with the psychologist. The psychologist analyzed the data, and attempted to contact the Team MD, who was unreachable and left no alternate physician to contact. Since there was a game the next day, it was late in the evening, and a swift decision was required by the traveling ATC. The psychologist contacted a group of colleagues via a neuropsychology e-mail listserv in order to get a "second opinion". The psychologist did not provide any demographic data (i.e., gender, age, race) but emphasized the need for a quick reply to his e-mail. Based on the available test data and the opinion of his colleagues, the psychologist made the determination that the student athlete could return to play the next day.

Relevant Ethical Issues

The above-outlined case exemplifies where the use of technology changed the process by which the psychologist obtained, stored, and accessed client data, as well as the manner in which the psychologist sought professional consultation. The psychologist's involvement in this case implicated several ethical guidelines.

Boundaries of Competence

The psychologist has had little formal training in assessing Mild TBI/post-concussion symptomatology, save for one formal workshop and a literature review. While his role as a consultant to the Team MD may be within the boundaries

of his competence, he is not a trained physician and is not qualified to make decisions regarding return to athletic competition after a head-to-floor collision and subsequent loss of consciousness. Such a decision may involve the integration of multiple contributing medical factors. Although the psychologist did attempt to obtain the opinion of colleagues and peers, through his contacts on the listserv, these peers were not medical doctors and could not provide the information needed for the psychologist to arrive at an informed opinion. As the psychologist's participation in this project was stipulated as a consultant to the Team MD, he has gone beyond his authority and competence (Standard 2.01).

Maintenance, Dissemination, and Disposal of Confidential Records of Professional and Scientific Work

As the psychologist was involved in the development of the concussion management program and had been accessing data through password-protected access, he was not naïve to the fact that student athlete data was being stored along with their names. While the use of names may be appropriate for the psychologist's personal data, this data was also being accessed by the ATCs, who were not trained in the interpretation of raw data. The presence of personal identifiers in the database may be in violation of the student athletes' confidentiality. The psychologist may have inappropriately communicated this case to colleagues, via an e-mail listserv, as discussed in the next section (Standard 6.02).

Consultations

The psychologist discussed the case on a public forum, an e-mail based list-serve without prior consent of the client. While he was careful to remove information which might have identified the athlete, based on the small size of the school, the nationally televised audience, and requested speedy turn-around for e-mail feedback, the members of the list-serve may have easily

determined the identity of the psychologist's client (Standard 4.06).

Bases for Assessments

In his capacity as a consultant, the psychologist provided an opinion on the results of cognitive testing which may implicate an athlete's return to play. However, the psychologist's role was to advise the Team MD, who conducts a more comprehensive evaluation of the student athlete. By acting alone and generating a return-to-play decision in the absence of a comprehensive evaluation, the psychologist had not utilized techniques sufficient to substantiate his findings (Standard 9.01).

Assessment by Unqualified Persons

By having an ATC conduct the post-concussion assessments, the psychologist is relying on potentially untrained personnel to obtain important data (Standard 9.07). Student athletes may present with a variety of symptoms that are not detected by the assessment measure, and may also go unnoticed by the ATC. Traditionally, psychometricians are trained to collect behavioral data such as affect, mood, and overall presentation. Recent position papers on the use of psychometricians have assisted and guided clinical psychologists in this manner (National Academy of Neuropsychology, 2000).

Case Resolution

The psychologist's involvement in this case could have been more "ethically sound" had he acted in the following manners.

Boundaries of Competence, Bases for Assessments

The psychologist had acted responsibly in educating himself regarding the use and interpretation of the computer-based assessment measure. However, he should have provided recommendations only for those student athletes whom he

had either seen personally, or those whose records he had an opportunity to fully review. In the case of the latter, his reports should have included a statement stipulating that he had only reviewed existing records. Any recommendations he made should have focused on psychological factors that might have impacted the athlete's ability to perform in her role as either an individual or team participant. He should also have formally recommended external referrals to proper medical professionals. In this case, he should have referred her for a radiological or medical examination and deferred any return-to-play decision making to medical professionals.

Maintenance, Dissemination, and Disposal of Confidential Records of Professional and Scientific Work

The psychologist should have assisted the Head ATC in creating a master list of pseudonyms for each student athlete. All data maintained in the database should have been listed only under the pseudonyms and not the names of the athletes. The master list should be maintained by the psychologist, along with all his client records and reports.

Consultations

The psychologist should not have consulted with colleagues for feedback on this case via an electronic mail list-serve. In spite of the steps taken to minimize infringement of confidentiality, he was unaware of the training and professional background of the list participants, and could not insure that the basketball player was unable to be identified. He should have limited his consultative request to either telephone or personal communications.

Assessment by Unqualified Persons

The psychologist may be relying on incomplete data obtained by the ATC staff, in that he is attempting to assess psychological and cognitive well being following cerebral concussions. While the ATCs may be trained to administer the actual

computer-based measure, the psychologist should have personally trained the staff to conduct behavioral observations and document behavioral data. The psychologist would be best suited to personally evaluate each and every athlete following a concussion.

Conclusions and Recommendations

In spite of the exponential increase in the ownership and use of personal computers over the past several years, there remain very few guidelines regarding their use in the practice of (neuro)psychology with respect to the administration of assessment measures, access to and storage of client records, and communication between professionals. In fact, the term "Internet" appears only twice in the 2002 Ethics Code, "technology" only once, and "electronic" five times. Rather, practicing psychologists are left to extrapolate proper ethical conduct to those areas where use of emergent technologies may affect the means by which they carry out their practice.

The above scenario is one in which technology increased the speed of access to test data, allowed access to test data from a distance, and altered the means by which test data was obtained. The ethical guidelines involved do not directly involve the use of technology, as such guidelines do not exist for the use of computer-based assessment measures, digital data storage and retrieval, and consultation by electronic mail. While benefits, limitations, ethics, and applications of computer-based assessment are documented in the literature (French & Beaumont, 1987; Schatz & Browndyke, 2002; Walker & Cobb-Myrick, 1985; Wilson & McMillan, 1991), few would argue that there remains a paucity in this area. Comparison of survey results from the 1980s (Farrel, 1989) and 1990s (McMinn, Buchanan, Ellens & Ryan, 1999), reveals that computer use by psychologists is ever-increasing, and data from the mid-1990s revealed psychologists who were less technophobic, performed

frequent assessments, were younger, and saw a higher percentage of managed care patients were more likely to use and embrace technology in their practice (Rosen & Weil, 1997). More recent surveys have focused solely on the ethical implications of consulting with colleagues via telephone or fax (McMinn et al., 1999), but the 2002 Ethical Code is generally replete with reference to the use of computers in psychological practice. Rather, practicing psychologists considering the use of technology are left with the APA Ethics Committee's "Statement on Services by Telephone, Teleconferencing, and Internet" (APA Ethics Committee, 1997): "review the characteristics of the services, the service delivery method, and the provisions for confidentiality ... then consider the relevant ethical standards and other requirements, such as licensure board rules."

Recent publications offer detailed recommendations on the ethical use of information technology and telecommunications in clinical practice (Bush, Naugle & Johnson-Greene, 2002), and outline specific ethical considerations for psychologists participating in on-line discussion groups in a professional capacity (Humphreys, Winzelberg & Klaw, 2000). To this end, it appears to be time for APA to revise their 1997 Statement on Services by Telephone, Teleconferencing, and Internet to more specifically define the types of services offered by psychologists and the means by which they can be carried out using technology. Guidelines should be established for the use of computer-based assessment measures, and the subsequent storage and retrieval of data. These guidelines should include acceptable digital storage media, back-up systems for digital storage, and security of such stored media. As well, more detailed guidelines and recommendations should be provided for communication between professionals using electronic mail and Internet-based message boards, with specific focus on maintaining client confidentiality and obtaining prior informed consent for such communications.

Scenario 2

A recent graduate begins a two-year post-doctoral neuropsychology fellowship in which he splits his time between a hospital-based “rotation” and a clinic-based rotation in which services are provided through the private practice of his supervisor. As part of the private practice rotation, the postdoc is expected to collaborate on research activities within his area of shared interest with the supervisor, ageing, dementia and memory. The supervisor maintains a web site for his practice, on which there is little information posted, other than practice contact information and services provided. During an informal lunch conversation early in the post-doc, the postdoc tells the supervisor that he has experience with web site design and maintenance, and shares his vision of creating an on-line “presence” for neuropsychologists, clients, and researchers seeking information regarding the practice of neuropsychology as well as information about the etiology, symptomatology, and treatment of memory disorders and dementias. The postdoc offers to improve the practice web site and increase the amount of information posted in this manner, and the supervisor agrees that these activities can be considered part of his research activities within his post-doc.

The postdoc takes on the role of “webmaster”, and throughout the year works on redesigning and expanding the web site, developing many new pages using referenced text from the voluminous literature review from his dissertation. As the site begins to grow, the postdoc develops and arranges pages according to each memory disorder and dementia, with separate pages for causes, symptoms, treatments, prognosis and links. He places a copyright symbol (“©”) and his name within the html “source code” of each web page that he designed (“©2002, the postdoc”). During the next year, the postdoc registers the domain name “MemoryLoss.com” and designs a comprehensive web-based resource, external to the supervisor’s practice site. The postdoc discusses this

new Internet site with the supervisor and tells the supervisor that he wishes to move the “content” pages he developed to his site and place links from the postdoc’s practice web page. The supervisor states that the pages in question were developed for his practice, and should remain there. The supervisor further states that he is disappointed in the postdoc’s professional conduct and may not be able to recommend him well following his post-doc. The supervisor re-claims the role of “webmaster” and places a copyright (“©2002, the supervisor”) on the bottom of each page on the site, but does not notice or alter the postdoc’s copyright in the html source code. The postdoc confronts the supervisor and states that this is plagiarism, points out his initial copyright, states that these pages are his “intellectual property,” and suggests that if the supervisor does not remove his personal copyright he will be reported to the State Licensing Board’s ethics committee.

Relevant Ethical Issues

The above-outlined case exemplifies issues related to potentially exploitive and multiple relationships, assessing student and supervisee performance, and resolution and reporting of ethical violations. With specific respect to the use of technology, this case raises issues related to authorship and publication credit, intellectual property, and copyright law. The psychologist’s involvement in this case implicated several ethical guidelines.

Exploitive and Multiple Relationships

Although it appears unintentional, the supervisor appears to have entered into a multiple relationship with the postdoc, in that he simultaneously supervised the postdoc as a postdoctoral fellow and as a hired web designer. Because the supervisor maintained a supervisory position, the postdoc’s web design performance could affect the supervisor’s objectivity when assessing the

postdoc's performance as a postdoctoral fellow. As well, since the position of web designer would most likely be a paid position, incorporating these duties as part of the postdoc's training may be interpreted as exploitive (Standards 3.05a & 3.08).

Assessing Student and Supervisee Performance

The supervisor should not have allowed the interaction regarding the postdoc's desire to claim ownership over the web pages he designed to enter into his evaluation of the postdoc's performance. Had the supervisor previously established a formal process for assessing the postdoc's performance, the risk of having bias from extraneous factors influence the evaluation may have been reduced somewhat, but it still would not have eliminated the potential effects of bias (Standard 7.06).

Plagiarism and Publication Credit

Due to the dynamic nature of the Internet, publication and authorship rights are not clearly defined for individuals who post information on the Internet. However, the postdoc was the primary and substantial contributor to the pages he developed for the supervisor's web site (Standard 8.11). By placing a copyright in the html source code of those web pages, he essentially claimed first authorship for those pages. By later placing his own copyright statement on those same pages, the supervisor was presenting this work as his own (Standard 8.12). Intellectual property rights, and copyright claims, laws and violations are constantly being re-defined and challenged with respect to Internet-based materials. A more comprehensive discussion of copyright laws and intellectual property rights will follow in the "Recommendations" section.

Resolution and Reporting of Ethical Violations

The postdoc attempted to resolve the issue informally by confronting the supervisor (Standard

1.04). He thus acted appropriately when he confronted the supervisor regarding his improper ownership of the materials. The postdoc was acting appropriately and ethically when (after the supervisor failed to change his stance and then threatened actions which might ultimately harm the postdoc) he stated his intention to report the supervisor to the State Licensing Board's ethics committee (Standard 1.05).

Case Resolution

The supervisor's involvement in this case could have been more "ethically sound" had he acted in the following manners:

Multiple and Exploitive Relationships

The supervisor should not have involved the postdoc in any web design activities that could be fulfilled by an outside contractor not trained in psychology. By holding a supervisory relationship, the supervisor was in a position to exploit the postdoc, as well as create a dual relationship of post-doc supervisor and web site owner. The supervisor should have invited the postdoc to lend his expertise and assist in hiring, advising, and supervising an appropriate web design contractor.

Assessing Student and Supervisee Performance

The supervisor should not have allowed the postdoc's performance on the web design project to guide his opinion of the postdoc's performance as a postdoctoral fellow in neuropsychology. The supervisor should have had regularly scheduled meetings during which the postdoc's performance was discussed, as well as during which the supervisor's performance was discussed. If new projects were added to the postdoc's responsibilities, appraisal of the postdoc's performance on these projects should have been discussed within supervision meetings. At no time should

the supervisor have used a future letter of recommendation as a “negotiating chip” in an argument.

Plagiarism and Publication Credit

While there is little guidance in the literature on this topic, web-based publications should be treated in a similar manner to journal-based publications. Authorship should be determined prior to commencing the work, and relative contributions should be weighed in determining authorship. Had the supervisor wished to retain copyright of the materials, he should have had the postdoc sign a statement transferring ownership and copyright of the materials developed to the supervisor. However, in the absence of such a document, since the postdoc created the content for these Internet pages, and inserted his copyright in the pages, he should be considered first author. By purposely taking control of this work, and inserting his own copyright symbol, the supervisor was essentially plagiarizing the postdoc’s work.

Resolution and Reporting of Ethical Violations

The postdoc acted appropriately when he first discussed his feelings with the supervisor, and then stated he would refer the matter to the State Licensing Board’s ethics committee. The supervisor should have consulted with a colleague or an ethics committee to guide his thinking and actions in what became an emotional and territorial matter.

Conclusions and Recommendations

As described above, there exist very few ethical guidelines to inform psychologists regarding their role in determining Internet-based professional publication credits, intellectual property rights, or copyright ownership. While psychologists can extrapolate proper ethical conduct from the 2002 Ethical Code, they must look beyond the published psychology literature for guidance.

According to the U.S. Copyright Act (2001), a copyright gives the owner the exclusive right to reproduce, distribute, perform, display, or license his work, as well as the exclusive right to produce or license derivatives of the work. To be covered by copyright, a work must be original and in a concrete “medium of expression,” and, under current law, works are covered whether or not a copyright notice is attached and whether or not the work is registered. The essential goal of copyright protection is to secure the interests of the owner/publisher of the information, such as ensuring any income from intellectual work or protecting personal information (Norderhaug & Oberding, 1995). Thus, the owner of a copyright has *exclusive* rights to reproduce their work, prepared derivatives, distribute copies, or display the work publicly.

Use of Internet technology creates an inherently paradoxical arrangement in which the mechanism for viewing content (i.e., the web browser) may actually store the document in memory or in a cache file, or facilitate the creation of copies of source material by the user by allowing them to: save the material as source, print a rendered version of the material, or select, copy and paste the material into a word document program (Norderhaug & Oberding, 1995). By placing a copyright statement in either the code or the content (“© Year, Creator”) the developer or creator is able to ensure that any individual accessing or copying their material is aware of its source and ownership. O’ Mahoney (2002) suggests that individuals who post materials on the web should either place a copyright symbol on each item developed, much like book publishers or movie producers list transferred copyright for each and every image, graphic, song, or work displayed. As well, much like journal publishers, for those materials created by employees, contractors, or contributors, there should be a mechanism to transfer copyright from those individuals who created the materials. Individuals who place a copyright statement on their web-based work are encouraged to register that work with the

Library of Congress, prior to arguing a copyright claim relative to that information. While the cost of registering a copyright is in the range of thirty dollars, the cost of emergent, expedited registration can be in the range of several hundred dollars.

While specific APA guidelines for Internet-based publications would assist psychologists, when preparing Internet-based materials, psychologists should follow existing ethical procedures for publishing print-based materials, and familiarize themselves with U.S. Copyright Law. Psychologists should always discuss authorship at the commencement of a multiple-author project, consider the contribution of multiple authors, and weigh whether or not the work is based on a student author's thesis or dissertation.

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