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The scientist–practitioner model in counseling psychology programs: a survey of training directors

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The scientist–practitioner model dominates as the premier training model for graduate training in applied psychology. Despite its widespread use, almost no research has focused critically on the model's operationalized definition or its implementation and evaluation in training programs. This study provides an overview of how training directors in counseling psychology currently define, implement, and evaluate the scientist–practitioner model within their respective programs. A multi-methods online survey was distributed to 50 counseling psychology training directors. Qualitative responses from 32 respondents were analyzed using thematic content analysis. Non-thematic observations on response form/style were also summarized. Key findings suggest that counseling psychology training directors define the model in at least three broad ways. Some definitions are inconsistent with each other. Furthermore, basic program requirements are often used as the basis for both implementing and evaluating graduate programs' use of the training model. Lastly, many training directors rely on previous responses or published program descriptions in their answers. Implications include the ethics regarding the lack of clarity and consistency of the model's current use, advancement of the model beyond an abstraction to concrete operationalization, and concern about other applied specialties in psychology potentially having similar problems with the model.

Keywords: scientist–practitioner model; psychology training; multi-methods research; training directors; integration of science and practice

Since its adoption at the Boulder Conference in 1949, the scientist–practitioner model has dominated as the premier model of training for doctoral programs in applied psychology in the USA (Kanfer, 1990; O'Sullivan & Quevillon, 1992). Not only is it considered by many to be the gold standard of training, Belar (2000) has asserted that the "model is fundamental to the growth of professional psychology" (p. 249). Originally, the model was adopted for training in clinical psychology (Benjamin & Baker, 2000). In the ensuing years since Boulder, other applied specialties in psychology also have given their endorsement of the model (Belar & Perry, 1992). Furthermore, the model has gained considerable traction internationally as many psychologists in other countries have embraced a scientist–practitioner orientation in their training and practice (Martin & Martin, 1989; Nixon, 1990; O'Gorman, 2001).

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The popularity of the model is without question. Horn et al. (2007), for instance, surveyed over 300 doctoral programs in counseling psychology, clinical psychology, and school psychology. They found that more than half of the programs referenced the model in their web-based program descriptions. In an earlier study, O'Sullivan and Quevillon (1992) reported that the directors of 97.8% of the doctoral programs in clinical psychology and 74.1% of the terminal master's programs surveyed in the USA and Canada adhere to the Boulder model.

Among the applied specialties that subsequently adopted the model, counseling psychology was the first new adopter. At its first national conference, known as the Northwestern Conference, Division 17 of the American Psychological Association (APA) affirmed a balanced emphasis on practice and research in the training of counseling psychologists (APA, 1952). Although the terminology scientist–practitioner model was not specifically used and acknowledgment of achieving a balance between science and practice was unresolved, the commentary was consistent with contemporary discussions of the model. Division 17 officially endorsed the model at its Third National Conference for Counseling Psychology in Atlanta, Georgia (Meara et al., 1988). Delegates at the conference issued the following statement:

> The scientist-professional or scientist-practitioner … model is the paradigm for the education and training of counseling psychologists. The terms *scientist* and *professional* are used here to represent the broad and integrative nature of the concepts of research and practice and to emphasize the many possible roles and job placements for well-trained counseling psychologists. (Meara et al., 1988, p. 367–368)

Continuing that legacy, the Council of Counseling Psychology Training Programs (CCPTP) in 1994 also adopted the scientist–practitioner model as the foundation for the counseling psychology field. Today, the CCPTP's website asserts, "Counseling psychology training programs are developed from a scientist-practitioner model of education." It further asserts, "At a core level this model prescribes the integration of science base with practice applications and the development of research that is relevant to practice." The central idea here is the "integration of science base with practice applications." The "integration of science and practice" has become a bellwether and is replete throughout the literature as a catch phrase for describing the model (e.g. Belar & Perry, 1992; Chwalisz, 2003; Heppner et al., 1992; Murdock, 2006).

In addition to the official endorsements by the above organizations, numerous publications about the scientist–practitioner model have either been published in counseling psychology literature or authored and published by counseling psychologists in other literature (e.g. Heppner et al., 1992; Meier, 1999; Spengler et al., 1995). Figure 1 lists representative publications. The sheer volume of publications on the topic indicates the importance of the model to the specialty. The initiatives and publications of counseling psychology entities also are commensurate with more recent efforts of counseling psychologists to improve the professional competence of their trainees and established professionals (Fouad et al., 2009; Ridley, Mollen, & Kelly, 2011).

Despite being invoked across countless publications, training program websites, and student handbooks, the model rarely, if ever, has been explicitly operationalized and evaluated. No single definition or set of defining characteristics is prominent in the expansive literature covering the model. Typically, the model is framed in only the most

Aspenson, & Gersh (1993)
APA (1952)
Baraclough (2006)
Barnett (2006)
Berstein & Kern (1993)
Chaalisz (2003)
Claiborn (1987)
Galassi & Brooks (1992)
Gelso (1993, 2006)
Haring-Hidore & Vacc (1998)
Heppner et al. (1992)
Hoshmand (1991)
Hoshmand & Polkinghorne (1992)
Howard (1985; 1993)
Lampropoulos & Spengler (2002)
Lampropoulos, Spengler, Dixon, & Nicholas (2002)
Martin & Martin (1989)
Meara et al. (1988)
Meier (1999)
Murdock (2006)
Neimeyer, Saferstein, & Rice (2005)
Sauer (2006)
Spengler, Strohmer, Dixon, & Shivy (1995)
Stoltenberg et al. (2000)
Stone (2006)
Vespia (2006)
Vespia & Sauer (2006)
Vespia, Sauer, & Lyddon (2006)

Figure 1. Representative counseling psychology publications on the scientist–practitioner model.

general manner. Leaders in counseling psychology, as in other specialties, seem to have taken for granted their understanding and implementation of the model in their training programs, causing the field to blindly accept ambiguous definitions and standards for evaluating the model's success. Without a clear consensus on the nature and means of implementation of the scientist–practitioner model, its practical utility for the field will likely remain powerful in reputation but ultimately vacuous.

Purpose of the present study

The purpose of this study was to investigate how CCPTP training directors define, implement, and evaluate the scientist–practitioner model within their respective programs. The impetus for this study came from the aforementioned definitional problem and the CCPTP's official statement that follows the recommendations of the Task Force on Integrating Science and Practice in Counseling Psychology (Heppner et al., 1992). Specifically, the council urges programs to: (a) create environments that foster a scientific attitude regarding all counseling tasks on the science–practice continuum; (b) review and revise curriculum to strengthen students' science–practice skills; (c) increase faculty, student, and alumni productivity and consumption of theory and research through professional publications; and (d) sponsor the professional exchange of information at regional and national meetings.

Although affirming the scientist–practitioner model and proffering the importance of integration, we had concerns that the programs constituting CCPTP may struggle in fulfilling their affirmation of and commitment to the model. These concerns arose out of the above-mentioned definitional problem and criticisms regarding the model's inadequate conceptualization and implementation (Barlow, Hayes, & Nelson, 1984; John, 1998; O'Gorman, 2001; Phillips, 1993). Correspondingly, the exact meaning of integration of science and practice, as well as how this process takes place in training, is not clear. By obtaining concrete evidence of the current status of the model, it is hoped that counseling psychology will be able to apply the model with more clarity, consistency, and intentionality.

Research questions

Table 1 presents the six core research questions for this study.

Method

Participants

Thirty-two leaders in counseling psychology training programs across the USA participated in this study. All of the participants were affiliated with the CCPTP. Twenty-five of the participants identified as training directors of counseling (or combined) psychology PhD programs, six identified as training directors of PsyD programs, two were CCPTP board/staff members, and one identified as a former training director of a counseling (or combined) psychology PhD program. Two participants who selected "other" indicated they were a department chair and a former CCPTP board member, respectively.

Unique issues regarding sampling methods made it difficult to identify an exact response rate. While the results are meant to generalize to all counseling psychology training programs in the USA, convenience sampling was used. Division 17 (Society of Counseling Psychology) currently cites approximately 67 APA-accredited counseling doctoral (PhD or PsyD) programs. The CCPTP represents the vast majority of these programs through institutional memberships, and most of these programs have at least one representative (usually a training director, but possibly a faculty member) present at CCPTP annual meetings. While the exact number of conference attendees during the annual winter meeting in 2013 is unknown, almost all attendees provided contact information to receive the survey and 50 contacts were obtained; therefore, a reasonable estimate for the true (unknown) sample pool is between 50 and 75. For the purpose of this study, the 50 persons who actually received the survey link serve as the sample pool. Thus, out of the sample pool of 50, a total of 32 participants (a 64% response rate) responded to at least part of the survey. The average response rate for all questions was 18 participants (a 36% response rate). It should be noted that, for some of the questions with lower responses rates, one participant can represent as much as 8% of the sample.

Table 1. Summary of research questions and associated qualitative and quantitative items.

Research question		Qualitative items		Quantitative items	
1	How do Counseling Psychology (CPSY) programs *define* the scientist–practitioner model?	L1	How does your program *define* the scientist–practitioner model?	T1	Rank the following statements in terms of your program's use of the scientist–practitioner model (1 being most accurate): "Our program trains students to be …" (rank order scale)
		L2	How do you differentiate a scientist–practitioner from a psychologist who is not a scientist–practitioner?		
		L3	Please describe the common activities of a scientist–practitioner		
2	How do CPSY programs *implement* the SP model?	L4	How does your program *implement* the scientist–practitioner model?	T2	In our program, the scientist–practitioner model is dominant in: (five-point Likert)
				T3	Place the following training program components on a scale of "emphasizing *science* only" to "emphasizing *practice* only": (seven-point Likert)
3	How do CPSY training directors *evaluate* their *program* and their *students* as scientist–practitioner?	L5	How does your program evaluate its performance specifically as a scientist–practitioner training program?	T4	The scientist–practitioner model dictates how our program evaluates students': (five-point Likert)
		L6	Please describe how your program evaluates students' professional development as scientist–practitioners specifically		
4	How do CPSY programs perceive their students to be integrating science and practice and taking on their identities as scientist–practitioners?	L7	How do students in your program most prominently incorporate science into *practice*?	T5	Students in our program take on their identity as scientist–practitioners through: (five-point Likert)
		L8	How do students in your program most prominently incorporate practice into *science*?		
5	How confident are CPSY training directors in the scientist–practitioner model?	–	–	T6	I am confident in my ability to: (five-point Likert)
6	To what extent do CPSY training directors use training guidelines and recommendations for scientist practitioner training, and to what extent is this formally assessed?	–	–	T7a	In our program: (Use of training published guidelines; five-point Likert)
				T7b	Are the outcomes of this formally assessed?

Procedure

During the annual winter meeting of the CCPTP (February, 2013), attendees were recruited to participate in the survey. The investigators obtained the names and contact information of the 50 attendees who agreed to be participants. An email with the survey link was sent to these attendees. A reminder email was sent to non-respondents twice within three months after the meeting. At the close of the survey, 32 participants had responded to at least part of the survey, yielding a 64% response rate.

Measures

CCPTP scientist–practitioner training model survey

The CCPTP scientist–practitioner training model survey is an 18-item multi-methods self-report questionnaire, which is in Appendix 1. It was designed using Qualtrics, online software that creates web-based surveys and databases. The survey consisted of two demographic questions, eight quantitative questions, and eight qualitative questions. Qualitative items were open-ended questions that allowed participants to write in unstructured responses. Quantitative items included one dichotomous question, two multiple-choice questions, five Likert-type rating scales, one rank-order scale item, and one semantic differential scale item. Survey branching was used in one instance: participants who indicated their training programs to be based on any model other than the scientist–practitioner model were given two extra follow-up questions to specify which training model their program uses and to provide a brief definition of the model.

Item development was driven by the research questions. The authors' research in and experience with the scientist–practitioner training model served as the primary resource when developing items. Outside surveys were not consulted, as the authors are unaware of any assessment instruments sufficiently similar to the one developed here. Further, use of previous research or empirical reviews did not play a role in the item development procedures. We believe this is an acceptable practice given the novel nature of the study's purpose.

Overall, questions focused on how the scientist–practitioner model is currently being defined, implemented, and evaluated in counseling psychology training programs. Table 1 indicates which qualitative and quantitative items paired with which research question. For most research questions, both qualitative and quantitative items were posed. Qualitative items allowed us to explore in depth how participants subjectively perceive the scientist–practitioner model as it functions within their respective training programs. Quantitative items included a range of questions relating the scientist–practitioner model to various training components; through these items, we were able to see (1) whether the scientist–practitioner model informed some training components more than others, (2) whether some training components were informed by science more than by practice (or vice versa), and (3) whether participants responded to these structured items consistently or discrepantly.

Questions were ordered such that, for any group of items with both qualitative and quantitative items, all qualitative items in the group were presented *before* any quantitative items. This prevented any potential biasing of participants' open-ended responses from reading quantitative items on the same general topic. Further, no more than four qualitative items were presented in a row to reduce respondent fatigue.

Procedure for qualitative data analysis

The gross data were submitted to systematic and inductive thematic content analysis procedures. First, responses for individual qualitative items were compiled and grouped together. For each item, the researchers read the responses multiple times to increase familiarity with the responses. Then, the researchers broke the compiled responses into individual units limited to one word, thought, or concept. Each unit was assigned a brief word, phrase, or description that could meaningfully describe, characterize, and/or reflect any content relevant to the research question. Next, the researchers began identifying and listing unit resemblances and connections. Recurring unit patterns were used to group units together, yielding thematic categories representing broader thoughts or concepts. This process of categorization and synthesis was repeated in a reiterative process until clear central themes were identified and could reliably characterize the gross content.

Some qualitative items had as few as 12 responses. For items with only a small number of responses, most units that could not be logically tied to any other unit or thematic category were denoted as individual responses and still reported in the results as such. However, for extremely diverse response corpora, reporting all isolated units would be meaningless and were thus excluded from the results for those items.

Researcher-as-instrument statement

To enhance the trustworthiness/credibility in the interpretation of the qualitative data, the authors drew upon Morrow's (2005) suggestion of qualitative researchers "making their implicit assumptions and biases overt to themselves and other, reflexivity, and representation" (p. 254). First, the senior author had spent considerable time researching and analyzing the disparate literature on the scientist–practitioner model. Dissatisfied with answers to some of his pressing questions, the experience prompted him to formulate the research problem of this study. Clearly, his major bias pertained to questioning the authenticity of the model. Nevertheless, he sought diligently but unsuccessfully to find alternative interpretations from the actual findings. The second author, however, did not have this in-depth experience with the literature but served as the primary interpreter of the qualitative data. Therefore, she was able to bring her fresh perspective without a strong bias to the interpretation. Second, the senior author reported the findings to others in the professional community, but they were unable to provide alternative interpretations. Third, because of the survey nature of the study, the researchers unfortunately were unable to learn the extent to which the interpretations matched the participants' meanings. However, many of their terse and succinct comments lent themselves to not being misinterpreted.

Results

Results are presented as means with standard deviations, frequencies, and/or percent totals. For ease of reading, fractions have been rounded to the nearest whole percent. For qualitative questions, categorical themes are presented; the complete list of responses can be found in a separate document.

Basic information

Participants were asked whether their clinical training program is based on the scientist–practitioner model of education. The majority (78%) said "yes," and 19% said "no" ($n = 32$). One participant (3%) reported being unsure and wrote that the training program is based on a "practitioner-scientist" model, but not "practitioner-scholar." At the end of the survey, those who said "no" were given the opportunity to write in the prominent model for their program or select from a list provided, and then prompted to provide a brief definition of that model. One participant selected practitioner-scholar and wrote that the model "prepares students for the professional practice of psychology utilizing knowledge and techniques grounded in the scientific literature."

Definitions of the scientist–practitioner model

Qualitative responses

The survey included three qualitative items aimed at understanding how participants define the scientist–practitioner model in their training programs. One item asked this question directly; two items focused on the activities and distinguishing criteria for scientist–practitioners. Table 2 summarizes the major themes in response to these three items.

First, participants were asked how their clinical training program *defines* the scientist–practitioner model. Twenty-three participants wrote-in a response. Several respondents described an "integration", "inseparability", "interdependence", or "blend" of science/research and clinical practice. Additional frequent responses described how the model trains students to (a) conduct research based on, or relevant to, clinical practice and/or (b) use empirically-supported research in clinical practice. Several described how their program provides an "equal emphasis on" or "balance of" research and practice in students' clinical training activities. Some respondents simply described their program philosophy or goals, often quoting directly from a student handbook or program website. One respondent wrote that their program uses the Murdock, Alcorn, Heesacker, and Stoltenberg (1998) definition. Six (26%) of respondents indicated that their program uses a model other than the scientist–practitioner model. Of these six, three identified as practitioner-scholar, one identified as practitioner-scientist, and two did not specify their alternative training model.

Second, participants were asked how they differentiate a scientist–practitioner from a psychologist who is not a scientist–practitioner. Again, there were 20 responses that varied widely. However, several participants described two general distinguishing features of a scientist–practitioner: (1) using research to inform one's clinical work (e.g. using evidence-based treatments) and (2) using clinical experience/literature to inform one's research. Inversely, research with no practical application, and clinical practice that fails to pay attention to empirical support, were identified as signs of a non-scientist–practitioner. Three participants indicated that a scientist–practitioner had to produce research, and one participant said that non-scientist–practitioners may take fewer research methods/statistics courses and may be less capable of critiquing research. Three participants wrote that, in real-world settings, most scientist–practitioners tend to do *either* primarily research *or* practice, but the ideal, and the standard, is an integration of the two. A few participants indicated that a scientist–practitioner either performs

Table 2. Qualitative themes for definition of the scientist–practitioner model.

Question(s)	Qualitative themes
How does your program *define* the scientist–practitioner model? ($n = 23$)	(1) Integration of science and practice • Main terms: *integration, union, interdependence, blend, reciprocal, circular, complementary* (2) Equal and balanced emphasis/focus on research and practice (3) Practice-based research and Research-based practice (e.g. EBPs) • Research based on (or relevant for) practice • Evidence-based practice/ empirically based treatments
How do you differentiate a scientist–practitioner from a psychologist who is not a scientist–practitioner? ($n = 20$) Please describe the common activities of a scientist–practitioner. ($n = 20$)	(1) Integrated activity (i.e. attends to the integration of science and practice in one's work) • Conducts practice-informed or practice-relevant research • Uses research-informed practice (2) Integrated way of thinking • Has a general attitude, philosophy, or perspective toward science and practice • Uses scientific/critical thinking; bases their work in scientific knowledge (3) Does *either* research or practice (4) Does *both* research and practice (equally or simultaneously) (5) Does many various activities (e.g. research, practice, teaching, advocacy, consultation, supervision/training) (6) Conducts research

research and clinical work equally or is equally comfortable and capable in both roles. A few emphasized that the scientist–practitioner may be best identified by a particular way of thinking or a philosophy in action.

Third, participants were asked to describe the common activities of a scientist–practitioner. Twenty widely diverse responses were provided. General themes included:

- Teaching.
- Research, including: basic scientific research, qualitative research, action research, mixed-methods research, writing articles, attending and presenting at professional conferences, conducting program evaluations, grant writing, publishing, reading

journals with empirical research, producing clinically relevant research, creating studies or developing research questions based on ideas gained from clinical practice, conducting research studies evaluating the outcomes of one's clinical practice, thinking through the practical implications of a research project for therapy, and testing current counseling models for applicability to certain populations.

- Clinical practice, including: providing direct client service, using evidence-based treatments or using the available evidence to select appropriate treatments, staying up-to-date on current literature and using this information in clinical work, supervising or training others in the scientist–practitioner model, and practicing in settings related to one's research.
- Miscellaneous, including: advocacy, consultation, supervision, and training.

Several participants responded that the activities are less central than the attitude/perspective/approach to thinking about science and working with clients. One participant included teaching, and one participant said the activities would not differ from those of other models except that students trained under the scientist–practitioner model would be more likely to take faculty or research positions than clinical positions.

Quantitative responses

Participants were asked to rank four statements in order of their accuracy in describing their training program. Table 3 shows that training directors were most likely to state their program trains students to be "both a scientist *and* practitioner" ($M = 1.65$) and least likely to state their program trains students to be "either a scientist *or* a practitioner" ($M = 3.53$). Slightly more training directors would state their program trains students to be "practitioners who provide services based on scientific knowledge" ($M = 2.35$) than "scientists who produce knowledge relevant to practice" ($M = 2.47$).

Implementations of the scientist–practitioner model

Qualitative responses

The survey included one qualitative item aimed at understanding how participants implement the scientist–practitioner model in their training programs. Table 4 summarizes the major themes in response to this item. Participants were asked how their clinical training program *implements* the scientist–practitioner model. Twenty-three participants wrote in a response. The majority described various program requirements

Table 3. Rank order of program definitions ($n = 17$).

Our program trains students to be …	1st (%)	2nd (%)	3rd (%)	4th (%)
Both a scientist *and* a practitioner	65	18	6	12
Either a scientist *or* a practitioner	6	6	18	71
Practitioners who provide services based on scientific knowledge	18	29	53	–
Scientists who produce knowledge relevant to practice	12	47	24	18

Table 4. Qualitative themes for implementation of the scientist–practitioner model.

Question(s)	Qualitative themes
How does your program *implement* the scientist–practitioner model? (n = 23)	(1) Program requirements and/or expectations • Coursework, research, practica, comprehensive exams, dissertation, etc. • Detailed descriptions of program structure, requirements, competency statements, etc. (2) Doing both research and practice • Doing either *equal amounts* or doing both *simultaneously* throughout the program (3) Doing clinically-relevant research and learning/using EBPs (4) Faculty, coursework, and practica focus on, emphasize, and/or teach the integration of science and practice (i.e. how they inform one another)

and opportunities for student involvement, such as "coursework" (in both research/statistics and practice), "research" (including submitting manuscripts to peer-review journals, completing dissertations, etc.), and "clinical practice" (including in-house clinics, outside field practica, training in evidence-based practices, etc.). Some described how their program either "requires," "supports," or "encourages" students to select research topics and projects that are relevant to practice. Some stated that their faculty and courses "attend to the integration of science and practice." A few discussed assessing students in both clinical and research competencies through comprehensive exams, written papers, and/or oral defenses. One respondent quoted the program's list of objectives from the student handbook.

Quantitative responses

One way to determine how the scientist–practitioner model is implemented in training programs is to consider the salience of the model within various program components. For this purpose, participants were asked to indicate their agreement with how dominant the scientist–practitioner model is in various areas of their respective training programs. In descending mean order, Table 5 indicates that training directors agree that the scientist–practitioner model is generally dominant in most areas. However, only 51% either agreed or strongly agreed that the scientist–practitioner model is dominant in student evaluations.

Another way to consider model implementation is to assess whether training directors perceive certain program components as emphasizing "science" or "practice" more. For this purpose, participants were asked to place various elements of their training program on a scale of 1 to 7 (1 = "emphasizing science only" and 7 = "emphasizing practice only"). In order of mostly science to mostly practice, Table 6 shows that training programs emphasize science more in statistics and research methodology, psychology

Table 5. Dominancy of scientist–practitioner model in major program areas (n = 16).

In our program, the scientist–practitioner model is dominant in	Strongly agree (5) (%)	Agree (4) (%)	Neither agree nor disagree (3) (%)	Disagree (2) (%)	Strong disagree (1) (%)	Mean (SD)
Coursework	75	19	–	–	6	4.56 (1.03)
Research	56	19	13	6	6	4.13 (1.26)
Mentoring/advising	44	19	31	–	6	3.94 (1.18)
Practica	19	63	13	–	6	3.88 (0.96)
Counseling supervision	6	69	19	–	6	3.69 (0.87)
Student evaluations	13	38	31	13	6	3.38 (1.09)

Table 6. Placement of program components on a scientist–practitioner scale (n = 16).

Place the following training program components on a scale of "emphasizing *science* only" to "emphasizing *practice* only"	1 = Science (%)	2 (%)	3 (%)	4 (%)	5 (%)	6 (%)	7 = Practice (%)	Mean (SD)
Statistics and research methodology	25	38	31	6	–	–	–	2.19 (0.91)
Psychology core courses	25	31	25	13	–	6	–	2.50 (1.37)
Research experiences	13	38	31	19	–	–	–	2.56 (0.96)
Dissertation experiences	13	38	19	31	–	–	–	2.69 (1.08)
Criteria for student evaluations	6	6	6	75	–	6	–	3.75 (1.06)
Counseling psychology core courses	6	13	13	19	44	6	–	4.00 (1.41)
Our program overall	–	6	13	50	25	6	–	4.13 (0.96)
Diagnostic/assessment courses	–	6	6	50	38	–	–	4.19 (0.83)
Practica courses	–	6	–	31	31	31	–	4.81 (1.11)

core courses, and research and dissertation experiences, while they emphasize practice more in practica courses. Interestingly, the distribution of all responses appeared significantly more skewed toward science than practice. For example, the most practice-oriented item (practica courses, $M = 4.81$) fell far closer to the middle of the scale than the most science-oriented item (science and research methodology, $M = 2.19$).

Evaluation of the scientist–practitioner model

Qualitative responses

The survey included two qualitative items aimed at understanding how participants evaluate their program's performance as scientist–practitioner. One question focused on the program itself, while the second focused on evaluation of students as scientist–practitioners. Table 7 summarizes the major themes in response to these items.

First, participants were asked how their training program evaluates its performance, specifically, as a scientist–practitioner training program. Of the 16 responses, the majority described various evaluation procedures for their students, such as the quantity and quality of their performance in coursework, research, and practica; comprehensive exams; dissertations; and annual portfolios. Most participants specified that they use these procedures to evaluate their students' proficiency in the program's training goals and standard competencies. One participant said their program evaluates students' competency in science and practice separately and should find more integrative assessment methods. One participant quoted from a student handbook describing the evaluation methods for their program's objectives. A few mentioned using program outcomes evaluations and/or alumni surveys.

Second, participants were asked how their training program evaluates their students' professional development as scientist–practitioners. Of the 12 responses, most referred to responses given in previous answers. Several discussed annual evaluations, and a few specified that their annual evaluations include practice and research competency benchmarks. One participant said they encourage students to attend professional conferences.

Table 7. Qualitative themes for evaluation of the scientist–practitioner model.

Question(s)	Qualitative themes
How does your program evaluate its performance specifically as a scientist–practitioner training program? ($n = 16$) Please describe how your program evaluates students' professional development as scientist–practitioners specifically? ($n = 12$)	(1) Evaluating students in their coursework, research, practica • Assessing both quality and quantity • Dissertation typically required to have clinical application (2) Evaluating students in annual evaluations/portfolios and comprehensive exams • Assessing proficiency and competency in program's training goals • Many include a scientist–practitioner portion or element (3) Evaluating program outcomes (4) Encouraging students to publish and present their research

Quantitative responses

Participants were asked to indicate how much the scientist–practitioner model is used to evaluate students in various professional competency areas. In descending mean order, Table 8 shows that training directors feel the scientist–practitioner model informs their evaluation of students in most competency areas, especially practice and research competency. Responses were more neutral for teaching and consultation competencies.

Student development as scientist–practitioners

Qualitative responses

A typical phrase found in scientist–practitioner literature is "integration of science and practice." Two qualitative items were used to understand how training directors perceive students integrating science and practice. First, participants were asked how students in their program most prominently incorporate science into practice. Fifteen participants responded and mentioned various student activities, including: reviewing research literature; evaluating research; informing their practice with empirical support from research literature; selecting empirically supported techniques; using evidence-based practice models; making clinical decisions of empirical evidence and citing that evidence; conducting research; conducting client outcome research through the course of treatment; writing case reports, case studies, and case conceptualizations; taking courses; and completing assignments and comprehensive exams.

Second, participants were asked how students in their program most prominently incorporate practice into science. Of the 15 responses, the majority focused on having their students: perform clinical work, use their clinical work to help them generate research questions and create research studies, review research for practical implications, consider how practice informs research, evaluate research for its application to practice, work on applied science research projects, present research that has clinical

Table 8. Use of the scientist–practitioner model in student competency evaluations (n = 12).

The scientist–practitioner model dictates how our program evaluates students'	Strongly agree (5) (%)	Agree (4) (%)	Neither agree nor disagree (3) (%)	Disagree (2) (%)	Strongly disagree (1) (%)	Mean (SD)
Practice (counseling) competency	33	58	8	–	–	4.25 (0.62)
Research competency	42	42	17	–	–	4.25 (0.75)
Assessment competency	33	50	17	–	–	4.17 (0.72)
Multicultural competency	33	33	33	–	–	4.00 (0.85)
Supervision competency	25	42	33	–	–	3.92 (0.79)
Teaching competency	17	8	67	8	–	3.33 (0.89)
Consultation competency	9	9	73	9	–	3.18 (0.75)

implications at conferences, work with professors whose research is applied, design thesis and dissertation projects that have practical implications, and conduct applied research projects and/or research projects connected to practice.

Quantitative responses

Participants were asked how their program's students take on their identity as scientist–practitioners. In descending mean order, Table 9 shows that training directors perceive their students taking on their scientist–practitioner identities most frequently through their interactions and relationships with their advisor(s) and mentor(s) and least frequently through self-instruction.

Confidence among training directors in scientist–practitioner model

Participants were asked to indicate how confident they were in their ability to define, implement, evaluate, and model in their own work the scientist–practitioner model. In descending mean order, Table 10 shows that training directors feel most confident about defining the scientist–practitioner model and least confident about evaluating students' development as scientist–practitioners.

Use of training guidelines in counseling psychology training programs

Participants were asked to indicate their agreement with a variety of statements that reflect broad recommendations made by Stoltenberg et al. (2000) for scientist–practitioner training. In descending mean order, Table 11 shows that participants most

Table 9. Means of developing students' scientist–practitioner identities (n = 15).

Students in our program take on their identity as scientist–practitioners through	Always (5) (%)	Most of the time (4) (%)	Sometimes (3) (%)	Rarely (2) (%)	Never (1) (%)	Mean (SD)
Advisors/mentors	27	67	7	–	–	4.20 (0.56)
Academic courses	20	67	13	–	–	4.07 (0.59)
Research teams/projects	33	40	27	–	–	4.07 (0.80)
Assigned readings	13	73	13	–	–	4.00 (0.53)
Practica	20	60	20	–	–	4.00 (0.65)
Workshops, conferences, webinars, etc.	13	33	33	20	–	3.40 (0.99)
Networking	13	20	53	13	–	3.33 (0.90)
Self-instruction	14	7	50	29	–	3.07 (1.00)
Other	–	–	50	–	–	3.00 (0.00)

Table 10. Training directors' confidence in scientist–practitioner model (n = 13).

I am confident in my ability to	Strongly agree (5) (%)	Agree (4) (%)	Neither agree nor disagree (3) (%)	Disagree (2) (%)	Strongly disagree (1) (%)	Mean (SD)
Define the scientist–practitioner model	31	62	–	–	8	4.08 (1.04)
Implement the scientist–practitioner model in the program	15	69	8	–	8	3.85 (0.99)
Model the scientist–practitioner model in my own professional activities	23	46	23	–	8	3.77 (1.09)
Evaluate our program's adherence to the scientist–practitioner model	–	77	15	–	8	3.62 (0.87)
Evaluate students' development specifically as scientist–practitioners	–	62	31	–	8	3.46 (0.88)

Table 11. Use of training guidelines and recommendations for scientist–practitioner training (n = 16).

In our program	Strongly agree (5) (%)	Agree (4) (%)	Neither agree nor disagree (3) (%)	Disagree (2) (%)	Strongly disagree (1) (%)	Mean (SD)
Students receive practica training over the full course of training	69	25	6	–	–	4.62 (0.62)
Students receive research training over the full course of training	75	13	6	–	6	4.50 (1.10)
Students are formally trained in the evidence-based practice (EBP) approach	44	50	6	–	–	4.37 (0.62)
Students are formally taught the logic of the scientist–practitioner model	44	50	–	6	–	4.31 (0.79)
Core faculty are active scientist–practitioners who model this identity for students	44	50	–	6	–	4.31 (0.79)
Diverse research methodology training is provided and encouraged by faculty	50	25	19	6	–	4.19 (0.98)
Students learn how to conduct n = 1 outcome research with their clients	13	19	31	31	6	3.00 (1.15)
Students are trained in manualized treatment approaches	13	31	31	31	13	3.00 (1.32)

strongly agree that their students receive practica and research training over the full course of training, and they neither agree nor disagree that their students are trained in n = 1 outcome research and manualized treatment approaches.

A follow-up question asked participants to indicate whether the outcomes of these training guidelines, if utilized, are then formally assessed by their program. In descending order of per cent "yes" responses, Table 12 indicates that formal assessment is greatest for formal EBP training and research training over the full course of training, while formal assessment is least likely for manualized treatment training, n = 1 outcome research training, and assessment of faculty modeling a scientist–practitioner identity. Although 94% of participants agreed that their students receive practica training over the full course of training, only slightly over half (58%) of them formally assess this. Perhaps even more surprising is that, although 75% said that their faculty model a scientist–practitioner identity for students, this is formally assessed by only 9% of training programs.

Discussion

The findings of this study are puzzling at the best and disconcerting at the worst. They reveal little consensus among leaders in counseling psychology about the defining characteristics and role of the scientist–practitioner model in their training programs. What consensus that does exist among these leaders is ambiguous, vague, and abstract. This is especially disturbing in light of the longstanding and widespread acceptance of the model in the specialty. Therefore, we are prompted to ask some critical questions: do psychologists really have a scientist–practitioner model? Or do they have a good idea in search of a model? A closer look at the results helps us to begin to answer these questions.

Definition

Training directors defined the scientist–practitioner model in three primary ways: (a) an integration of science and practice (e.g. conducting research based on or relevant for clinical practice or using evidence-based practice); (b) an equal emphasis on research and practice (but not necessarily attempting to integrate the two domains); and (c) an attitude

Table 12. Formal assessment of training guidelines and recommendations (n = 10–12).

Are outcomes of this formally assessed?	Yes (%)	No (%)
Students are formally trained in the evidence-based practice (EBP) approach	100	–
Students receive research training over the full course of training	91	9
Students are formally taught the logic of the scientist–practitioner model	60	40
Students receive practica training over the full course of training	58	42
Diverse research methodology training is provided and encouraged by faculty	45	55
Students are trained in manualized treatment approaches	20	80
Students learn how to conduct n = 1 outcome research with their clients	10	90
Core faculty are active scientist–practitioners who model this identity for students	9	91

or way of thinking about science and practice. Some training directors conceptualized the relationship between science and practice within the scientist–practitioner model as a "both … and" relationship, while others conceptualized it as an "either … or" relationship. Some of the definitions were incompatible with each other. In addition, training directors varied in their opinion of the typical activities for scientist–practitioners.

The absence of a consensus definition, along with the apparent incompatibility of some definitions, helps to explain why there is a definitional gap in the literature. Moreover, if directors of training programs, who also are affiliated with the council concerned with training in the member programs, cannot define the scientist–practitioner model or identify common defining features, on what basis can we conclude that there is a model? Based on these findings, arriving at such a conclusion is a stretch in logic. Along these lines, Trierweiler and Stricker (1998) described the model as an idealized image of education. They pointed out that the Boulder conferees established broad educational guidelines. However, in examining the conference proceedings (Raimy, 1950), the conferees never used the word model in their resolutions. At some point after the conference, the term "model" became a part of our professional nomenclature. But this usage does not mean that the profession has undergone the arduous task of articulating the definition and parameters of this idealization. Apparently, in particular, counseling psychology has not done so either.

Implementation

Training directors reported implementing the scientist–practitioner model through program requirements, such as research and practice requirements. Some indicated that student research must be clinically relevant, and student practice must be evidence-based. Several respondents either referred to "previous answer," or their responses appeared directly quoted from published program descriptions. This suggests that some training directors may have difficulty discerning between how they define, evaluate, and implement the model. In the absence of a cogent framing with specified parameters, this also implies that program requirements are the default criteria for implementation of the model. Barlow et al. (1984) pointed out that "the Boulder conference has dealt with dual training only as a generality and had not provided guidance on the specifics of implementing this role" (p. 11). Since the Boulder conference, we perhaps have made little progress developing and implementing focused training on the integration of science and practice. There is no evidence that training programs have advanced beyond generality. If we cannot articulate the definition and parameters of the model, we cannot implement it in alignment with its defining features.

Evaluation

Training directors reported evaluating their program's scientist–practitioner training primarily on the basis of student performance in established program requirements. These included annual evaluations, comprehensive examinations, coursework, research, and practica. None of the directors reported conducting any evaluations specifically for the overall effectiveness of their scientist–practitioner training or the specific integration of science and practice. Instead, the programs seem to infer the effectiveness of the training model through training outcomes that are not specifically linked to definitions of the model. In this era of evidence-based practice, it is ironic that programs claiming to adhere to the scientist–practitioner model do not directly evaluate training outcomes based explicitly on the model. Furthermore, this finding runs contrary to one of the recommendations set forth at the National Conference on Scientist–practitioner Education and Training for the Professional Practice of Psychology (Belar & Perry, 1992). The faculty of training programs should evaluate the effectiveness of their implemented scientist–practitioner model.

The only possible explanations for this state of affairs are that programs deem direct evaluation of the model as unnecessary, the parameters of the models are so nebulous that evaluation is impossible, or these programs really do not have a model that can be evaluated as scientist–practitioner. To state that evaluation is unnecessary would be an oxymoron, contradicting the inherent nature of scientist–practitioner model. To admit that the parameters are nebulous would be a concession of a flawed model, undermining the aims of training in the model. To concede that there is no model indicates misrepresentation by the specialty, implicating all related counseling psychology entities. In any of the above scenarios, as the evidence is conspicuous by its absence, counseling psychology programs are on tenuous ground to state that they train scientist–practitioners.

Integration of science and practice

The findings also suggest that the integration of science and practice, to the extent that it actually exists, occurs incidentally rather than purposefully. Despite the training directors' lack of clarity and consistency in defining, implementing, and evaluating the scientist–practitioner model, they reported some activities of students that reflect on integration. In reporting on how students incorporate science into practice, they identified 11 activities (e.g. informing practice with empirical research, using evidence-based models, conducting client outcome research through the course of treatment). In reporting on how students incorporate practice into science, they identified 10 activities (e.g. using clinical work to generate research questions and create research studies, evaluating research for practical implications, presenting research that has clinical implications at conferences).

In the training directors' longer list, each of the identified activities arguably are relevant to integration. Some of them are more concrete than others. Some perhaps are more critical to the process; others, perhaps less so. Their identification, in an otherwise disappointing data-set, provides a ray of optimism about the prospects of developing and implementing an authentic scientist–practitioner model. At present, however, these activities appear to be random and fragmented rather than coordinated, as there is no clear sense of an overarching purpose of integration or explication of how the training directors or their students perceive the process to work. We still are left to speculate how the integration of science and practice is manifested concretely.

It is of interest that participants reported more confidence in defining the scientist–practitioner model than in evaluating both their program's adherence to the model and students' development as scientist–practitioners. This difference could be due to the higher degree of accountability required in evaluation. Beyond the theorizing, it may be more of a challenge to assert evaluative confidence in the absence of definitive model criteria.

Recommendation

The most important step the specialty of counseling psychology can take is to revisit its conceptualization of the scientist–practitioner model. In particular, the CCPTP could initiate a think tank among its members, perhaps in collaboration with the Society of Counseling Psychology, to specify the parameters of the model. This undertaking could build on the work of Heppner et al. (1992), who provided useful recommendations to integrate science and practice in counseling psychology but fell short of defining the exact nature of this process or specifying the parameters of the model. We argue that such a specification should be a prerequisite to implementing, evaluating, and demonstrating the viable integration of science and practice inherent in the model. We acknowledge that the collaboration would require a considerable investment of time, commitment, and intellectual capital. However, any proposed solutions to the lack of clarity and inconsistency in the utility of the model that does not include developing a coherent and consensus conceptualization of the model ultimately will fail to correct these problems.

Limitations

One limitation concerns the depth of the data reported in this study. While the findings yielded important insights regarding the research questions, our method employed open-ended, fill-in-the blank survey questions. In-depth interviews may have yielded more insightful and informative information. Another limitation is the small sample size and use of a convenience sample. By most survey standards, this is fairly small. Nevertheless, training directors and key leaders in US-based counseling psychology programs represented the populations of interest. Further, because the CCPTP serves as the official representative body for this population, it was an ideal sampling pool for the purposes of this study. As such, the limitation of small sample size and convenience sampling, at least for qualitative items, mitigates some of the data analysis concerns associated with these limitations.

In addition, the low response rate limits the study's usefulness in drawing clear conclusions. Again, the number of participants who agreed to complete the survey and received the survey link was 50. Out of this sample pool, 36 responded to at least one item (64% response rate). However, the response rate varied widely across items, with some items receiving as few as 12 responses (24% response rate). The average number of responses for all items was 18. Thus, not all participants completed the survey in its entirety. There was a noticeable fatigue factor in the response rates across the survey, which may have occurred due to the number and complexity of the qualitative items. The survey not only included a large number of qualitative items, but also required participants to wrestle with their knowledge and understanding of an abstract, theoretical, and complicated topic. Further, we wonder whether participants became frustrated with their own responses and chose not to answer later items rather than continue to provide even more muddled responses.

A further concern for this study is the lack of systematic validity-checking procedures, such as member-checking, for qualitative items. We regard this an important methodological limitation of the study. However, the small number of responses to most qualitative items rendered the process of identifying themes and synthesizing responses somewhat easier than is in most qualitative studies.

Lastly, two key generalizability issues affect this study. First, the results pertain only to counseling psychology training programs and cannot be generalized to other applied specialties in psychology that advocate the scientist–practitioner model. Second, participants who responded that their training program was based on a model *other* than the scientist–practitioner training model were still encouraged to take the survey. This created a small subgroup of respondents who, for the majority, represented PsyD programs that espoused a practitioner-scholar or similar model. From scanning the qualitative and quantitative results, we estimate approximately five participants came from non-scientist–practitioner training programs. While non-scientist–practitioner respondents could usually be identified in the qualitative items by explicit statements, some guesswork was involved in identifying how this subgroup responded to quantitative items. For example, Table 5 shows that one participant (representing 6%) strongly disagreed that the scientist–practitioner model was dominant in any part of his or her training program. We assume this participant represented a non-scientist–practitioner training program, but there is no way to verify this. The primary concern here would be in how the responses from this subgroup of participants approached the survey items and the risk that their responses became outliers (such as in Table 5) and impacted mean scores.

Implications

A host of implications can be drawn from this research. Three are especially noteworthy. First, the findings raise concern about questionable ethical practices. In particular, how can the specialty proffer the scientist–practitioner model when it is largely unclear about what that model means and how to evaluate it? The leading professional organizations and entities of counseling psychology and their respective training programs should determine which of the following ethical matters of the APA *Ethical Principles and Code of Conduct* (APA, 2010) are concerns or possible problems: the General Principles of B (Fidelity and Responsibility) and C (Integrity) and the Ethical Standards of 2.01 (Boundaries of Competence); 5.1 (Avoidance of False or Deceptive Statements); 7.01 (Design of Education and Training Programs); and 7.06 (Assessing Student and Supervisee Performance). These matters should be put on the formal agendas of these entities and dealt with in a deliberate and forthright manner. The last thing counseling psychology should do is to avoid determining whether or not and to what extent ethical problems exist in how the model is represented and implemented.

Second, and building on the first implication, revisiting the very idea of the scientist–practitioner model as a model is essential. Actually, this should extend beyond counseling psychology to the entire guild of professional and applied psychology. How can psychologists claim to have a model if there is no consensus definition on which the model is built, no agreed on defining parameters, implementation practices based on tangential and preexisting criteria, and non-existing evidence of its effectiveness? At long last, now is the time to pick up where the Boulder conferees left off in 1949. Psychologists have the opportunity to engage in the due diligence of explicating the process of the integration of science and practice and advancing it beyond an abstract idea to an operational endeavor.

Third, there is a need to conduct similar studies in other applied areas of psychology. It would be unfair to imply that similar results necessarily would be found in the applied specialties of clinical psychology, school psychology, and industrial/organization psychology, for instance. However, it would be reasonable to raise the question of whether similar findings could be found. Given the seriousness of the findings, the other applied specialties should investigate their training programs along similar lines and submit themselves to the same ethical scrutiny and model development considerations.

The results of this study can be viewed as a red flag that the dominant model of training for counseling psychology programs has not been carefully integrated into training competencies. There is no consistent indication of how training directors connect the scientist–practitioner model to benchmark competencies. As discussed, this may be due to definitional ambiguity, confusion about how to implement the model into a training program, and/or lack of specific evaluative measures. Our hope is to inspire and motivate training directors to critically evaluate if and how the scientist–practitioner training model is reflected in their program's training competencies. We recommend that training directors reflect on these fundamental issues: What is the scientist–practitioner model? How do we implement the model in our program? How do we evaluate our program as one that provides scientist–practitioner training? These reflections may serve as starting points from which to reevaluate and revise current training competencies.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix 1

Intro	"Counseling psychology training programs are developed from a scientist-practitioner model of education." - CCPTP website We are interested in learning how the scientist-practitioner model is being defined, implemented, and evaluated within counseling psychology training programs. As a leader in this field, you can provide valuable information on HOW the scientist-practitioner model is impacting graduate training in counseling psychology. Please complete this brief survey, which will take approximately 15-20 minutes. Responses will be collected anonymously and summarized to improve our understanding of this important issue. Thank you in advance for your participation in this survey! Survey Instructions: Questions marked with an asterisk (*) are required to navigate the survey. Please use the back button on the survey and not your browser button to return to a previous page.
Dem1	I am a... (check all that apply) ☐ Training Director -- Counseling (or combined) Psychology Ph.D. program ☐ Professor --Counseling (or combined) Psychology Ph.D. program ☐ Former Training Director -- Counseling (or combined) Psychology Ph.D. program ☐ Training Director -- Psy.D. program ☐ Professor -- Psy.D. program ☐ Former Training Director -- Psy.D. program ☐ CCPTP board member/staff ☐ Other:
Dem2	*Is your training program predominately based on the scientist-practitioner model of education? ○ Yes ○ No ○ Unsure
L1	*How does your program DEFINE the scientist-practitioner model?

L4

*How does your program IMPLEMENT the scientist-practitioner model?

L3

Please describe the common activities of a scientist-practitioner:

L2

How do you differentiate a scientist-practitioner from a psychologist who is not a scientist-practitioner?

T1

*Rank the following statements in terms of your program's use of the scientist-practitioner training model (1 being
the most accurate).

Our program trains students to be...

	1	2	3	4
both a scientist AND a practitioner	○	○	○	○
either a scientist OR a practitioner	○	○	○	○
scientists who produce knowledge relevant to practice	○	○	○	○
practitioners who provide services based on scientific knowledge	○	○	○	○

T2

*In our training program, the scientist-practitioner model is dominant in:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Coursework	○	○	○	○	○
Research	○	○	○	○	○
Practica	○	○	○	○	○
Counseling Supervision	○	○	○	○	○
Student Evaluations	○	○	○	○	○
Mentoring / Advising	○	○	○	○	○

L5	How does your program evaluate its performance specifically as a scientist-practitioner training program?
T7a & T7b	In our program... (item content based off of Stoltenberg et al. 2000)

						Are the outcomes of this formally assessed?		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Yes	No	Please explain:
Students are formally taught the logic of the scientist-practitioner model								
Students receive research training over the full course of training								
Students receive practica training over the full course of training								
Students are formally trained in the evidence-based practice (EBP) approach								
Students are trained in manualized treatment approaches								
Diverse research methodology training is provided and encouraged by faculty								
Students learn how to conduct (N=1) outcome research with their clients								
Core faculty are active scientist-practitioners who model this identity for students								

T3

Imagine a science-practice continuum for counseling psychology training programs:

Emphasizes SCIENCE only <<------------------>> Emphasizes PRACTICE only

Place the following elements of your training program on this continuum:
Please answer honestly and to the best of your knowledge.

	Science			--/--			Practice
Our program overall							
Psychology core courses							
Counseling Psychology core courses							
Statistics and research methodology courses							
Diagnostic / Assessment courses							
Practica courses							
Research experiences							
Dissertation experiences							
Criteria for student evaluations							

L7

*How do students in your program most prominently incorporate science into PRACTICE?

L8

*How do students in your program most prominently incorporate practice into SCIENCE?

T5

Students in our program take on their identity as scientist-practitioners through:

	Never	Rarely	Sometimes	Most of the time	Always
Academic courses					
Assigned readings					
Research teams/projects					
Practica					
Advisors/mentors					
Workshops, conferences, webinars, etc.					
Networking					
Self-instruction					
Other:					

L6

Please describe how your program evaluates students' professional development as scientist-practitioners specifically:

T4

The scientist-practitioner model dictates how our program evaluates students':

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
practice (counseling) competency	○	○	○	○	○
research competency	○	○	○	○	○
assessment competency	○	○	○	○	○
multicultural competency	○	○	○	○	○
supervision competency	○	○	○	○	○
consultation competency	○	○	○	○	○
teaching competency	○	○	○	○	○

T6

*I am confident in my ability to:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
define the scientist-practitioner model	○	○	○	○	○
implement the scientist-practitioner model	○	○	○	○	○
evaluate our program's adherence to the scientist-practitioner model	○	○	○	○	○
evaluate students' development specifically as scientist-practitioners	○	○	○	○	○
model the scientist-practitioner model in my professional activities	○	○	○	○	○

Follow-ups

What training model does your program primarily use?

- ○ Practitioner-scholar model
- ○ Practice-oriented model
- ○ Science-oriented model
- ○ Integrated Developmental Model (Stoltenberg et al.)
- ○ Other:

Please provide a brief definition of this training model: