

The Professional Credential in Behavior Analysis

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The quality of behavior analysis is of interest to many individuals within the community. Other professionals are including behavior analysis in their credentials and excluding from practice those qualified behavior analysts who do not have their credentials. Existing credentialing programs do not seem to regulate behavior analysis adequately. This article examines reasons for a professional credential in behavior analysis, various components of credentialing programs, the forms of programs available, and alternative professional credentials for behavior analysts.

Key words: credentialing, certification, accreditation, ethics, licensing, registration

The nature and quality of professional behavior analysis services that are available to consumers are of concern to various segments of society. Consumers, government agencies, state legislatures, advocacy groups, professional organizations, behavior analysis practitioners, and practitioners in other fields are all interested, for differing reasons, in whether or not these services are being provided in an effective manner and within an ethical framework.

Although some consider behavior analysis to be a part of psychology, competence in behavior analysis cannot be assumed of an individual licensed as a psychologist. A relatively small number of the competencies addressed by the typical form of the American Board of Professional Psychology licensure examination are in behavior analysis. This lack of breadth in content precludes an adequate assessment of the vast array of competencies required to practice behavior analysis. Therefore, even if a person were to get all of the behavior analysis questions correct (a fact that would not be available to the public), an adequate

level of competence could not be inferred. However, if an individual were to get none of the behavior analysis questions correct (again, a fact that would not be available to the public), the individual could pass the examination. Furthermore, state programs that license psychologists typically do not require that other components of the program address competence in behavior analysis. For example, licensing programs for psychologists do not require that the individual have specific coursework in behavior analysis and do not require, or sometimes even allow, internships that are behavior analytic in nature. In addition, considerable training of behavior analysts occurs in departments other than psychology, and sometimes training occurs only at the master's level; both of these situations preclude licensure in psychology.

A number of formal approaches may be employed to ensure the quality of behavior-analytic services on a broad scale (Johnston & Shook, 1987, in press; Shook & Van Houten, in press). First, legislatures and government agencies may regulate how behavior analysis is practiced by means of state and federal laws, rules and regulations, and various review committees (Florida Administrative Code Chapter 10F-4, 1992; Florida Department of Health and Rehabilitation Services, 1989; Florida Statutes Chapter 393, 1989). Second, independent groups may accredit agencies or programs that meet established standards (Accreditation Council, 1990). Third, governments or

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professional groups, such as the Association for Behavior Analysis (Hopkins et al., 1991; Shook et al., 1988), may accredit training programs meeting standards established to promote uniform and appropriate training. Fourth, credentialing programs in professions such as psychology may recognize a specialty in behavior analysis to complement its broader existing credential (American Board of Behavioral Psychology, 1989).

Finally, state governments or professional organizations may provide an autonomous credential in behavior analysis through registration, certification, and licensing programs. The state of Florida, for example, provides a Certified Behavior Analyst credential (Florida Department of Professional Regulation and Florida Department of Health and Rehabilitative Services, 1991), and the state professional organizations in Texas and California are establishing registration programs. However, unlike other professions (e.g., physical therapy, medicine, or law), there is no widely accepted credential specific to behavior analysis.

A consensus on whether or not behavior analysis is, or should be, an autonomous profession never has been reached within the field itself, although discussion of the topic is well documented (Epstein, 1984; Fraley & Vargas, 1986; Harzem, 1987; Neuringer, 1991; Shook & Van Houten, in press). This issue warrants continuing scrutiny and analysis, for there are many reasons for behavior analysts to stand on their own. An autonomous professional credential is a step in that direction.

In general, a professional credential involves some mechanism for identifying an individual as being part of a profession. It further implies that the individual has met some standards established for that profession. This article will discuss reasons for having a professional credential in behavior analysis, will provide an overview of various components of credentialing programs, will describe the forms of programs available, and will discuss processes to establish alternative professional credentials.

WHY A CREDENTIAL IN BEHAVIOR ANALYSIS?

A widely accepted behavior-analytic credential fosters quality and consistency across practitioners by providing a standard for content and practice. Comprehensive standards are developed containing the content determined necessary to practice and specifying the manner in which services should be provided. Consumers, therefore, have some assurance that any individual credentialed as a behavior analyst has met established standards in the profession and will practice in an appropriate manner.

Furthermore, the standards help to ensure that all behavior analysts use the same terminology, view procedures similarly, and are trained and experienced in all areas important to practice. It is unlikely, for example, that a credentialed individual would not be familiar with the importance of a functional analysis.

Credentialing helps to establish a professional identity. In fact, the existence of a credential is a primary defining characteristic of a profession. If one wanted to know if a field of endeavor were a profession, he or she might reasonably request a professional credential as the indicator. Credentials are available for a substantial number and wide variety of professions. The state of Florida, for example, credentials over 60 professions, including nursing, clinical psychology, social work, and dentistry. Clearly, behavior analysis has a number of similarities to these professions.

A credential in behavior analysis would not only increase the quality of behavior-analytic practice but would also increase the training demands for and quantity of behavior analysts as well. Simply having the profession identified as such may increase the probability that an individual would want to become a behavior analyst, thereby creating a need for training in university programs and increasing the number of persons engaged in practicing the profession.

A list of practitioners who are credentialed in behavior analysis is useful as a

reference to other behavior analysts. Behavior analysts may use the practitioner listing when it is necessary to refer clients to behavior analysts in other locations.

In addition, a credential in behavior analysis provides a bureaucratic category descriptor for the profession. Often legislators and administrators need to identify an individual with behavior-analytic skills. For example, an administrator may wish to hire an individual who is competent in behavior analysis to run the client training component of a program for persons with developmental disabilities or, in another instance, a state legislator may wish to specify that an individual must be competent in behavior analysis to sit on a local mental health behavioral program review committee. If no behavior analysis credential exists, these individuals cannot readily determine competence. Often, this results in other credentialed professionals being specified in job listings or in legislation. One state's legislature, when specifying the membership of committees charged with reviewing the use of restricted behavior-analytic procedures, passed legislation mandating that medical doctors, psychologists, and other specific professions be represented on the committee, but did not have a professional credential to refer to for behavior analysts. A credential in behavior analysis would give administrators and legislators an efficient and effective means to specify an individual qualified in behavior analysis when the circumstances dictated.

State legislatures, when considering a licensing program, argue that the primary reason for a professional credential is to protect the health, safety, and welfare of the public. There is evidence that behavior-analytic procedures have been misused to the detriment of the public, that these procedures should have been used in some instances and were not, and that persons who were not qualified to do so have held themselves out as behavior analysts. One unethical use of behavior-analytic procedures that occurred in Florida in the early 1970s was so egregious that special committees of national experts

were convened to investigate the incident and to make recommendations so that similar instances of abuse would not occur in the future. Documented cases of severe injury and client death as function of misuse of behavior-analytic procedures have been reported in several other states. Certainly numerous additional instances of abuse relating to the misuse or omission of these procedures are not identified or go unreported.

A professional credential in behavior analysis also protects the field. If no professional credential exists, anyone can legally claim to be a behavior analyst or can practice behavior analysis. Because the public has no mechanism to separate those who are qualified from those who are not, individuals with no skills in behavior analysis but who claim to be behavior analysts are accepted as representing what behavior analysis can do. Because these individuals are not skilled, one may assume that their results would be less satisfactory than those results obtained from a qualified individual. This state of affairs gives the impression that behavior analysis is a far less robust treatment modality than it is, thereby diluting the impact of the technology and the profession. A credential in behavior analysis would allow the profession to avoid this problem.

Perhaps the most pressing reason for current practitioners to establish a credential in behavior analysis is to protect their own ability to practice and earn a living. If behavior analysts do not take professional responsibility for behavior analysis, other professions will. Many state licensing laws include behavior analysis as an example of practice under other professions. This action has excluded qualified behavior analysts, who were not licensed under the other profession, from being able to practice behavior analysis. As this trend of exclusion continues to expand, increasing numbers of qualified behavior analysts will no longer be able to practice. Oddly, many of the individuals who are licensed in those other professions are not qualified to practice behavior analysis, have

no desire to treat clients typically served by behavior analysts, and do not constitute sufficient numbers to meet the public need for behavior-analytic services. It seems that the success of behavior analysis and the potential rewards of its use are not lost on other professionals, even those who are the field's most vocal critics.

COMPONENTS OF A CREDENTIALING PROGRAM

Professional credentialing programs (such as registration, certification, and licensing) are made up of various components. Generally, the number of components increases as the sophistication and power of the program increase. The following components are typical.

Practitioner Listing

Perhaps the most simple component is a list of practitioners. Such a list is usually compiled by the state or national professional organization or by an agency of state government. In the most elementary type, a practitioner submits a request to the compiling body that his or her name be included in a listing which, in turn, is made available to other practitioners or to the public. Usually the compiling body charges the practitioner a fee to be listed.

Association Membership

Membership in the appropriate state or national professional association is a component of some credentialing programs. Although membership in a professional organization may have some face validity to the general public, its value as a predictor of competence is directly related to the nature of the membership criteria established by the professional organization. Membership requirements vary considerably from one organization to another. The Association for Behavior Analysis has degree, educational, endorsement, and fiscal requirements for membership.

Codes of Ethics and Standards of Practice

Another component involves obtaining a formal indication that the practi-

tioner adheres to professional codes of ethics or standards of practice. Practitioners may be required to sign a document and, by so doing, pledge that they will practice in a manner consistent with the code or standards applicable to their profession. In some instances, practitioners must make such a commitment in order to practice; in other instances, individuals who have not signed may practice without restraint. However, only the names of those who have signed are made available to the public as part of a credentialing program.

The code of ethics or standards of practice usually are developed by the state or national professional organization and are approved formally by that organization's membership. The code or standards typically describe appropriate professional behavior and responsibilities along a number of parameters, and may even extend into the realm of personal behavior. A state-level code was developed specifically for behavior analysts by the Florida Association for Behavior Analysis (1989).

Endorsement

Occasionally, an endorsement of a practitioner's skills and character is obtained from an individual familiar with the practitioner. An endorsement form usually is sent from the credentialing body to a professional, consumer, and/or a member of the public (the latter being used for character reference only). The endorsers may be identified by the practitioner or by the organization; however, the confidence of the endorser is usually maintained. The endorsement process ranges from being simple to quite complex and may be conducted by a professional, governmental, or private organization. For example, a private concern (Martindale-Hubbell, 1992) has published a directory for the legal profession for the past 125 years. In addition to extensive personal and professional information on individual lawyers and firms, the directory includes optional individual ratings compiled through a form of peer endorsement. Lawyers, if they so choose, are rated anonymously by peers on legal ability, ranging from preeminent to fair. In addition, a general recommen-

dation rating can be included that reflects the individual's adherence to personal and ethical standards.

Educational Requirements

Often, a professional credential requires the practitioner to meet certain educational criteria. Usually, educational requirements include degree(s) held, course work or other educational preparation, and/or supervised internship or practicum. The completion of a training program that is accredited by the appropriate state or national professional organization, or other accreditation body, may be required in lieu of other course-work requirements. The degree requirement may specify that the individual hold a degree of a certain level (e.g., a minimum of a master's degree) and/or in a specific field of study (e.g., psychology, social work, education, or a health science).

Course-work requirements in professions not requiring college training or degrees (e.g., jeweler or insurance agent) may be directed toward successful completion of a workshop or course of study outside of the university, such as trade schools or programs specifically designed to train individuals in a given profession. For professions whose rigors demand that the individual have extensive formal college training and a degree (e.g., physician or behavior analyst), the course-work requirements may be general, perhaps weighted in a particular area such as behavior analysis, or may be specific, perhaps delineating the number of credit hours, specific courses, and/or hours of internship or practicum.

The following example of language specifying course work is taken from a bill introduced before the Florida Legislature:

1. Twenty-seven semester hours or 41 quarter hours of graduate course work, which must cover content in the following areas: basic and advanced behavior analysis, behavior analysis research design, and behavioral observation methods. Course work must also cover content in at least three of the following areas: classroom behavior management, child behavior management, behavior analysis with the developmentally disabled, behavior analysis with the mentally ill, behavior analysis in medical settings, organizational behavior analysis, community be-

havior analysis, behavior therapy, verbal behavior, conceptual issues, or any other behavior analysis courses approved by the department for this requirement. Course work in any of the following areas may substitute for one of the required courses listed above: mental retardation, special education, mental health, or rehabilitation. Thesis work, practicum, internship, or field work may not be applied to this requirement.

2. A minimum of one course in legal, ethical, and professional standards issues in the practice of behavior analysis or a course determined by the department to be equivalent.

3. A minimum of one supervised practicum, internship, or field experience in a setting utilizing behavior analysis as the primary therapeutic technique. This clinical experience must be 2 semester or 3 quarter hours.

Experience Requirements

In some instances, individuals may be required to have experience as a practitioner either before or after the degree requirements are met. This experience typically must be of a specified duration (e.g., 3,000 hours of work experience in behavior therapy and modification), and the experience may or may not have to be supervised by a qualified individual. If supervision is required, typically the supervisor must have the credential of the profession involved, and may need to meet additional requirements (e.g., years of practice). Completion of the experience requirement usually must be documented by a designated individual (such as the supervisor) or by self-documentation.

Written Examination

A written examination is a part of most credentialing programs and is generally considered to be the single most objective and powerful means to determine competence. Examinations may occur one or more times per year, depending on the candidate demand. Typically examinations are scheduled at a place and time convenient to the candidates (the Florida Behavior Analysis Certification Examination is scheduled in conjunction with the annual meeting of the Florida Association for Behavior Analysis). Registration forms and materials must be obtained, and typically the completed response must be submitted well in advance of the desired examination time. Often examination programs have pre-

requisites (e.g., degree, course work, internship requirements) that must be completed before a candidate is eligible to take the examination, and documentation (e.g., college transcripts) must be submitted with the registration materials (e.g., completed forms, candidate pictures) so that a credentials review may be completed. Usually eligibility criteria are established by statute, and the eligibility determination process is implemented through a professional board.

At the examination site, candidates' credentials are checked before they are allowed to enter the examination room. Typically the candidates are allowed several hours to complete an examination (the Florida examination allows candidates 5 hours), after which the examination materials are transported to a secure site for scoring.

Specially constructed multiple choice questions usually are used in the test instrument, although free-response (essay) items are occasionally included. A multiple choice format is preferred over a free-response format even though it is more labor intensive to construct multiple choice items. Free response items must be scored by hand, typically by a team of individuals who are credentialed in the profession. Procedures are instituted that help to ensure consistency between scorers, but because the nature of the task is complex and tedious and because scoring may extend over several days, the process inevitably is imperfect and expensive. A multiple choice item can be constructed that will perform as well as a free-response item in most content areas. Because the multiple choice item, unlike the comparable free-response item, has one correct answer, the answer sheets can be scored by machine, thereby allowing a higher degree of consistency in scoring as well as providing substantially lower scoring costs while maintaining a high level of discrimination capability.

Once the examination scoring has been completed, usually item analysis and/or established statistical evaluation procedures are employed to ensure appropriate performance of the test instrument. The

Information and Registration Booklet for the Florida examination offers the following description of part of that process:

There are several reasons that it is possible that a few of the items on the examination will receive additional review. For example, when an item analysis is performed, certain items may be found, through standard statistical procedures, to be strong negative discriminators (that is, to correlate poorly with the overall individual performances). Such items receive additional review and may be re-scored to show a different correct answer, to give credit for more than one of the choices, or to give credit to all examinees. [In addition,] to ensure that the current edition of the examination is of equal difficulty to previous editions, raw scores are statistically equated to an established reference scale. (p. 22)

After the individual scores have been established, the candidates may be notified by mail of their status. Often candidates are notified only of their own score and the passing score. A list of who passed the examination, without individual scores, is made available upon request. Candidates who do not pass the examination usually are given an opportunity to review the examination and/or request that a score verification procedure be instituted to ensure that the answer sheet was appropriately scored.

The examination process must be completed in accordance with principles developed by the field of test construction and measurement and also within the context of a substantial body of case law, both of which specifically address how the test instrument was developed and how the entire examination process is executed. Because results on the written examination may control the candidate's ability to practice his or her chosen profession and earn a living, passing the examination becomes extremely important. This state of affairs virtually guarantees that some of the candidates who did not receive a passing score will demand relief by challenging one or more aspects of the examination process through administrative hearing or in a court of law. Challenges may be directed toward as small an issue as a single question, or may be on as grand a scale as to question the integrity of basic components of the test instrument develop-

ment. In the former case, failure to withstand the challenge might result merely in the question being thrown out, an additional individual passing the test, and the question being rewritten. In the latter case, however, failure to withstand the challenge because of a fatal flaw in development of the test instrument might result in the collapse of the entire credentialing process. Such a collapse would have profound ramifications for those wishing to be credentialed, for those already credentialed, and for the profession in general.

The test instrument must be developed by professionals in the field of test construction and measurement, and the examination process must be administered by an organization of trained professionals specializing in that endeavor. Perhaps one way to gauge the quality of an examination is to submit that examination to the scrutiny of a committee comprised of experts in the areas of test construction and measurement; in the content of the profession being examined; in law, regulatory legislation, and government; and in operation of professional regulation programs and regulatory examinations in behavior analysis. Here are some of the questions that were posed by such a body during the evaluation of an examination program in behavior analysis:

Does the examination fulfill the stated purpose of having an examination program? Because regulation should be tied to the health, safety, and welfare of the public, the examination should help to meet that purpose. For example, issues surrounding behavioral procedures that would be perceived as being likely to cause the most harm to the public should be carefully addressed.

Have appropriate actions been taken to ensure examination reliability and validity? In addition to statistical evaluations of reliability and validity, appropriate procedures must be followed in the development process. For example, to help ensure content validity, a job and task analysis or survey work could be done using practitioners in the field. The analysis could look specifically at what practicing behavior analysts actually do as

professionals and establish content and practitioner competencies based on that analysis. Alternatively, the basic content and competencies could be established through interaction with documented published reference materials and experts in the field. Practicing behavior analysts then could be surveyed to determine how critical each competency is to practice of the profession and what proficiency level is required from the practitioner for each competency.

Has the cutting (passing) score for the examination been established through the use of appropriate procedures? A formally constituted board could be established to set the cutting score. If the purpose of the examination program is to protect the health, safety, and welfare of the public, the cutting score could be set to ensure that the credentialed individuals possess the level of behavioral competence necessary to protect the public adequately. The issue of public protection should be delicately counterbalanced by the issue of adequate numbers of practitioners being available to serve the public need. That is, the board should set the score at the precise level that will ensure adequate practitioner competence and will in sufficient numbers of persons passing to meet the requirements of the state's citizens for behavior-analytic services.

Are procedures in place to ensure adequate examination renewal and equating? Examinations periodically need to be changed (renewed) so that the content is current and so that the questions do not become known to those who wish to take the examination. New forms of the test instrument should be developed from existing item banks (pools containing a number of questions for assessing each of the competency tasks). The new form of the test instrument should be statistically equated to a previously used form of the instrument "in order to maintain a constant passing standard" and "to obviate accusations of fluctuating examination difficulty."

Is test security adequate? The highest standards of security must be maintained at all times. For instance, the Florida Department of Professional Regulation

maintains a high-security walk-in safe as a depository for the test instruments used in its many examination programs. When the test instruments must be moved to one of the administration sites around the state, it is done under tight security.

Are specific examination administration procedures in place? The administration of an examination is a complex process involving a chief examination officer and a number of proctors, each of whom is assigned to and responsible for a specified group of candidates. A well-run examination is an orchestrated precision drill designed to provide the best possible test conditions within an atmosphere of high security.

Are there provisions for the perpetuation of the examination process? In addition to the requirements outlined above, there are several additional recurring activities that must take place as a matter of course in any examination program. For example, registration materials must be developed and reviewed, new test questions must be written, candidate files must be established and maintained, and challenges to questions must be dealt with. A well-integrated system must be in place to ensure that the entire examination process is institutionalized and run in a consistent manner by full-time professional staff dedicated to that purpose. A well-constructed written examination program will separate those who have at least minimal competence in the area being tested from those who do not. However, the program will be of little continuing use if it will not withstand the rigors of a challenge in a court of law.

The current Florida Behavior Analysis Certification Examination was developed in 1983 to appropriate professional and legal standards by a professional test construction firm (under contract with the Department of Health and Rehabilitative Services). Currently, the examination is administered by the Department of Professional Regulation, the state agency responsible for regulating most professions in Florida. This agency also does the continuing test instrument development work required in any written

examination program. The examination is given once a year, and contains multiple choice questions based on 10 clusters of 150 competency tasks established during the initial development process. The 10 competency clusters are: deciding to intervene, selecting an assessment method, displaying data, interpreting data, effectively changing behavior, writing a behavioral program, training staff, evaluating behavioral treatments, and managing staff and behavioral programs.

Behavior Analysis Curriculum and Evaluation Guides (1987) were constructed when the examination initially was being developed, and have been reorganized and refined as the need has arisen. Both of these guides may be used in preparation for taking the examination. The Curriculum Guide contains the competency tasks, objectives relating to those tasks, and the performance standards for meeting the objectives. The Evaluation Guide provides the individual with a personalized assessment and study plan for examination preparation.

Work Sample

Occasionally, a sample of an individual's work is evaluated as part of a credentialing program. Various formats are used in this type of evaluation process. One format of evaluation requires that a written sample of work of a specified type may be submitted for panel evaluation. For behavior analysts, this might be a written behavioral program or some other document from one's practice. For example, the Diplomate Program in Behavior Therapy requires that the candidate submit "one or more work samples of his or her typical practice as a psychologist and behavior therapist" and suggests that this "will usually consist of a summarized report of professional interactions." A second format of work-sample evaluation involves submission of some variation of a taped work sample. The Diplomate Program in Behavior Therapy, for example, suggests that the written work sample "may be accompanied by an audiotape, videotape, motion picture, or other in-depth

depiction of the candidate's activity." Usually the evaluation of written or taped work samples is performed by an evaluation panel using some predetermined criteria. The panel is usually constituted of individuals who currently hold the credential being sought.

In some instances, the work sample must be generated by the candidate "live" in the presence of the evaluation panel as a form of "clinical simulation" or "practical" evaluation. This form of evaluation may involve the candidate's traveling to a designated location at a specified time and performing a predetermined task. For instance, Florida requires that candidates for licensure as a barber cut an individual's hair and that candidates for licensure as a dentist perform work on simulated teeth.

Two main problems with the work-sample evaluation format have limited its use in credentialing programs. First, it can present significant reliability problems among members of the examination panel regarding correctness or incorrectness of candidate responses. In addition to making the format questionable as an adequate discrimination process, this reliability issue also can make the process vulnerable in a court of law. Second, work-sample evaluation is an extremely expensive proposition when compared to other forms of evaluation, and can significantly increase the cost to persons being credentialed.

Credentials Review

The credentials review process is not a discrete form of quality control, but rather is a mechanism to evaluate the fulfillment of one or more of the component requirements listed above. The process typically consists of the individual submitting specified documentation of task completion to be evaluated by a committee or professional board. To be credentialed in a profession, for example, persons may be required to have a minimum of a master's degree, have taken at least nine credits in a specific topic area with three additional credits of supervised internship, and be a member of the

national professional organization. To document that they have completed all the requirements, they submit a copy of their diploma, an official copy of their university transcript, an internship completion form signed by their supervisor, and a copy of their membership card to the national professional organization. The board then reviews their documentation, possibly requesting additional information (e.g., university catalogue class descriptions, instructors' names, or textbooks used in courses in question), and renders a judgment on the completeness and adequacy of the documentation. The process is designed to be as objective as possible in order to minimize what might be viewed as subjective judgments by reviewers.

Continuing Education

Continuing education is usually required for maintaining a credential rather than as a condition for obtaining one. Individuals must attend approved educational presentations in order to obtain a specified number of training hours over a predetermined interval. The basic intent of continuing education requirements is to ensure that professionals have contact with current content in their profession, thereby presumably maintaining an appropriate level of competence. All of the credentialing programs under the Florida Department of Professional Regulation contain continuing education requirements.

Discipline

Most professional credentialing programs include provisions for disciplining credentialed individuals who overtly violate basic professional, ethical, or legal standards. Usually, a formal complaint must be filed against the practitioner and must include documentation of the violation. An independent board typically reviews the allegations and documentation and rules on its findings. The penalties for those found guilty of violations range from a reprimand to suspension of license and substantial fines. This process effectively allows the credentialing body

to remove the offending practitioner from the profession.

FORMS OF CREDENTIALING PROGRAMS

For the purposes of this paper, registration, certification, licensure, and specialty credentialing will be viewed as the four relevant forms of credentialing for behavior analysts. Unfortunately, there is little agreement between those who credential professionals as to: (a) the components required for each of the four forms, (b) who should do the credentialing, or (c) whether or not each of the forms is voluntary (Carpenter, 1987; Institute of Medicine, 1989; United States Department of Health, Education, and Welfare, 1971; Young, 1987). However, there is general agreement that (a) registration, certification, and licensure represent three increasing levels of regulation, and (b) as regulation level increases, the cost of consumer services increases and the availability of services decreases.

Registration of Individuals

Registration of individuals can refer to a broad spectrum of operations that provide varying degrees of quality control. At one end of the spectrum, registration may consist of a simple practitioner listing component-based program. At the opposite end of the spectrum, registration may require many or all of the components described above and may be comparable to a certification or licensure program. The following examples, excerpted from the Final Report of the Task Force on Credentialing, Quality Assurance and Right to Practice of the Association for Behavior Analysis (Shook et al., 1988), illustrate some of the diversity in various registration programs:

For instance, in order to become a Registered Dietitian one must earn a baccalaureate degree from an accredited institution of higher education and, in the process, satisfactorily complete a specified program of study in a department that holds current accreditation from the American Dietetic Association. Furthermore, this program of study must include completion of a practicum that is also accredited by the national organization. Graduates

must then pass a national examination before they are granted status as a Registered Dietitian. Becoming a Registered Nurse involves a similar process, except that programs are accredited by state nursing boards. The profession of pharmacy also uses similar procedures. (p. 9)

The use of the term registration in the insurance industry is different still. Unlike the fields of nursing and food science, which have well-developed academic foundations and training industries, the field of insurance underwriting does not require a particular academic history. Instead, the Life Underwriter Training Council offers courses throughout the country to anyone who wishes to attend. However, satisfactory completion of certain courses is required to stand for state-administered exams, which then qualify individuals to refer to themselves as registered. Further course work qualifies one to take a national examination offered by the insurance industry. (p. 9)

The requirements for becoming a Registered Jeweler differ further. First, one must satisfactorily complete a full-time program of course work that takes up to 18 months at one of two training sites. To apply for this status, one must also have been working for two years in the industry and currently work for a firm that is a member of the American Gem Society, which is the professional organization that grants the Registered Jeweler designation. Furthermore, in order to maintain this status, one must take an annual examination that assesses the examinee's knowledge of materials disseminated during the year by the society. (p. 10)

These registration programs approximate what is usually thought of as certification or licensure programs, and they have the advantages and disadvantages of such programs. Registration programs are usually run by professional organizations, but may also be run by state government.

For the purposes of credentialing in behavior analysis, registration will be defined as a voluntary program that is operated by the Association for Behavior Analysis or a state affiliate. Component requirements may range from practitioner listing and association membership to a practitioner listing based on a credentials review of the following components: association membership, code of ethics, endorsement, educational requirements, experience requirements, continuing education, and discipline. Registration programs may not contain a written examination that is administered by the association or a work-sample component.

Certification and Licensure

The terms *certification* and *licensure* often are used interchangeably and, as with registration, do not have discrete and widely recognized defining characteristics. However, they are usually multicomponent programs consisting of many, or all, of the components discussed previously. Most certification and licensing programs contain at least a credentials review of educational requirements (degree, course work, and internship), experience requirements, a written examination, continuing education, and a discipline component. Licensure programs also often contain provisions for reactivating an inactive license.

Certification programs may be operated through professional associations or by the state, whereas licensure programs are usually run by the state. Usually a board of examiners is appointed to oversee either kind of program. Certification programs are usually implemented pursuant to practice acts, whereas licensure programs may be implemented pursuant to title or practice acts. According to Shook and Van Houten (in press):

A title act protects and limits the use of professional title. Under such an act, individuals could not call themselves behavior analysts unless they were so licensed; however, they could practice behavior analysis without limitation. A practice act, in contrast, includes title protection but extends limitations into the practice of behavior analysis as well. Under a behavior analysis practice act, individuals could not call themselves behavior analysts, nor could they do any of the things the act defined as the practice of behavior analysis, unless they were licensed pursuant to the act. Both title and practice acts usually apply only when individuals charge for their services, so parents, for instance, could apply behavior analysis principles without a license. Both title and practice acts typically have a number of exemptions as to who is required to have a license; certified teachers, social workers and any number of other professionals could be exempted.

Certification and licensure programs usually contain a definition of the profession and the scope of that profession's practice. This definition is included for the purpose of establishing the parameters of what the specific profession does. In the case of title acts, the definition merely provides a context within which

the profession may be viewed. In the case of practice acts, the definition serves to exclude unlicensed practitioners from engaging in areas of practice included in the definition.

The Florida Behavior Analysis Certification Program is the only state-operated credentialing program in behavior analysis. The program is undergoing format refinements through the state rule-promulgation process. Many or all of the following components will be included in the revised version: educational requirements (degree and course work), written examination (the Florida Behavior Analysis Certification Examination), credentials review (of the aforementioned components), and continuing education. The names of persons currently holding this credential will be available through a certified practitioner list. A fee is charged to take the examination.

For the purposes of credentialing in behavior analysis, certification will be defined as a program that is instituted pursuant to a title act and that is operated by a state agency. Certification programs must contain most of the components described above and must include written examination, continuing education, and discipline components.

For the purposes of credentialing in behavior analysis, licensure will be defined as a program that is instituted pursuant to a practice act and that is operated by a state agency. Licensure programs must contain most of the components described above and must include written examination, continuing education, and discipline components.

Specialty Credential

A specialty credential is usually an extension of an existing, more broadly based credential. The specialty credential typically signifies recognition of the individual's higher level of competence in the specialty area. The specialty credential may be sponsored by the same entity responsible for the more broadly based credential, or by a separate entity. For example, the American Board of Professional Psychology (ABPP), which evolved

from the American Psychological Association, supplements the broadly based state psychology license (passing the ABPP Psychology Examination is required by all states in order to be licensed as a clinical psychologist) by awarding diplomas in specialties such as clinical, counseling, industrial, and school psychology. The American Board of Behavioral Psychology (ABBP), which evolved from the Association for the Advancement of Behavior Therapy and is now affiliated with the ABPP, also supplements the state psychology license by awarding the Diploma in Behavior Therapy. The American Board of Behavioral Psychology suggests that becoming a Diplomate

signifies that the individual possesses a sufficiently high level of professional competence and professional maturity to 1) deal effectively, within the current limits of knowledge and the constraints of ethics, with patients or clients and 2) make recommendations or treat such persons in a meaningful and consistent manner, with advanced level skills practiced with excellence. (p. 5)

Individuals who wish to become an ABBP Diplomate must submit an application for candidacy. Applicants must provide documentation that they meet the following criteria: a doctoral degree in psychology from an American Psychological Association approved program or equivalent program, completion of a 1,800-hour internship in professional psychology, 5 years of acceptable post-doctoral experience, completion of 3,000 hours of work experience in behavior therapy and modification, be presently engaged in behavior therapy, having engaged in postdoctoral continuing education, membership in the American Psychological Association or the Canadian Psychology Association and a national behavior therapy professional association, and have state licensure as a psychologist. Upon receiving the application, ABBP will send endorsement forms to applicant-specified psychology professionals in order to collect more information.

When the applicant's file is complete, the review board performs a credentials

review and evaluation to determine if there is

clear evidence that the applicant meets its standards in accordance with the following criteria: 1. Adequacy and extent of basic training as a professional psychologist and as a behavior therapist. 2. Amount, breadth, and quality of professional experience. 3. Special competence in applied behavior analysis/behavior therapy/behavior modification, cognitive therapy and/or cognitive-behavior therapy. 4. Reputation among professional colleagues for standards of the profession of psychology and the field of behavior therapy. (p. 6)

The applicant will be granted candidate status upon successfully meeting the qualifying standards and may register for the Diplomate examination.

Prior to taking the examination, the candidate must pay a fee and submit a professional work sample. The work sample should be a verbatim record of a professional interaction with a client, although some other form of work sample may be accepted, and may be supplemented with audio or video recordings. A three-person examination committee, consisting of a chair and two additional examiners, is chosen by the ABBP board. These Diplomate-level committee members usually are peers to the candidate in that they come from the specialty field of the particular candidate (e.g., applied behavior analysis in mental retardation), although the candidate "should expect to be examined in the full arena of behavioral assessments and intervention." The oral examination consists of a "direct observation of skills by the committee, and a direct examination of the candidate" in the following four areas: (a) realistic assessment of the problem, (b) effectiveness of the candidate's efforts toward constructive interventions, (c) awareness of theory and research, and (d) sensitivity to ethical implications of professional practice. A typical examination might require 3 to 4 hours, during which time the materials previously submitted (including the work sample) are reviewed, an in vivo client-practitioner session is run and discussed, and an interview session is held to discuss all manner of professional issues. The examination is designed to be a professional interaction between peers and colleagues rather than an interroga-

tion of the candidate, and as such, no hard and fast criteria are specified for correct candidate responses. Candidates are notified of the results within 1 month, and the unsuccessful candidate is given an explanation of reasons for failure.

Although the Diplomate in Behavior Therapy may be useful for identifying licensed psychologists who have backgrounds in some form of cognitive or behavior therapy, it may not generally be the credentialing program of choice in identifying qualified behavior analysts for the following reasons:

1. The credential requires that the individual first be licensed in psychology. Most training in psychology is cognitively oriented, has little to do with behavior analysis, and, in many instances, does not complement it. Many well-qualified behavior analysts have degrees in other areas or do not meet the varying and often idiosyncratic requirements of state licensing programs, and therefore cannot apply for Diplomate status.

2. The Diplomate program does not mandate that the specific course work, internship, or experience requirements be completed in behavior analysis.

3. The primary content of the oral examination, depending on the candidate's specialty area, may be "cognitive therapy or cognitive-behavior therapy" rather than the very different "behavior therapy" or different still "applied behavior analysis." The Diplomate in Behavior Therapy title is used regardless of the specialty area tested. If the consumer wishes to obtain the services of a behavior analyst, the Diplomate title, in and of itself, may be of little help.

4. The credential does not contain the professionally constructed written examination as a component, but rather relies on the generally less objective and reliable oral exam. Given the lack of content in behavior analysis examined by the written ABPP licensing examination, the power of the written examination appears to be absent in the Diplomate program.

This is not to say that the Diplomate program cannot be valuable in some circumstances. If an individual is currently

licensed in psychology, he or she should consider getting the Diplomate in Behavior Therapy. However, if the goal is to determine which individuals are qualified behavior analysts on a broad scale, the program will not meet all critical requirements and mandates the unnecessary provision of becoming licensed as a psychologist. Given these limitations and the low probability that they will be remedied, the specialty credential will not be considered further.

THE PROFESSIONAL CREDENTIAL IN BEHAVIOR ANALYSIS

Several forms of credentialing, with varying degrees of effectiveness, are available to behavior analysts. Generally, it may be assumed that elementary forms with few components are less effective than more sophisticated programs such as certification. These more complex programs use a combination of components built around a written examination, and are more effective in discriminating qualified behavior analysts from those who are not. Unfortunately, there appears to be a direct relationship between program effectiveness in protecting the public and (a) the difficulty and amount of time required to establish the program, (b) the money required to operate the program, and (c) the amount of restriction of practice and trade. An inverse relationship exists between the effectiveness in protecting the public and the number of practitioners available to the public. An in-depth analysis of the relative strengths and weaknesses of the three forms of credentialing is not within the scope of this paper, and credentialing forms should be considered within the context of individual situations. However, some general considerations may be appropriate.

Simple registration programs do not offer the regulatory power of certification programs. Nevertheless, they may be a cost-effective means of beginning to organize practitioners systematically. A practitioner list (registry) containing a few

components will be useful to practitioners as an information source and may get the behavioral foot in the regulatory door.

Certification is more powerful, yet less restrictive, than a licensing program because it identifies individuals who meet professional standards. In addition, it does not restrict practice to only those who are certified. Certification may be the best overall form of regulation for behavior analysts. However, it will require more behavior to establish than a registration program.

Licensure is the most restrictive form of regulation because it (a) prevents individuals from practicing, (b) limits services available to the public, (c) raises consumer costs, and (d) is extremely difficult to establish. For these and other reasons, behavior analysts should not consider this form of credentialing at this time.

For a variety of reasons, state professional associations are in the best position to effect change in the credentialing of behavior analysts and should consider the following three avenues to do so:

1. Track legislation of other professional credentialing programs that might affect the practice of behavior analysis by those individuals who are qualified but are not credentialed pursuant to those programs. If legislation restricting the practice of qualified behavior analysts is proposed, the state association may wish to insert language that will exempt certain behavior analysts.

2. Begin an elementary registration program in behavior analysis for use as a reference to members of the professional association. In the early stages, registration should have a few components that are easy to document. In later stages, the registration program might be expanded to include more components and to become a more powerful credential.

3. Begin working with state agencies to establish a certification program in behavior analysis. This approach is the one most likely to protect behavior analysts' right to practice in the long term. Exemptions can easily be removed from legislation. In contrast, registration pro-

grams, without the backing of the state, may not be powerful enough to protect the public adequately. Establishing a certification program will probably require a Herculean long-term effort and will require the support of the state legislature and government agencies. The basic considerations for a prototype credentialing program in behavior analysis follow.

Certification should require a minimum educational level of the master's degree. Subdoctoral certification would allow greater numbers of individuals to become certified, thereby meeting the needs of the public and spreading the costs of certification across a greater number of professionals. The certification program in behavior analysis should presumably include the following components:

1. Degree requirements in an appropriate area of study.

2. Course-work requirements similar to the Florida suggestions listed in the earlier Educational Requirements section.

3. Postdegree experience requirements at some minimum level.

4. Formal indication that the individual will adhere to a specified professional code of ethics.

5. Membership in the Association for Behavior Analysis and the state affiliated association.

6. A credentials review to determine if the above criteria have been met.

7. A professionally constructed written examination covering appropriate content in behavior analysis.

8. Ongoing continuing education requirements after the credential has been awarded.

9. Provisions for discipline.

A listing of Certified Behavior Analysts should be kept and be made available to the public.

The Association for Behavior Analysis might be able to foster state certification by instituting a national register of behavior analysts. Such a register should not be a mere list but rather a review of easily observable and documented components, such as obtaining an appropriate degree from an Association for Be-

havior Analysis approved program (or alternatively, a degree with specific course work), completing a supervised internship or demonstrating appropriate experience, and signing the Association for Behavior Analysis code of ethics. Registration status might be maintained through obtaining appropriate continuing education credits and could be funded through fees from those seeking registration.

This type of registration program could be similar in form to the certification program suggested above. The association might avoid the liability and litigation issues inherent in operating a certification program by accepting an existing examination rather than by administering an examination of the association's construction. Nevertheless, the association would be well advised to establish a separate organization to administer the registration program in order to insulate itself from possible litigation. In addition, professionals within the association would have authority over specific requirements of the program. The program could set national standards for the profession. Although states ultimately have the authority to license within their boundaries, registration with the Association for Behavior Analysis could be stipulated as a requirement for state certification, or could heavily influence (as the national standard) the criteria for individual state certification.

The implementation of a credential in behavior analysis will serve both the public and the profession and would increase the quantity and quality of services available. These programs will not come without significant costs, however, and those who develop them should be prepared to expend a variety of resources and must be of firm resolve.

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