



Behavior Analytic Skills Training in School Psychology Programs

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Abstract

Applied behavior analysis (ABA) has played an important role in the practice of school psychology. Despite the field's expectation of school psychologists to effectively address student behavior, little attention has been placed on the development of school psychology graduate students' training in ABA. An extensive review was undertaken to assess the amount and content of required ABA coursework in school psychology training curricula. Findings, discussed within the context of meeting the training needs of school psychology students, indicated that the majority (77%) of programs offered only one or no course focused on ABA knowledge and skills. Content focus varied between specialist level and doctoral level programs.

Keywords School psychology training · Behavior analysis

In 1999, Shriver and Watson reported that behavior analysis (henceforth referred to as *applied behavior analysis* or ABA) courses in school psychology training programs were limited. Their survey of training programs across the country indicated that, on average, they offered only one to 1.5 quarters/semesters of a didactic course in ABA which was simply insufficient for adequately preparing school psychologists to use behavioral technology in the schools. Indeed, this amount of training seems rather insufficient when compared to what the behavior-analytic community considers as the minimum amount of training required for entry-level behavior analytic practice. A recent review of the literature conducted by the author did not produce any research following the 1999 survey to more fully describe or track the integration of ABA content in school psychology training curricula. Thus, the purpose of this study was to conduct an extensive review of the training curricula of school psychology training programs in the USA to obtain baseline data on the current state of ABA training in school psychology programs.

Brief History of Applied Behavior Analysis

Applied Behavior Analysis (ABA) involves the application of behavioral principles to evaluate and change socially

important behaviors to a meaningful degree (Baer et al., 1968). Prior to the 1960s, few people anticipated the significant influence behavioral principles learned from laboratory settings would eventually have on the field of education (Kagel & Winkler, 1972). By 1968, the deliberate use of behavioral principles to change human behavior had become so commonplace that a new journal, the *Journal of Applied Behavior Analysis* (JABA), was created to publish the ever-increasing research in this area of study. With ABA's focus on issues of social importance, many researchers flocked to schools to conduct their studies, and the practice of conducting research in schools persisted; in Northup et al.'s (1993) review of empirical studies published in JABA between 1968 and 1992, it was learned that the most frequently targeted setting for research was schools.

Since the publication of JABA's first issue and Baer et al.'s (1968) seminal article defining the discipline, ABA procedures have been repeatedly demonstrated to be effective for teaching new skills and for decreasing problem behaviors in educational settings (Baer, 1988; Dunlap et al., 2001; Sugai et al., 2000). Indeed, Baer and Bushell's (1981) claim that "[ABA] could transform a classroom of shouting, aggressive, destructive, rebellious, out-of-seat [students] into a quiet, seated, attentive, and industrious [group of children]" appears to be true and valid given the available evidence. But, despite the impressive and growing evidence base supporting the use of ABA in schools, there has been and continues to be a gap between what we know from the research and what we do in practice (Baer, 1988; Slocum et al., 2014).

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ABA and School Psychology

In 1968 at the American Psychological Association's 76th Annual Conference, Bijou's address to Division 16 (School Psychology) described four functions of school psychologists that would require a strong foundation in ABA knowledge and skills: (a) supporting young students transitioning from home to school, which involves assessing students' behavioral repertoires, assisting teachers in arranging suitable educational programs, and evaluating teachers' use of reinforcement contingencies; (b) working with school personnel and parents to mitigate or eliminate problem behavior using the principles and methods of behavior analysis; (c) supporting teachers' use of classroom behavioral management practices; and (d) disseminating behavior analysis to improve the instructional effectiveness of teaching staff, which includes informing them of advances in behavior-change procedures (Bijou, 1970).

ABA has fundamentally influenced school psychology practice since the creation of the National Association of School Psychologists (NASP) in 1969 by providing a general model for the discipline (Ervin & Ehrhardt, 2000). Rather than seeing a child's failure to thrive in the school environment as the result of an inherent weakness or problem in the child, the assumption put forth with the behavior-analytic lens was that a child's failure to thrive was at least in part the result of the improper arrangement of environmental events. An emphasis was placed on relating assessment to intervention for addressing student behavior issues (Lentz & Shapiro, 1985). With the adoption of school-wide Positive Behavioral Interventions and Supports (PBIS) in thousands of schools across the USA since the 1990s (Horner & Sugai, 2015) as a multi-tiered framework for improving academic outcomes and preventing problem behaviors, school psychologists have commonly been involved in its implementation as deliverers of ABA services across all tiers (Fischer et al., 2019). As ABA impacted the general services provided by school psychologists, including assessment, intervention, and consultation, some trainers of school psychologists took notice and drew attention to the benefits of integrating ABA in school psychology training. Also, in recognition of the lack of adoption of evidence-based behavioral interventions in schools, some school psychologists and behavior analysts have worked to highlight the potential role of school psychologists in bridging this gap to increase student access to ABA services (e.g., Bijou, 1970; Fischer et al., 2019; Kratochwill & Bergan, 1978; Shriver & Watson, 1999; Vollmer & Northup, 1997).

Foundational Knowledge and Skills for Behavior Analytic Practice

The Behavior Analyst Certification Board (BACB) was formed in 1998 to credential behavior analysts at two levels:

(a) Board Certified Behavior Analyst (BCBA; the master's level credential) and (b) Board Certified Assistant Behavior Analyst (BCaBA; the bachelor's level credential) (Shook, 2005). These credentials accredited by the National Commission for Certifying Agencies (NCCA) were important for establishing the entry requirements into the profession and served to communicate to the public that credential-holders have the minimum knowledge and skills necessary to deliver ABA services (Johnston et al., 2017).

The BACB defines ABA, for the purpose of certification, as the content of the *Task List* which catalogs the specific knowledge and skills that students must learn. The most recent fifth edition of the BCBA/BCaBA Task List is comprised of two major sections: (a) *Foundations* and (b) *Applications*. Foundations includes basic skills and knowledge of underlying principles, while Applications includes more practice-oriented skills. The BCBA/BCaBA Task List includes 37 items under Foundations distributed across two content areas (philosophical underpinnings & concepts and principles; and measurement, data display and interpretation & experimental design) and 58 under Applications distributed across four content areas (compliance code & professionalism; behavior assessment; behavior-change procedures & selecting/implementing interventions; and personnel supervision and management); there are a total of 95 items (BACB, 2017b). Table 1 illustrates the number of instructional hours required in each of the seven content areas by credential type.

In addition to coursework, students must obtain a minimum number of supervised fieldwork hours that focus on "acquiring the skills necessary to demonstrate competence of relevant tasks on the appropriate BACB Task List and the skills necessary to interact effectively with consumers, supervisors, families, and others" (BACB, 2020b, p. 6). The number of fieldwork hours range from 1500 to 2000 hours for those pursuing the BCBA credential (BACB, 2020b) and 1000 to 1300 hours for those pursuing the BCaBA credential (BACB, 2020a).

National Association of School Psychologists Standards

The National Association of School Psychologists (NASP) 2020 *Model for Comprehensive and Integrative School Psychological Services*, which represents the association's official policy on the delivery of comprehensive school psychological services, outlines the 10 general domains of practice. Under Domain 4 (Mental and Behavioral Health Services and Interventions), school psychologists "demonstrate skills related to behavior analysis and use systematic decision making to consider the antecedents, consequences, functions, and potential causes of behavioral difficulties that may impede learning or socialization" (NASP, 2020, p. 6)

Table 1 Number of instructional hours required in each content area by credential type

Content area	Hours required (BCBA)	Hours required (BCaBA)
Foundations		
Philosophical Underpinnings; Concepts & Principles	90	45
Measurement, Data Display and Interpretation; Experimental Design	45	30
Applications		
BACB Compliance Code and Disciplinary Systems; Professionalism	45	30
Behavior Assessment	45	45
Behavior-Change Procedures; Selecting and Implementing Interventions	60	60
Personnel Supervision and Management	30	15
Total	315	225

Adapted from “BCBA/BCaBA coursework requirements,” by BACB, 2017a, p. 1. Copyright 2017 by the BACB. Adapted with permission

In the NASP 2020 *Standards for Graduate Preparation of School Psychologists*, critical learning objectives and outcomes for graduate training programs in school psychology are described. Several parts of the standards are particularly relevant to the development of knowledge and skills for addressing behavior, including Program Standards 2 and 3. Program Standard 2 (Domains of School Psychology Graduate Education and Practice) describe the need for school psychology students to develop competency in the “use [of] effective strategies and skills in the domains to help students succeed... behaviorally” (NASP, 2020, p. 19). Standard 3 (Supervised Field Experiences in School Psychology) requires training programs to require supervised practica experiences for school psychology students that, “at a minimum... must include opportunities to build professional competencies in... the design, implementation, and evaluation of services that support socialization, behavioral and mental health, and emotional well-being (e.g., counseling, behavior analysis and intervention, social-emotional learning)” (NASP, 2020, p. 21). The term *behavior analysis* is mentioned only once in the standards as an example area in which school psychologists have knowledge; and behavior analysis is not mentioned at all in the scoring rubric used by NASP to evaluate and approve school psychology training programs (NASP, 2010).

The Standards highlight essential elements of training programs, but they do not describe all that can or should be taught. Unlike the BACB’s Task Lists, the Standards do not provide an exhaustive list of what students should learn. The lack of specificity about *what* (knowledge and skills) and *how much* (amount of time) is required leaves training programs with a great deal of freedom to decide what and how much students will receive. Given the many ways student behavior can be assessed and addressed, it seems reasonable to question whether some school psychology training programs are teaching any ABA knowledge and skills.

IDEA Requirements

The Individuals with Disabilities Education Act (IDEA) is a four-part (A-D) piece of federal legislation that helps to ensure that students with disabilities are provided a free and appropriate public education (FAPE) that is tailored to their individual needs (USDOE, 2010). Part B of IDEA, which covers assistance for education of students with disabilities, includes language that requires the consideration or use of ABA to address behavior problems in schools. Under subpart D, IDEA states that the Individualized Education Program (IEP) Team must consider the use of positive behavioral interventions and supports when a student’s behavior impedes his/her learning or that of others (34 CFR § 300.324(a)(2)(i)). Pursuant to 34 CFR § 300.320(a)(4), positive behavioral interventions and supports should be based on peer reviewed research to the extent practicable.

Under subpart E, IDEA also requires that local education agencies (LEAs) use a behavior analytic process, the functional behavior assessment (FBA) to gather information about events that predict and maintain a student’s behavior under certain circumstances. These circumstances include (a) when school authorities seek to change the placement of a student with an IEP who has violated a student code of conduct, the IEP determines that the conduct was a manifestation of the student’s disability, and the LEA had not already conducted an FBA; (b) when it is deemed appropriate in cases of disciplinary removals involving a change in placement and the IEP team determines that the conduct was not a manifestation of the student’s disability; and (c) when the IEP team determines that it would be appropriate for the student (34 CFR sections 300.530(b)(2); 300.530(d)(1)(ii); 300.530(d)(5); and 300.530(f)). The FBA process, which school psychologists should know and be skilled in (Shriver et al., 2001), assists

in the identification of cause-effect relationships that are used to inform the development of intervention procedures.

Purpose

Unfortunately, many students with disabilities who need behavioral interventions and supports may not be receiving them (U.S. Department of Education [USDOE], 2016b). In 2016, the USDOE's Office of Special Education and Rehabilitative Services (OSERS) sent a letter to schools reminding them of IDEA requirements and noted the importance of ensuring the availability of evidence-based behavioral supports and interventions in special education and general education classrooms (USDOE, 2016a).

A primary function of school psychologists is to work with school personnel to address student behavior issues with evidence-based supports and interventions (Ervin, Peacock, & Merrell, 2009). Despite this, there are concerns about the possible lack of training in ABA for school psychology students (Fischer et al., 2019; Shriver & Watson, 1999). In a survey of 392 nationally certified school psychologists (NCSPs), 71% of respondents rated their graduate training in the use of evidence-based behavioral interventions as inadequate, with no significant difference between those that attended SL and DL programs (Hicks et al., 2014). The current study is guided by one overarching question: How much ABA training are school psychology students receiving? It is hoped that the baseline data on current ABA coursework requirements of school psychology training programs will contribute to future discussion and research that can help address the questions of *what* (knowledge and skills) and *how much* (amount of time) should be covered in school psychology training programs in order for graduates to effectively address behavior issues in schools.

Methods

Sample

The sample consisted of 241 school psychology training programs offered across 195 schools approved by the National Association of School Psychologists for the 2019-2020 academic year (NASP, 2019). Each school offered one of three possible degree options: specialist level (SL, $n = 122$), doctoral level (DL, $n = 27$), or both ($n = 46$); in total, there were 168 specialist level and 73 doctoral level training programs. Most training programs followed a semester-based academic calendar (94%) while those remaining followed a quarter-based academic calendar (6%) (Table 2).

Procedures

Identification of ABA-Focused Coursework

A multi-step process was used to identify didactic courses for inclusion in the present study. First, the core curriculum (i.e., list of required courses) for each training program was accessed through its respective website (available through hyperlinks on the list of NASP-approved programs). Training programs posted core curriculum information on a webpage and/or in a downloadable program handbook on their website. Second, course titles in each curriculum were examined to identify those that contained key terms associated with ABA knowledge and skills. A set of key terms was developed for the initial search but expanded for use with subsequent searches as alternative terms were identified in the process of reviewing each curriculum. The key terms included ABA, assess*, behavior, classroom, consult*, ethic*, interven*, learn*, operant, PBIS, PBS, practic*, research, respondent, single case, single subject, supervis*, SWPBIS. Third, the description of each course containing at least one key term was obtained from its corresponding program's current school catalog of courses.

Inclusion Criteria for ABA-Focused Coursework

Courses identified through the search procedure described above, along with their descriptions, were evaluated for inclusion in the analysis. In order to examine the ABA-focused coursework in school psychology training programs, it was required for courses to be accompanied with a description that describes ABA knowledge and skills. The fifth edition of the BCBA/BCaBA Task List was used to assist in the identification of qualifying knowledge and skills described in course descriptions. Specifically, included courses must contain content related to any of the following areas: concepts and principles of behavior analysis; measurement of behavior and single case experimental design; ethics in behavior analysis; behavioral assessment; behavioral interventions; behavioral supervision; and behavioral consultation.

Coursework Coding and Intercoder Reliability

Following the coursework identification process, a coding system was developed to score course descriptions based on how much of the content was ABA-focused (*none*, *some*, or *all*). Courses with descriptions containing zero ABA-focused content were coded as *none*; courses with any ABA-focused content (but also included any content that was non ABA-focused) were coded as *some*; and courses with only ABA-focused content were coded as *all*. The author identified all scoring discrepancies between coders and made a final determination based on an independent review of the course.

Table 2 Number of specialist and doctoral school psychology training programs across each region/division of the USA

Region	Division	No. of SL Programs	No. of DL Programs
Northeast	New England	13	3
	Middle Atlantic	30	14
Midwest	East North Central	34	13
	West North Central	12	7
South	South Atlantic	24	12
	East South Central	8	5
	West South Central	17	7
West	Mountain	11	7
	Pacific	19	5

Intercoder reliability was calculated to determine an agreement coefficient for the ABA-focused coursework. The author trained an independent reviewer (who was a registered behavior technician with at least 30 hours of didactic training and 40 hours of supervised field experience in ABA) by reviewing ABA knowledge and skills and providing guidance through the course identification and scoring process using a practice set of 10 training programs selected at random from those included in the current analysis. Training occurred across two sessions (1.5 hours each) over the span of approximately two weeks. After completion of the training, the reviewer independently identified and scored eligible coursework for 60 training programs (25% of each program type; 42 specialist and 18 doctoral). The 60 training programs were selected at random and excluded the 10 used during training. Reliability estimates, calculated by dividing the total number of agreements by the total number of agreements plus disagreements, were determined for both the identification of courses and scoring of the courses. The reliability for the identification of courses was 100%, whereas the reliability for the scoring of courses was 99.1%.

Results

Curriculum information for 239 NASP-approved school psychology training programs (99.2% of the total possible) was available online and included in the current analysis. The final sample included 167 SL and 72 DL training programs across country: 60 (43 SL and 17 DL) in the Northeast, 65 (45 SL and 20 DL) in the Midwest, 72 (49 SL and 43 DL) in the South, and 42 (30 SL and 12 DL) in the West. One SL program in the East North Central Division of the Midwest and one DL program in the South Atlantic Division of the South was excluded from the current analysis due to missing curriculum information or course descriptions.

A total of 1309 courses (840 from SL and 469 from DL programs) were identified to have a title containing at least one of the key terms associated with ABA knowledge and skills. These include both didactic courses ($n = 897$) and experiential practicum courses ($n = 495$; 306 from SL and 189 from DL programs) (Table 3).

Courses with None or Some ABA Content

Approximately 80% of the courses initially identified did not cover only ABA content. The majority of these ($n = 904$; 580 SL and 324 DL) did not cover any ABA content, but some courses were found to contain at least some ABA content ($n = 138$; 90 SL and 48 DL). Of the courses that were identified to contain at least some ABA content, the most commonly targeted knowledge and skills are in the areas of assessment (SL = 27.8%; DL = 35.4%) and intervention (SL = 35.6%; DL = 25%) for both SL and DL programs. The remaining areas covered include concepts and principles (SL = 7.8%; DL = 2.1%); measurement and single-case experimental design (SL = 2.2%; DL = 10.4%); ethics (SL = 0.7%); and consultation (SL = 10%; DL = 22.9%). Some courses were also identified to cover at least some knowledge and skills from multiple content areas (SL = 16.7%; DL = 2.1%) (e.g., behavioral assessment and consultation) (Table 4).

Table 3 Number of courses with descriptions that have none, some, or all ABA content

	Total $N = 1309$		Specialist level $n = 840$		Doctoral level $n = 469$	
	N	%	N	%	N	%
None	904	69.1	580	69.1	324	69.1
Some	139	10.6	90	10.7	49	10.5
All	266	20.3	170	20.2	96	20.5

Courses with All ABA Content

Approximately one-tenth of the courses screened ($n = 264$; 170 SL and 94 DL) were determined to be ABA-focused and covered only ABA content. While 59.1% of the pooled sample of SL and DL courses focused on a single content area, 40.9% covered multiple content areas. SL courses that focused on only one content area most often targeted assessment (11.8%) and intervention (22.4%); the remaining courses focused on experimental design (10%), concepts and principles (7.1%), consultation (3.5%), and ethics (0.6%). DL courses that focused on only one content area most often targeted experimental design (23.4%) and intervention (16%); the remaining courses focused on assessment (10.6%), concepts and principles (10.6%), consultation (4.3%), and ethics (1.1%) (Table 5).

Of the 239 school psychology training programs, 31% did not offer any courses focused on ABA knowledge and skills; 46% offered one course; 13% offered two courses; and 10% offered more than two courses (ranging from 3-5 in SL programs and 3-8 in DL programs). Figure 1 illustrates the percentage of SL and DL training programs that offered 0, 1, 2, 3, 4, and 5 or more courses (Table 6).

Practicum Courses Only Seventeen of the 495 experiential practicum courses initially identified were removed from the analysis due to missing course descriptions. Of the 478 remaining, 10 courses (2.1%) covered only ABA content; 12 courses (2.5%) covered some ABA content; and 456 courses (95.4%) were not described to include coverage of any ABA content.

Didactic Courses Only A descriptive analysis was conducted to examine the percentage of SL and DL training programs that offered 0, 1, 2, 3, 4, or 5 or more didactic courses only. Results showed that 31.7% did not offer any courses focused on ABA knowledge and skills; 45.8% offered one course; 12.9%

Table 5 Content areas covered by courses with only ABA content

	Total $N = 264$		Specialist level $n = 170$		Doctoral level $n = 94$	
	N	%	N	%	n	%
Assessment	30	11.4	20	11.8	10	10.6
Concepts & Principles	22	8.3	12	7.1	10	10.6
Consultation	10	3.8	6	3.5	4	4.3
Ethics	2	0.8	1	0.6	1	1.1
Experimental design	39	14.8	17	10	22	23.4
Intervention	53	20.1	38	22.4	15	16
Multiple content areas	108	40.9	76	44.7	32	34

offered two courses; and 9.7% offered more than two courses (ranging from 3 to 5 in SL programs and 3-8 in DL programs) (Table 7).

Discussion

The principles and methods of ABA have demonstrated effectiveness for addressing classroom management, instructional design, individual behavior support, group behavior support, and many areas of assessment in educational settings for the full range of student populations (Dunlap et al., 2001). Notwithstanding the vast amount of research supporting the use of ABA in school settings, its adoption and implementation in schools remains unsteady and limited. Concerns have been raised about the many children and adolescents in schools with and without disabilities that can benefit from but fail to receive evidence-based behavioral supports and interventions. School psychologists play a crucial role as frontline responders in schools; they are the professionals most likely to be called on to address student behavior issues (Fagan & Wise, 2000). However, there have been concerns about the level of training that school psychology students receive in effectively addressing behavior issues.

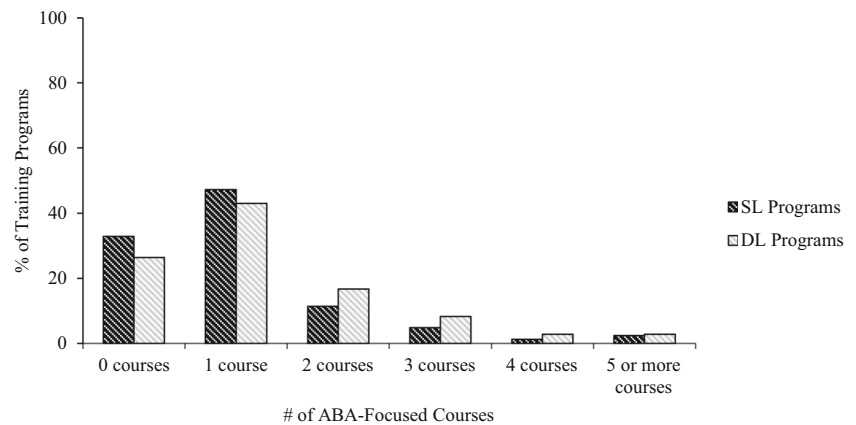
Table 4 Content areas covered by courses with some ABA-focused content

	Total $N = 138$		Specialist level $n = 90$		Doctoral level $n = 48$	
	N	%	N	%	n	%
Assessment	42	30.4	25	27.8	17	35.4
Concepts & Principles	8	5.8	7	7.8	1	2.1
Consultation	20	14.5	9	10.0	11	22.9
Ethics	1	0.7	0	0	1	2.1
Experimental design	7	5.1	2	2.2	5	10.4
Intervention	44	31.9	32	35.6	12	25
Multiple content areas	16	11.6	15	16.7	1	2.1

Table 6 Number of ABA-focused courses in school psychology training programs

	Total $N = 239$		Specialist level $n = 167$		Doctoral level $n = 72$	
	N	%	N	%	n	%
0 courses	74	31	55	32.9	19	26.4
1 course	110	46	79	47.3	31	43.1
2 courses	31	13	19	11.4	12	16.7
3 courses	14	5.9	8	4.8	6	8.3
4 courses	4	1.7	2	1.2	2	2.8
5 or more courses	6	2.5	4	2.4	2	2.8

Fig. 1 Percentage of specialist level (SL) and doctoral level (DL) programs that have 0, 1, 2, 3, 4, or 5 or more ABA-focused courses



Results indicated that nearly one-third of NASP-approved training programs did not offer any courses entirely focused on ABA knowledge and skills. This is surprising given federal legislation requirements for the use of positive behavioral interventions and functional behavior assessment in schools. The greatest proportion of training programs (45.8%) offered only one such course. Less than a quarter of the programs offered more than one ABA-focused course. The average number of ABA courses ($M = 1.1$) fall within the one to 1.5 range reported by Shriver and Watson (1999) and do not suggest training in ABA has been enhanced in school psychology training programs over the past 20 years.

Examination of the ABA-focused courses revealed a high percentage of courses in SL and DL programs (44.7% and 34%, respectively) that covered knowledge and skills across multiple content areas (e.g., assessment and intervention). Courses in SL programs that targeted a single content area most frequently focused on assessment and intervention, whereas courses in DL programs most frequently focused on experimental design and intervention. Single content area courses between SL and DL programs were least likely to target ethics or consultation. It is important to also consider the ABA training contributions of experiential practicum courses. As described by the NASP standards (2010), supervised practica is designed to systematically develop school

psychology students' skills such as behavioral assessment, consultation, and intervention. Results indicate that over 95% of practicum courses do not specifically target any ABA knowledge or skills.

As previously delineated, BCBAs must complete 315 hours of coursework and 1500 to 2000 hours of supervised fieldwork, and BCaBAs must complete 225 hours of coursework and 1000 to 1300 of supervised fieldwork. When comparing the expected amount of training required for behavior analysts to begin independent practice, what school psychology students receive may seem rather scant. This discrepancy is profound, particularly when considering what is expected of school psychologists by the profession's guidelines for the provision of services (NASP, 2020) and the real-world educational settings that view them as the professionals to whom referrals for behavioral support services should be sent.

In Fischer et al.'s (2019) review of NASP-approved training programs, 11.1% were found to offer a BACB verified course sequence (VCS). Recognizing the gap between the training provided in school psychology training programs and what is expected of school psychologists to address behavior issues in practice, the authors argued for school psychology programs without a VCS to consider its adoption. Given that courses within a VCS can address NASP practice domains, their integration in school psychology training curricula may be more easily achieved. However, establishing an integrated program can present possible challenges for training programs, including some loss of flexibility in course offerings and the need for an available faculty member who can serve as a coordinator for the VCS. These issues can certainly act as barriers for some, and it should be acknowledged that there are training programs that may operate within a philosophical model that places less emphasis on behavior. Nevertheless, it is imperative that training programs examine the extent to which they are equipping school psychology students with ABA knowledge and skills if they are committed to training them to be capable of delivering evidence-based behavioral supports in schools.

Table 7 Number of ABA-focused courses in school psychology training programs, excluding practicum courses

	Total $N = 239$		Specialist level $n = 167$		Doctoral level $n = 72$	
	N	%	N	%	N	%
0 courses	76	31.7	57	34.1	19	26.4
1 course	110	45.8	78	46.7	32	44.4
2 courses	31	12.9	19	11.4	11	15.3
3 courses	15	6.3	8	4.8	7	9.7
4 courses	5	2.1	3	1.8	2	2.8
5 or more courses	3	1.3	2	1.2	1	1.4

Limitations

The findings presented in this study should be interpreted in the context of some limitations. First, the sample was comprised of only NASP-approved programs. Thus, results may not generalize to school psychology training programs that are not NASP-approved. Based on an online search of school psychology programs listed in the USDOE database, there are currently 11 universities that offer school psychology degrees that are not listed as NASP-approved. Second, the current study focuses on required coursework in school psychology training curricula. Some training programs offer students the option to take elective courses that include behavior analytic content. Thus, results may accurately represent the true number of ABA-focused courses that school psychology students are taking during their graduate studies, and third, it is difficult to assess the degree to which some courses cover ABA knowledge and skills based only on program materials, particularly courses that combine a variety of content from a broad range of knowledge and skills that school psychology students are expected to learn (e.g., cognitive assessment and intervention, human development, psychopathology, social aspects of behavior, etc.). Thus, compared to courses covering *None* or *All* content focused on ABA knowledge and skills, those identified as having *Some* ABA content likely represent greater variance in the amount of ABA training provided. In other words, the measure used in this study to determine the amount of ABA training provided may lack the sensitivity to produce more accurate information about the amount of ABA training provided in school psychology training programs.

Conclusion

Over two decades have passed since Shriver and Watson's (1999) survey of school psychology training programs that resulted in a recommendation for the integration of "at least one didactic course in behavior analysis, didactic coursework in behavioral assessment (functional behavior assessment), and didactic coursework in behavioral interventions" (p. 220). Now in 2020, there is no clear evidence of any enhancement of behavioral training in school psychology programs.

As stated by Fischer et al. (2019), "there is a problem with advocating for a behavioral problem-solving model in school psychology without also advocating for necessary behavioral training" (p. 11). If the BACB's requirements for behavior analysts are considered reasonable, then the baseline assessment of ABA coursework in school psychology training programs presented in this study suggests the need for further reflection and dialogue on the topic of what ABA knowledge and skills are, should be, and will be taught to meet the expectations of the NASP standards, federal legislation requirements, and the field. Future research to track the integration of

ABA training provided in school psychology curricula and examine the effectiveness of integrated training models may assist training programs in designing optimal curricula for the preparation of school psychologists.

Declarations

This study did not involve data collection from human participants and/or animals; thus, informed consent was not applicable.

Competing Interests The author declares no competing interests.

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