

Perceptions of the Validity and Utility of Criminal Profiling Among Forensic Psychologists and Psychiatrists

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Criminal profiling is the process of using crime scene evidence to make inferences about potential suspects, including personality characteristics and psychopathology. An exploratory Internet survey of forensic psychologists and psychiatrists was conducted to examine their experiences with and opinions about profiling and to determine whether referring to profiling as “criminal investigative analysis” had any impact on these opinions. About 10% of the 161 survey respondents had profiling experience, although more than 25% considered themselves knowledgeable about profiling. Fewer than 25% believed that profiling was scientifically reliable or valid, and approximately 40% felt that criminal investigative analysis was scientifically reliable or valid. Although the scientific aspects of profiling lacked support, respondents viewed profiling as useful for law enforcement and supported profiling research.

Keywords: profiling, criminal investigative analysis, general acceptance, admissibility, forensic

The image of a criminal profiler sorting through crime scene evidence and definitively identifying a guilty suspect is popular in novels, television shows, and movies. However, this popular image is more fiction than fact, and the process and limits of real profiling work are often misunderstood. Criminal profiling is the process of using behavioral evidence left at a crime scene to make inferences about the offender, including inferences about personality characteristics and psychopathology. In its most basic form, profiling is simply the postdiction of behavior; an action has taken place that allows investigators to make inferences about the person responsible (Davis & Follette, 2002). Despite popular images of criminal profiling, the main goal of profiling in real investigations is to narrow the scope of a suspect pool rather than to identify a single guilty criminal (Douglas & Olshaker, 1995).

Background

Mental Health Practitioners and Criminal Profiling

Psychiatrists and psychologists made significant contributions to the early development of criminal profiling. The profiles created

by these practitioners were based largely on clinical judgment and prevailing theories of personality and psychopathology. For example, many early profiles from mental health practitioners were rooted heavily in psychoanalysis (Grubin, 1995). These profiles focused on the probable interpersonal functioning and psychopathology of the person responsible for committing the crime (Wilson, Lincoln, & Kocsis, 1997). Psychiatrist William Langer developed one of the most famous early profiles—a profile of Adolf Hitler for the U.S. Office of Strategic Service during World War II (Pinizzotto & Finkel, 1990). Langer’s psychiatric approach led to a profile of Hitler’s personality and mental disorder as well as to Langer’s prediction of suicide as Hitler’s response to defeat (Pinizzotto, 1984). The most lauded and cited example of early profiling comes from the work of another psychiatrist. In 1956, David Brussel constructed a profile of New York’s “Mad Bomber” that was accurate in many details (see Weinerman, 2004a).

Although some criminal profiling work is done by mental health professionals (e.g., psychologists and psychiatrists), most of it is done by trained law enforcement agents. It is difficult to get a clear estimate of how many mental health professionals are involved in profiling. The best data come from a survey of 152 police psychologists, who reported spending approximately 3% of their time profiling offenders (Bartol, 1996). However, Bartol did not report a standard deviation value for this finding, making it impossible to infer whether most psychologists spent 3% of their time conducting profiles or whether a few professionals spent a large proportion of their time conducting profiles while others avoided this work completely. Although Bartol’s published survey results cannot help researchers determine the number of respondents who did and did not participate in profiling, Bartol did find that 70% of the police psychologists “seriously” questioned the validity of profiling work (p. 79). This combination of findings from the Bartol study suggests that many respondents were not actively involved in generating profiles. It is possible, but unlikely, that the same psychologists who expressed negative views about profiling were actually participating in a significant amount of profiling-related

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activities. The applicability of Bartol's findings to other groups of mental health professionals is not clear. Larger groups of professionals have not been surveyed about their participation in profiling work.

The pattern suggested by the Bartol (1996) survey—that is, that a small number of psychologists participate in profiling work and the vast majority avoid it because of concerns about validity—fits well with our perception of the relationship between psychology and criminal profiling during the past 20 years. However, this pattern may be changing. A recent issue of the American Psychological Association's (APA) monthly professional magazine, *Monitor on Psychology*, highlighted the role of psychology and psychologists in criminal profiling (Weinerman, 2004a, 2004b). Several psychologists who are active in profiling work were interviewed, and, although the articles clearly acknowledged that many concerns about the scientific validity of profiling still exist, the reader is left with the impression that interest in profiling work by psychologists is on the rise. This trend is also evident in the recent publication of profiling research by psychologists (e.g., Canter, Alison, Alison, & Wentink, 2004; Canter & Wentink, 2004; Kocsis, 2004; Salfati, 2003; Salfati & Canter, 1999) and coverage of profiling in recent editions of psychology-law textbooks (Bartol & Bartol, 2004; Constanzo, 2004; Wrightsman & Fulero, 2005), suggesting that professional interest and practice in this area also may be on the rise. Indeed, the use of psychological profiles in criminal investigations has been described as "burgeoning" (Kocsis & Hayes, 2004, p. 149).

Profiling Research

When reviewing profiling research, one must recognize that multiple approaches to profiling exist, each with different underlying theories, methods, and assumptions (see Homant & Kennedy, 1998, for a concise overview; see also Turvey, 2002). Most profiling studies examine the scientific merit of aspects of these specific approaches as opposed to the profiling process in general. These studies can be thought of as examinations of construct validity in that they gauge support for the theories and concepts underlying various components of profiling approaches. For example, one focus of recent profiling research has been the validity of the offender typologies underlying some profiling approaches. For instance, in several studies Canter and colleagues coded information from police files and found limited support for typologies sometimes used to classify serial killers, such as the classification of crime scenes as organized or disorganized and use of the Holmes and Holmes system that includes visionary, mission, hedonistic, and power or control killers (see Canter et al., 2004; Canter & Wentink, 2004). These findings raise serious questions about the validity of approaches that rely on these types of distinctions for generating profiles. However, researchers also have used data from real cases to develop more empirically supported typologies of murderers and rapists (Canter, Bennell, Alison, & Reddy, 2003; Salfati, 2003; Salfati & Canter, 1999; see also Kocsis, Cooksey, & Irwin, 2002). Future research in this area clearly is needed to determine whether psychologists can use these typologies to accurately classify offenders in future cases and to provide useful information for investigators.

A second line of profiling research has focused on the reliability and accuracy (criterion validity) of professional profilers. Formal

examinations of the reliability of profiling are limited to a study of six Federal Bureau of Investigation (FBI) profilers' agreement in classifying crime scenes as organized, disorganized, mixed, or unknown (Ressler & Burgess, 1985, as reported in Homant & Kennedy, 1998). The identification of a crime scene as organized or disorganized has important implications in some profiling approaches. Agreement among the agents in classifying crime scenes in 64 cases was reported to be 74%. The researchers concluded that the overall level of agreement found in the study indicated adequate reliability; however, there was notable variation in the accuracy of the agents. For instance, the classification accuracy of one rater was only 51.7%.

Several studies have examined the accuracy of profiles generated by professional profilers. The general design used in these studies has been to compare profiles generated by profilers with those generated by nonprofilers (e.g., students, psychologists, police detectives). One important limitation of this research was that most of these studies used fewer than five profilers because the researchers had difficulty finding profilers willing to participate in the research (see Kocsis, 2004; Pinnizzotto & Finkel, 1990). Nevertheless, the existing studies in this area seem to converge in finding that trained profilers write longer and more detailed reports that contain more information and predictions about the offender (Kocsis, 2003b; Pinizzotto & Finkel, 1990).

Existing accuracy studies also provide some support for profilers making predictions that are more accurate than those of nonprofilers, although results are somewhat mixed and are based on a small number of profilers and studies (see Kocsis, 2003a, for a review). For example, Pinizzotto and Finkel (1990) examined the profiles generated by four current or former FBI profilers, six police detectives with profiling training, six police detectives with no profiling training, six clinical psychologists with no profiling training, and six undergraduate students with no profiling training. Each participant generated profiles for one murder case and one arson case on the basis of actual police investigation materials from the two cases. Participants also answered 15 multiple-choice questions about the suspect, including age, race, occupation, the relationship between the victim and the offender, and the likelihood that the offender had committed similar crimes in the past. Researchers knew the correct response to each question. In the profiling of the murder case, all the participants performed better than chance, with the average number of correct responses for each group ranging from 5.3 (35%) to 7.0 (47%); however, no significant differences were observed between the groups of participants. Thus, the accuracy of the professional profilers was similar to that of untrained psychologists and students. In the profiling of the sexual assault case, the 10 profilers performed significantly better than the other three groups of participants. Again, all groups performed at an above-chance rate, but the average number of correct responses for profilers was 10.0 out of 15.0 (67%), compared with correct response averages ranging from 5.5 (37%) to 8.5 (57%) for the other three groups.

Kocsis (2003a) summarized the results of three studies conducted by his research team comparing the accuracy of professional profilers ($N = 11$, across studies), psychologists, self-identified psychics, college students, and various groups of law enforcement officers. In each study, participants reviewed crime descriptions and case materials from actual solved cases (i.e., murder, arson) and completed multiple-choice questionnaires

about the suspect. Across these studies, the profilers provided the largest number of correct predictions about the actual perpetrators, with accuracy rates ranging from 46% (Kocsis, Irwin, Hayes, & Nunn, 2000) to 70% (Kocsis, 2004). However, Kocsis (2003b) cautioned that a notable amount of variability was observed within the profiler group, indicating that some profilers were much more accurate than others. It is unclear whether this variation was due to overall differences in the profilers' skills or to specific aspects of the cases.

Profiling Admissibility in Court

When profiles are created, both the prosecution and the defense may attempt to have the profiler testify as an expert witness. Profiling evidence has been admitted and denied admission into court. Many professionals who engage in profiling work believe that profiling testimony is more likely to be admitted into court when it is called something other than profiling (Cooley & Turvey, 2002; Risinger & Loop, 2002). For example, in *United States v. Meeks* (1992), testimony that was based on motivational analysis—the name sometimes used by the Federal Bureau of Investigation (FBI) for profiling—was admitted because it was found to be a generally accepted investigative technique that is based on specialized knowledge (Cooley & Turvey, 2002). Profiling also has been referred to as behavioral evidence analysis, linkage analysis, signature analysis, and investigative analysis. The FBI, which originally coined the term *profiling*, now uses *criminal investigative analysis* to refer to its profiling work (Turvey, 2002).

Although motivational analysis testimony was allowed in *United States v. Meeks* (1992) because it was found to be a generally accepted investigative tool, profiling testimony has been found inadmissible because it was not perceived as being generally accepted (see Grezlak, 1999). A defense attorney in one case in which a psychologist's profiling testimony was barred from being entered into evidence openly referred to profiling as "voodoo" (Grezlak, 1999, p. 3).

One likely reason for the discrepant decisions concerning the admissibility of profiling testimony is that there is little documentation one way or the other about whether profiling, regardless of what it is called, is a generally accepted investigative technique. Just as perceptions of profiling are often based on lore, so are opinions about its acceptance. The general acceptance of profiling has not been systematically examined among mental health professionals, and arguments that support the acceptance of profiling in the law enforcement community typically are based on the rationale that profiling must be accepted if it continues to be used (see Kocsis & Hayes, 2004).

In all states and federal jurisdictions, general acceptance is a criterion that judges consider when making decisions about the admissibility of expert testimony. General acceptance in the field is the main criterion on which decisions are to be based in states relying on the *Frye* (*Frye v. United States*, 1923) standard for determining the admissibility of expert testimony. In *Daubert v. Merrell Dow Pharmaceuticals* (1993), the Supreme Court ruled that the Federal Rules of Evidence, and not the *Frye v. United States* standard, should be used for determining the admissibility of expert testimony in federal courts. Many states have since adopted *Daubert*-like standards for admitting expert testimony.

Daubert v. Merrell Dow Pharmaceuticals (1993) departs from *Frye v. United States* (1923) by asking judges to consider the scientific merit of the theories, procedures, and research on which potential experts will base their testimony. The Supreme Court noted in *Daubert v. Merrell Dow Pharmaceuticals* that general acceptance is one criterion that can be used for evaluating scientific merit but also recommended that judges consider other sources of evidence, including whether the theory or technique on which the testimony is based has been subjected to peer review, whether that theory or technique can be falsified, and whether it has a known and acceptable error rate. Under *Daubert v. Merrell Dow Pharmaceuticals*, any theory or procedure upon which experts rely should be based on a falsifiable theory that has been tested, be subjected to peer review, be published, have a known error rate, and be generally accepted in the field (Goodman-Delahunt, 1997).

Survey Results as Evidence for General Acceptance

Error rates of profiling methods, the falsifiability of profiling theories, and the peer review status of profiling theories and methods, are, for the most part, objective criteria that can be identified at any point in time through the current scholarly literature. Although arguments concerning the general acceptance of profiling work can be informed by findings from existing empirical research, general acceptance can be examined directly by surveying the opinions of those in the relevant profession or field. For example, researchers have used surveys to systematically examine general acceptance within the psychology field of the validity of polygraph testing (Honts & Quick, 1995; Iacono & Lykken, 1997) and factors influencing the accuracy of eyewitness memory (Kassin, Ellsworth, & Smith, 1989; Kassin, Tubb, Hosch, & Memon, 2001).

The purpose of the current study is to use a survey approach to explore perceptions of the validity and utility of criminal profiling among forensic psychologists and psychiatrists. This study also seeks to provide information about the proportion of mental health professionals in these fields who are active in profiling work, to explore similarities and differences in opinions about profiling from forensic psychologists and psychiatrists, and to examine whether changing the term *criminal profiling* to *criminal investigative analysis* has an impact on perceptions of its acceptance and validity.

Exploratory Profiling and Criminal Investigative Analysis Survey

Identifying Appropriate Mental Health Professionals

Because there is no professional society or organization dedicated to mental health professionals involved in profiling work, we asked members of professional organizations with a more general focus on mental health and law issues to complete an Internet survey about the scientific merit and utility of profiling. These organizations were Division 41 (American Psychology–Law Society [AP-LS]) of the APA, the American Academy of Forensic Psychology (AAFP), the American Academy of Psychiatry and Law (AAPL), and the Police and Public Safety section in APA Division 18, Psychologists in Public Service. AP-LS member

e-mail addresses were obtained from the list of attendees posted on the 2004 AP-LS conference Web site. We cross-checked names from the AP-LS Web site with the APA membership directory to ensure that those asked to participate were psychologists, as opposed to graduate students, attorneys, or other affiliate members. We e-mailed AAFP members directly, using addresses available through the organization's Web site. The presidents of AAPL and of the Police and Public Safety section of APA Division 18 requested that we first send e-mails soliciting participation to them, which they would then forward to their respective members.

E-mails soliciting participation were distributed to 1,637 forensic mental health professionals: 175 AP-LS members, 147 AAFP members, 840 AAPL members, and 475 members of the Police and Public Safety section of APA Division 18. Only 9.9% ($N = 161$) of those who received an e-mail solicitation completed the study. Although this response rate was admittedly lower than we had hoped for and clearly places limits on the applicability of the findings to forensic mental professionals as a whole, the completed surveys provide information about the perceptions of profiling by a sizable group of forensic mental health professionals ($N = 161$). Moreover, a low response rate was anticipated for several reasons. Few practitioners in these four organizations were expected to be active in profiling, and many were expected to avoid answering questions about profiling because they felt it was outside the scope of their field. Although the Internet can be a cost-effective method for collecting survey data, response rates for Internet surveys are often markedly lower (ranging from 7% to 44%) than those for mail and telephone surveys (Schonlau, Fricker, & Elliot, 2002). In addition, response rates for Internet surveys of academic and professional groups tend to be lower than those of other groups (Cook, Heath, & Thompson, 2000). The expected low response rate was the main reason for soliciting participation from such a large group of forensic mental health professionals ($N = 1,637$).

Although the survey data reported in this article provide information about the practices and beliefs of 161 forensic mental health professionals, the low response rate raises legitimate questions about whether the sample is representative and, thus, whether the findings can be generalized to forensic mental health professionals as a whole. The low response rate also suggests that it is unlikely that respondents were able to accurately express the amount of variation in beliefs and practices that is present among forensic mental health professionals as a whole. It may be that those who responded were strong proponents or advocates of profiling and that the survey findings represent either an overly positive or an overly negative view of profiling. For this reason, we strongly caution readers against interpreting the findings reported here as clear evidence either for or against the acceptance of profiling in the field. We consider this study to be an early exploratory step in moving the fields of psychology and psychiatry toward a more empirically based understanding of the acceptance or nonacceptance of profiling. Readers must interpret the survey findings with this important limitation in mind.

Of the responding forensic mental health professionals, 44.7% ($n = 72$) reported AP-LS membership, 19.3% ($n = 31$) reported AAFP membership, 44.1% ($n = 71$) reported AAPL membership, and 8.1% ($n = 13$) reported Police and Public Safety section membership. Many participants reported membership in multiple organizations. With respect to profession, 50.9% ($n = 82$) identified themselves as psychologists, 43.5% ($n = 70$) identified them-

selves as psychiatrists, 3.1% ($n = 5$) reported having a doctorate in medicine and a doctorate in philosophy, and 2.5% ($n = 4$) did not provide information about their profession.

Survey Format and Questions

A major goal of this study was to examine whether perceptions of the validity, utility, and acceptance of profiling methods varied depending on whether these methods were described as "profiling" or "criminal investigative analysis." Two versions of the study survey were created that were identical in all aspects except one: one version used the term *profiling* in the instructions to participants and in the study questions, whereas the other version used *criminal investigative analysis*. The latter is the term currently used by the FBI to refer to profiling. The definition of profiling provided to mental health professionals was "Profiling is the process of using physical and behavioral evidence available at a crime scene to make inferences about the personality characteristics of the individual(s) responsible for committing the criminal act." In the alternate version of the survey, *criminal investigative analysis* was substituted for *profiling*, but the definitions were otherwise identical.

The first five survey questions asked participants to provide yes or no responses to questions about their training, knowledge, and experience with profiling methods or criminal investigative analysis (see Table 1). The second five questions asked participants to provide yes or no responses to questions about the scientific and professional status of profiling or criminal investigative analysis (see Table 2).

The final five questions assessed respondents' knowledge of standards used for admitting expert testimony into court, including *Daubert v. Merrell Dow Pharmaceuticals* (1993), *Frye v. United States* (1923), and the Federal Rules of Evidence.¹ Each item was scored as correct or incorrect. We totaled the scores on the five items to form an admissibility knowledge composite score, which we found to have acceptable internal consistency (Kuder-Richardson 20 = .72).

For each professional organization, mental health practitioners with last names beginning with A-M were directed to one version of the survey, and those with last names beginning with N-Z were directed to the other version. The order was counterbalanced for the different organizations. For two organizations, those with names beginning with A-M were directed to the profiling survey. For the other two organizations, those with names beginning with A-M were directed to the criminal investigative analysis survey.

Experiences and Attitudes of Psychologists and Psychiatrists

Preliminary analyses revealed only one significant difference between psychologists and psychiatrists on the 10 main survey questions concerning training, knowledge, experience, and attitudes about profiling. This one effect revealed that psychiatrists were somewhat more likely to say that profiling was a useful tool for law enforcement (95.4%) than were psychologists (84.9%), χ^2

¹ A copy of the five-item questionnaire assessing knowledge of admissibility standards is available from Marcus T. Boccaccini.

Table 1
Percentage of Surveyed Forensic Mental Health Professionals With Profiling Knowledge, Training, and Experience

Survey item	Procedure	
	Profiling (<i>n</i> = 92)	CIA (<i>n</i> = 69)
Do you consider yourself knowledgeable about the field of ____?	31.5%	26.1%
Do you have any training in ____?	16.3%	20.3%
Have you ever generated a ____ for an investigation?	10.9%	10.1%
Have you ever testified in court about a ____?	9.8%	10.1%
Have you ever been asked about your opinion of ____ in court?	10.9%	13.0%

Note. CIA = criminal investigative analysis. Percentage values in this table reflect the proportion of “yes” responses to survey items. All differences between profiling and CIA failed to reach statistical and clinical significance, $p > .05$, phi coefficients (ϕ) $< .06$.

(1, $N = 172$) = 4.12, $p < .05$, $\phi = .17$. Although this difference is large enough to reach statistical significance, the majority of respondents from both professions felt that profiling was a useful tool for law enforcement. Because the overall pattern of findings across the 10 main survey questions was similar for psychologists and psychiatrists, findings are reported below for the entire sample of forensic mental health professionals.

Training, Knowledge, and Experience With Profiling

Table 1 provides information concerning the proportion of forensic mental health professionals who reported having training, knowledge, and experience with profiling and criminal investigative analysis. A similar pattern of findings was observed for participants responding to questions about profiling and criminal investigative analysis. Although a sizable minority of forensic mental health professionals reported having knowledge of profiling and criminal investigative analysis (31.5% and 26.1%, respectively) and training in these techniques (16.3% and 20.3%, respectively), only about 10% reported ever having generated a profile or criminal investigative analysis for an actual case. Similarly, only about 10% reported having testified in court about their use of these techniques or their opinion of these techniques in general.

Attitudes About Profiling and Criminal Investigative Analysis

Forensic mental health professionals’ attitudes about the scientific merit and utility of profiling and criminal investigative analysis are reported in Table 2. Fewer than half of the forensic mental health professionals felt that either profiling or criminal investigative analysis was reliable, was valid, or had enough scientific support to be admitted into court. Perceptions were especially negative among those who received the version of the survey using the term *profiling*. These forensic mental health professionals rated profiling to be significantly less reliable and valid than those who were given the term *criminal investigative analysis* for the same process. These findings support the position that profiling is likely to be viewed more favorably if it is referred to by another name. Recall that the definitions provided for *profiling* and *criminal investigative analysis* were identical. Only the name of the process varied.

Although forensic mental health professionals questioned the scientific merit of profiling and criminal investigative analysis, there was general agreement that these techniques were useful tools for law enforcement. In addition, nearly all forensic mental

Table 2
Percentage of Surveyed Forensic Mental Health Professionals Who Identified Profiling and Criminal Investigative Analysis (CIA) as Being Valid and Useful

Survey item	Procedure		$\chi^2(1, N = 160)$	ϕ
	Profiling (<i>n</i> = 92)	CIA (<i>n</i> = 68)		
Is ____ scientifically valid for linking a defendant to a crime?	23.0%	43.3%	6.84*	.22
Is ____ scientifically reliable?	17.1%	40.0%	9.69**	.26
Do you think that ____ is scientifically supported enough to be admitted into court under any circumstances?	27.0%	31.1%	0.31	.05
Do you think that ____ is a useful tool for law enforcement?	86.4%	95.1%	3.03	.14
Do you think that ____ should be researched empirically?	97.8%	96.9%	0.10	-.02

Note. Percentage values in this table reflect the proportion of “yes” responses to survey items. ϕ = phi, effect size for χ^2 analyses that can be interpreted as a correlation coefficient. In this table, ϕ provides an index of the strength of the association between the label given to the profiling process and positive perceptions of scientific merit and utility. Larger positive values of ϕ indicate more positive evaluations for CIA as opposed to those evaluations for profiling.

* $p < .05$. ** $p < .01$.

health professionals felt that profiling and criminal investigative analysis should be the focus of empirical research.

Because many forensic mental health professionals reported that they did not consider themselves knowledgeable about profiling and criminal investigative analysis, it can be argued that only the perceptions of those who are knowledgeable should be considered for gauging general acceptance. To address this concern, we compared beliefs about the validity, reliability, and scientific support for profiling and criminal investigative analysis for those who did and did not consider themselves knowledgeable about these methods. Small cell sizes precluded separate analyses for profiling and criminal investigative analysis. No significant differences between those with and without knowledge were revealed, with effect sizes (ϕ) ranging from .01 to .05. For the 47 forensic mental health practitioners who reported being knowledgeable about profiling or criminal investigative analysis, 27.7% ($n = 13$) felt that these procedures were scientifically valid, 25.5% ($n = 12$) felt that they were reliable, and 25.5% ($n = 12$) felt that they had adequate scientific support for being admitted into court.

Admissibility Knowledge

Knowledge about standards for admitting expert testimony into evidence was assessed to examine whether those with higher levels of admissibility knowledge were more likely to see profiling and criminal investigative analysis as lacking adequate scientific merit. The average number of correct responses to the admissibility questions across the 158 mental health professionals who completed all five questions was 3.65 ($SD = 1.48$). Psychologists ($n = 80$, $M = 3.99$, $SD = 1.35$) exhibited significantly more knowledge about admissibility standards on the five-question scale than psychiatrists did ($n = 69$, $M = 3.26$, $SD = 1.46$), $t(147) = 3.15$, $p < .02$, Cohen's $d = 0.52$.

A scientific merit composite score was created by totaling the "yes" responses to the survey questions about the reliability, validity, and scientific support for profiling (see Table 1). Scores on this composite could range from 1 to 3, with high scores reflecting positive attitudes about the scientific merit of profiling. These scores were then correlated with scores on the admissibility knowledge scale using Spearman rank-order correlations (r_s). Among forensic mental health professionals as a whole, admissibility knowledge was negatively related to beliefs about the scientific merit of profiling and criminal investigative analysis, $r_s = -.16$, $p < .05$. Those with higher levels of admissibility knowledge tended to view profiling as having less scientific merit. However, further examination revealed that this trend was almost completely accounted for by psychologists ($r_s = -.26$, $p < .05$). Admissibility knowledge and beliefs about the scientific merit of profiling were not significantly correlated for psychiatrists, $r_s = -.03$, $p > .05$.

Implications for Practice

The purpose of conducting this exploratory survey was to provide an estimate of the acceptance of profiling among forensic mental health professionals. Although the low response rate necessarily limits the strength of the conclusions that can be drawn from the survey findings, this survey should be considered an early step in moving the field toward a more empirically based understanding of the acceptance of profiling.

Mental Health Professionals' Involvement in Profiling

Few forensic mental health professionals responding to the survey had ever conducted a profile or criminal investigative analysis, yet a somewhat larger minority considered themselves knowledgeable about these techniques. Why would those who claim to be knowledgeable about profiling not conduct profiles? Three possible interpretations for this pattern of findings are offered here: (a) one that argues against mental health professionals' involvement in the practice of profiling, (b) one that is more positive about involvement in profiling, and (c) one that is open minded about involvement in profiling.

The first interpretation is that the knowledge possessed by some respondents suggests to them that profiling lacks scientific merit. Support for this interpretation is provided by the finding that both profiling and criminal investigative analysis were seen as lacking adequate reliability, validity, and scientific support by more than half of all respondents. This pattern of findings was similar for those who did and did not consider themselves knowledgeable about profiling, suggesting that many with knowledge about profiling felt that profiling and criminal investigative analysis lacked scientific merit. This perspective may be especially common among psychologists who are active practitioners and who are knowledgeable about standards for admitting expert testimony into court. Psychologists who said that they were more knowledgeable about admissibility standards tended to have the most negative views about the scientific merit of profiling and criminal investigative analysis.

The second, more positive interpretation is that some forensic mental health professionals have become familiar with profiling methods or research (or both) because they have been asked about profiling by attorneys, journalists, or students. Some of these forensic mental health professionals may be willing to undertake profiling work but have never been hired to do so.

The third and more open-minded interpretation is that some forensic mental health professionals are keeping a watchful eye on developments in profiling but are not yet comfortable practicing in this area. During the past 5 years, many of the top peer-reviewed psychology-law journals have published articles concerning profiling. These journals include *Psychology*, *Public Policy*, and *Law* (Alison, West, & Goodwill, 2004; Canter et al., 2004), *Law and Human Behavior* (Davis & Follette, 2002; Wells, 2003), *Behavioral Sciences and the Law* (Canter et al., 2003; Salfati & Canter, 1999; Snook, Canter, & Bennell, 2002), and *Criminal Justice and Behavior* (Canter & Wentink, 2004; Kocsis, 2004). Those involved in forensic practice or research may have seen these articles or been given information about the latest developments in profiling through continuing education outlets. This interpretation also is supported by the finding that nearly all forensic mental health practitioners believed that profiling was worthy of scientific study. Many respondents who questioned the scientific merit of profiling still believed that more research should be conducted.

These three interpretations are not mutually exclusive. All or none of these rationales may apply to a single forensic mental health professional who is knowledgeable about profiling but is not involved in profiling work. Those individuals who are considering becoming involved in profiling work should be aware that some forensic mental health professionals who are knowledgeable about profiling avoid working in this area. At this point in time,

profiling does not appear to be generally accepted among forensic mental health professionals as a valid and scientifically supported technique. Whether research advancements in this area will eventually improve the opinions of profiling among mental health practitioners is not clear. The finding from the current study that approximately 70% of mental health practitioners believed that profiling or criminal investigative analysis was not a valid technique is nearly identical to Bartol's (1996) finding from nearly 10 years ago that 70% of police psychologists "seriously questioned" the validity of profiling (p. 79).

However, findings from the current study do suggest that some forensic mental health professionals harbor negative views about the term *profiling* rather than, or in addition to, the profiling process. Survey participants who were asked to express their opinions about *criminal investigative analysis* (another name for *profiling*), expressed much more positive views. On the basis of this finding, we recommend that those individuals who are asked to comment on or testify about profiling think carefully about the basis for their opinion of profiling before making any statements. Beliefs about the validity of profiling should be based on existing evidence rather than on negative attitudes about the term *profiling*. Many of the recent scholarly articles addressing the current status of profiling research are cited in this article. We encourage those individuals who are asked to comment or testify about profiling to become familiar with this growing body of research literature.

Limitations and Conclusions

Although findings from the current study show that many forensic mental health professionals have concerns about the scientific merit of profiling, these findings alone are insufficient for arguing that profiling evidence should not be admitted into court. Views about the acceptance of profiling as a valid technique may be higher among other professionals who do profiling work, including law enforcement agents and criminal justice experts. In addition, most participants felt that profiling was a useful tool for law enforcement, suggesting that they believe someone should be doing this work.

The seemingly counterintuitive pattern of respondents reporting insufficient evidence for the validity of profiling but endorsing its use for law enforcement potentially could be explained in multiple ways. The most likely explanation is that these forensic mental health professionals think about profiling in a similar way to that of professionals in the law enforcement community by reasoning that profiling must be at least somewhat useful if it continues to be used (see Kocsis & Hayes, 2004). Indeed, it is possible that these forensic mental health professionals have seen, or have at least heard of, the process being effective for law enforcement and are willing to admit that it may be useful in some cases. A second explanation is that respondents may have believed that more information about the scientific merit of profiling is needed before they are willing to assert that it is not at all useful and should be discontinued. In other words, given the small amount of profiling research available, they may have believed that the existing evidence against profiling is not strong enough to argue that it should never be used. A third explanation is that the respondents to the survey represent a biased sample of forensic mental health professionals. It may be that a large portion of the responding sample was made up of individuals who have some interest or training in

profiling, and, thus, they were likely to view its use within law enforcement as important. However, this explanation seems less plausible given that the overwhelming majority of the respondents viewed profiling as invalid and unreliable and did not rate profiling positively, overall.

One final limitation of this survey is that participants were provided with a general description of profiling. There are many different approaches to profiling, with different underlying theories, methods, and assumptions. For those knowledgeable about profiling, responses may have varied if we had asked about a specific approach. Major approaches to profiling include the FBI's criminal investigative analysis (Douglas & Burgess, 1986), behavioral evidence analysis (Turvey, 2002), investigative psychology (Canter, 1995), and geographic profiling (Rossmo, 1999). It may be that support for some of these approaches is stronger than others, and future studies may seek to examine support for different profiling approaches.

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