American Chiropractic Neurology Board (ACNB)

2024 Job Analysis Report

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Executive Summary

The American Chiropractic Neurology Board (ACNB) conducted a comprehensive job analysis study in 2023-2024 to ensure that its certification examination reflects the current practices in chiropractic functional neurology. The study, led by Dr. Deborah Schnipke from ACS Ventures, involved a three-phase process: a content outline focus group, a validation survey of chiropractic neurologists, and a test blueprint focus group. The purpose of this study was to update the content outline, refine work activities, and adjust test specifications to align with contemporary practice in chiropractic neurology.

Key Findings and Adjustments

The JTA committee reviewed the 2019 test blueprint and survey respondent recommendations, and made final decisions regarding the test blueprint, resulting in several changes for the 2024 certification examination, as shown in full in Table 1 and Table 2. In summary:

1. **Work Activities:**

   o **Perform a Physical Exam** increased from 10% in the 2019 blueprint to 20% based on survey feedback, emphasizing its practical relevance.

   o **Take a Patient History** was retained at 5%, and **Conduct or Order Special Studies** was retained at 6%.

   o **Identify Diagnoses** remained the most critical activity but was lowered from 45% to 42%.

   o **Treatment and Rehabilitation** was adjusted to 24%, slightly less than the 2019 weight of 30%, while **Referral** decreased from 4% to 3%, maintaining its smaller role in chiropractic neurology.

2. **Content Domains:**

   o **Cerebellar/Vestibular** increased significantly from 5% to 10% due to its critical role in chiropractic neurology.

   o **Autonomic Nervous System** increased from 5% to 8%, and **Peripheral Nerves** rose from 5% to 7%, based on practitioner emphasis.

   o **Limbic System** decreased from 8 to 5% based on the survey respondents' ratings.

   o Several domains, such as **Neuron Theory**, **Spinal Cord**, and **Neuroendocrine System** all decrease by 2%, reflecting decreased focus in current practice.

3. **Physical Examination:**

   o **Evaluate the Cerebellum and Vestibular Systems** was increased by 2%, while **Perform Reflex Testing** increased by 1%.

   o The previous blueprint's separate categories for cardiovascular, respiratory, and abdomen assessments were combined into **Evaluate Cardiovascular, Respiratory, and Abdomen** and decreased from 12 % to 9%.

4. **Case Study:**

   o The weight structure for the case study retained its 2019 blueprint allocations, despite survey respondents' suggestions for reweighting. The committee felt this structure better reflected the examination's core focus on diagnostic proficiency and treatment planning.

Rationale for Adjustments

The committee's changes were guided by a balanced approach, considering survey feedback and practical aspects of test development. Survey results helped identify critical areas needing emphasis, while others, like four of the 148 original tasks were dropped due to survey respondents providing low importance and frequency ratings. Similarly, changes in content domain weights ensure the test blueprint is aligned with current real-world practice, focusing on high-impact areas such as cerebellar/vestibular and autonomic systems, while reducing emphasis on less relevant domains.

Table 1. Comparison of 2019 and 2024 Weights for Multiple-Choice Examination

Work Activity	Prior (2019)	2024 Final
Take a Patient History	5%	5%
Perform a Physical Exam	10%	20%
Conduct or Order Special Studies	6%	6%
Identify Diagnosis(es), Differential Diagnosis(es), Disease Processes, Metabolic Rate, Pathways	45%	42%
Treatment and Rehabilitation	30%	24%
Referral	4%	3%
Total	100%	100%

Content Domains	Prior (2019)	2024 Final
Neuron Theory	7%	5%
Receptor Systems	6%	5%
Peripheral Nerves	5%	7%
Spinal Cord	8%	6%
Brainstem	8%	8%
Cranial Nerves	7%	7%
Head and Face Pain	6%	6%
Cerebellar/Vestibular	5%	10%
Basal Ganglia	6%	6%
Reflexogenic System	4%	5%
Autonomic Nervous System	5%	8%
Limbic System	8%	5%
Lobes of the Brain	7%	6%
Brain and Its Environment	6%	5%
Neuroendocrine System	6%	4%
Pain	6%	7%
Total	100%	100%

Table 2. Comparison of 2019 and 2024 Weights for the Performance Examination

Physical Exam	Prior (2019)	2024 Final
1. Obtain the Patient's Vital Signs	3%	3%
2. Perform Cranial Nerve Examinations	18%	18%
3. Perform Sensory Examinations	10%	10%
4. Perform Testing of the Motor Systems	14%	14%
5. Perform Reflex Testing	5%	6%
6. Evaluate the Cerebellum and Vestibular Systems	15%	17%
7. Evaluate Cardiovascular, Respiratory, and Abdomen	12%	9%
8. Perform Tests Related to the Basal Ganglia	10%	10%
9. Perform Tests Related to the Limbic System	5%	5%
10. Perform Cognitive Tests	6%	6%
11. Additional Tests	2%	2%
Total	100%	100%
Case Study Work Activity	Prior (2019)	2024 Weights
Identify Diagnosis(es), Differential Diagnosis(es), Disease Processes, Metabolic Rate, Pathways	45%	45%
Conduct or Order Special Studies	6%	6%
Referral	4%	4%
Treatment and Rehabilitation	30%	30%
Review a Patient History (was Take a Patient History)	5%	5%
Perform a Physical Exam	10%	10%

Conclusion

The 2024 test blueprint adjustments reflect an up-to-date approach to evaluating chiropractic neurologists, emphasizing clinical relevance and maintaining a balanced evaluation of core competencies. The updated blueprint, based on empirical and logical methodologies, ensures that the ACNB certification examination remains a valid and reliable measure of a practitioner's expertise in chiropractic functional neurology, supporting the high standards of patient care and safety that the ACNB strives to uphold.

Introduction

In 2023, the American Chiropractic Neurology Board (ACNB) initiated a job analysis study to ensure that the content outline and test specifications for the certification examination reflect current best practices in chiropractic functional neurology, following their policy to conduct a job analysis every five years. The ACNB retained Dr. Deborah Schnipke, a senior psychometrician from ACS Ventures, LLC, to assist with this study. Dr. Schnipke led the meetings, analyzed the data, and prepared this report, which includes a description of the methodology, a summary of the data, and the results, including a draft content outline and preliminary test specifications that were later finalized by the ACNB.

The JTA was conducted in three stages:

1. **Content Outline Focus Group**: A group of subject matter experts (SMEs) reviewed and updated the detailed content outline of practice in chiropractic neurology, which includes both the work activities and content domains.

2. **Validation Survey**: A broader survey was distributed to a larger number of chiropractic neurologists (DACNBs) to gather feedback on the updated content outline. The survey results were used to calculate preliminary test percentages for the certification exam.

3. **Test Blueprint Focus Group**: This group of SMEs reviewed the validation survey results and finalized the test percentages, ensuring that they were aligned with the findings of the job task analysis (JTA).

The ACNB Chiropractic Neurology Certification Examination

A chiropractic neurologist specializes in working with patients who have some type of neurological issue. The Chiropractic Neurology Center (CNC) explains that this includes individuals with issues related to:

- Radiculopathy, or a pinched nerve in the spine
- Movement disorders such as Parkinson's disease, Huntington's disease, or Tourette syndrome
- Dystonia, which is abnormal muscle tone that results in muscle spasms and abnormal posture
- Rehabilitation after a stroke or head injury
- Vertigo or chronic pain
- Nerve entrapment syndromes

Though other medical professionals who specialize in neurology also treat these same types of conditions, the major difference between them and a chiropractic professional is that the

chiropractic neurologist engages in treatment without the use of drugs or surgical intervention. Or, as the CNC says, "A Chiropractic Neurologist is trained to use safe, natural, non-invasive health therapies."

They use the patient's body and environment to assess, diagnose and localize areas of dysfunction. The human body systems are constantly affecting the neurological system and being affected by the neurological system. Our doctors use this functional and holistic approach to target interventions specific to the location of the dysfunction.

The chiropractic neurologist uses the muscular skeletal system and the sensory systems as they interact with the neurological system to improve quality of life. They use a variety of treatment modalities including the technique of adjustment as well as other sensory-based modalities to bring about improvements in health.

This provides a treatment avenue for patients who prefer natural methods of care over remedies that involve taking prescription medications or undergoing surgery to correct the neurological issue.

Prerequisites for the ACNB Certification Exam

Chiropractic neurologists have a Doctor of Chiropractic or the equivalent, have taken 300 post-doctoral hours of coursework in functional neurology and passed the rigorous written and performance exams required for certification by the ACNB. These certified doctors are called Diplomates of the American Chiropractic Neurology Board (DACNB).

Rationale for the Prerequisites for the ACNB Certification Exam

The prerequisites for the American Chiropractic Neurology Board (ACNB) certification exam ensure that candidates possess the necessary foundational knowledge, clinical skills, and experience to competently and safely practice as a Diplomate of the American Chiropractic Neurology Board (DACNB). These prerequisites are designed to uphold high standards of care and patient safety, reflecting the complexity and specialization required in the field of chiropractic neurology.

1. **Doctorate in Chiropractic or Equivalent:**
   - **Requirement:** Candidates must hold a Doctor of Chiropractic degree or an equivalent qualification from an accredited institution.
   - **Rationale:** A doctorate ensures that candidates have acquired a comprehensive education in chiropractic care, including foundational knowledge of anatomy, physiology, and the musculoskeletal system. This level of education is essential to understand and effectively treat neurological conditions without relying on

drugs or surgical interventions. The doctorate also signifies a commitment to professional standards and ethics in healthcare.

2. **300 Hours of Specialized Training in Functional Neurology:**

   o **Requirement:** Candidates must complete 300 post-doctoral hours of coursework in functional neurology.

   o **Rationale:** The field of chiropractic neurology requires advanced understanding and application of neurological principles. The specialized training equips candidates with in-depth knowledge of neurological disorders, assessment techniques, and non-invasive treatment modalities. This extensive training is critical for developing the skills needed to diagnose and manage conditions such as radiculopathy, movement disorders, dystonia, and vertigo. The training also emphasizes a holistic approach, integrating the body's systems to target specific dysfunctions and improve overall health.

3. **Successful Completion of Written and Performance Exams:**

   o **Requirement:** Candidates must pass rigorous written and performance exams required for certification by the ACNB.

   o **Rationale:** The certification exams evaluate a candidate's proficiency in key areas of chiropractic neurology. The written exam tests their theoretical understanding and ability to recall and apply knowledge to clinical situations. The performance exam assesses their practical skills in diagnosing and treating neurological conditions. Passing these exams demonstrates that the candidate is capable of providing high-quality, evidence-based care and can effectively communicate and implement treatment strategies.

The prerequisites for the ACNB certification exam are designed to ensure that only highly qualified professionals earn the DACNB credential. This rigorous process guarantees that certified chiropractic neurologists have the expertise, skills, and experience necessary to provide safe, effective, and patient-centered care in the complex field of neurology.

Methodology

Methodology Rationale

In determining the appropriate methodology for our job analysis, two distinct approaches were considered: empirical and logical.

Empirical analysis relies on surveys and is contingent upon a broad sampling of practitioners. In contrast, logical analysis relies on focus groups comprised of subject-matter experts (SMEs) who collectively deliberate until consensus is reached on each point under investigation. This process, known as "role delineation," essentially resembles a structured brainstorming session. The objective of role delineation, as a technique in job task analysis, is to formulate practice-based test specifications for certification-level professionals. It accomplishes this by identifying the major and specific work activities (tasks) defining the profession, along with the requisite knowledge in the content domains.

A combined approach that incorporates both logical and empirical practice analysis methodologies was utilized for the following reasons:

1. A sufficient pool of qualified SMEs was available from which to assemble a focus group committee (i.e., the job analysis committee).

2. Utilizing a combination of these data collection methodologies complements each other; the logical approach contributes to the development of a content outline that will be validated by a larger population.

The procedure employed encompassed several sequential steps:

1. Reviewing the work activities to ascertain their alignment with current practice. These work activities constitute the principal areas of responsibility or activities characterizing DACNBs' practice and serve as the major headings in the test specifications document.

2. Subsequently, the tasks associated with each work activity were scrutinized to ensure their contemporaneity and comprehensiveness. Tasks are defined as specific, goal-directed activities or sets of activities with a common objective or type of output. The set of tasks for each work activity were articulated exhaustively, ensuring mutual exclusivity and comprehensive coverage of all relevant aspects of the profession pertinent to the job task analysis's objectives (i.e., the creation of practice-based test specifications). The committee drew on information from the content domains to develop or refine task statements.

3. The committee finalized the work activities and tasks, ensuring clarity and comprehensiveness.

4. The content domains linked to the performance of each task were reviewed by the committee to verify their alignment with the knowledge, skills, and abilities (KSAs) necessary for current practice.

5. The committee then formalized the content domains and KSAs related to the content domains, ensuring clarity and comprehensiveness.

6. A survey of the content outline was disseminated to the DACNB population. Utilizing an importance validity rating scale and indicating the percentage of time spent on tasks in major work activities, along with applying importance and frequency validity rating scales for task statements, content domains, and KSAs, survey respondents' ratings were leveraged to derive weights for the draft test specifications. Qualitative data were collected and integrated into the survey results for committee review.

7. The job analysis survey results guided the committee in finalizing the content outline (i.e., work activities and content domains) and test specifications.

Role of the Job Analysis Committee

First, a representative committee of subject matter experts (i.e., the job analysis committee) in the practice of chiropractic neurology was convened by ACNB for the job analysis's development. Their role in the study encompassed:

- Reviewing and updating the current content outline, encompassing major work activities, associated tasks, content domains, and KSAs required for task performance.

- Collaborating in the formulation and review of survey questions, instrument assessment, and participation in a pilot survey.

- Leveraging the data derived from the study to finalize the content outline and test specifications.

Table 3 shows a detailed list of committee members.

Table 3. Job Analysis Committee Members

Name	Location	Years of Experience	Credential(s) and/or Education	Years as DACNB	Year Certified
Dr. Douglas Brown	Foley, AL, USA	30	DC, DACNB	22	2003
Dr. Candace Duty	Chesapeake, Ohio, USA	39	DC, DACAN, DACNB	31	1994
Dr. David Hardy	Red Deer, AB, Canada	11	DC, DACNB, FABBIR	11	2014
Dr. Gail Henry	Houston, TX, USA	44	DC, DABCN, DACNB, FACFN	33	1992
Dr. Jay Hobbs	Visalia, CA, USA	29	DC, DACNB	18	2007
Dr. Rachel Klein	Hilo, HI, USA	12	ND, DC, DACNB, FIBFN-CNDH	12	2013
Dr. Michael Lovich	Newton Centre, MA, USA	9	DC, DACNB	9	2016
Dr. James Munse	Chantilly, VA, USA	9	DC, DACNB	9	2016
Dr. Christina O'Brien	Lewisville, TX, USA	16	DC, DACNB	11	2014
Dr. Michaele Posey	Abilene, TX, USA	20	DC, DACNB	19	2006
Dr. Timothy Saltys	Calgary, AB, Canada	5	DC, DACNB	4	2020

Note: for all SMEs:
- Current job function = *Chiropractor specializing in rehabilitation of neurological disorders*
- Work setting = *Private Practice*

Initial Update of Content Outline

The process of updating the content outline began with a kick-off meeting on February 13, 2023, where subject matter experts (SMEs) were introduced to the job task analysis (JTA) process and conducted a thorough review of the previous content outline.

Following the initial meeting, the SMEs independently worked on updating the content, ensuring it aligned with current best practices and standards. On February 20, 2023, the SMEs reconvened to review and discuss the changes made by each member. Afterward, minor additional changes were made, primarily focused on formatting.

The key differences between the updated "2024 ACNB Content Outline for the DACNB" and the previous content outline focus on the following areas:

1. Terminology Changes:
   o In the final 2023 document, some terms have been standardized or updated. For instance, references to certain anatomical or functional systems, like the "cerebellar-vestibular system," are presented in a more specific and detailed manner.
2. Expanded Descriptions:
   o The updated version provides more granular detail in task descriptions. For example, "Work Activity 2: Perform a Physical Examination" has added specifics in the final version regarding the examination of cranial nerves and sensory systems.
3. Rehabilitation and Treatment:
   o The final version places a stronger emphasis on rehabilitation principles, including detailed steps for specific systems (e.g., the vestibular system, basal ganglia, and spinal cord). These sections have been expanded compared to the previous version, including additional treatment modalities.
4. Organizational Structure:
   o The updated version reorganizes some sections to provide clearer guidelines for practical application, such as diagnostic criteria and special study recommendations. For example, testing methods for sensory and cognitive functions are covered in more detail.
5. Inclusion of New Content:
   o Additional diagnostic tools and examination techniques have been introduced in the final document. For example, more detail is provided for reflexogenic system testing, including pathological reflexes like Hoffman's, Babinski, and more.

These updates reflect more detailed procedures, expanded explanations, and a stronger focus on practical, evidence-based rehabilitation methods.

Preparing the Validation Survey

Given the extensive number of tasks associated with the work activities (148 tasks) and KSAs associated with the content domains (188 KSAs), two surveys were developed for the job analysis study:

1. Survey 1 which included the work activities

2. Survey 2 which included the content domains

Table 4 lists the types of questions that were common to both surveys, and the types of questions that were unique. The work activity survey included the tasks associated with the work activities, whereas the tasks were not included in the content domain survey. The content domain survey included the KSAs, whereas the KSAs were not included in the work activity survey.

Since the examination program consists of a written examination and a practical examination, the surveys included questions to obtain data that would contribute to the development of test weights for both examinations.

The purpose of having common background questions is to assess the representativeness of the survey respondent group to the DACNB population but to also compare the comparability of the two surveys. The intent of the remaining common questions was to collect data from both surveys in the event that one of the surveys had a low response rate. However, since the response rates for both surveys were good (see section of the report describing the response rates), the data specific to work activities from the work activity survey and the data specific to the content domains from the content domain survey were used for making decisions about the content outline and test specifications.

Table 4. Components of the Validation Surveys

Work Activity Survey (Survey 1)	Content Domain Survey (Survey 2)
Background Questions (both surveys)	
Task Statements (Importance & Frequency Ratings, Questions concerning the representativeness of tasks of the specialty practice.)	KSAs (Importance & Frequency Ratings, Questions concerning the representativeness of the KSAs of the content domains for specialty practice.)
Work Activities Validity Ratings (both surveys)	
Content Domains Validity Ratings (both surveys)	
Weightings for the Written and Practical Examinations (both surveys)	
Activities Required to Achieve Competence as a DACNB (i.e., eligibility and recertification requirements) (both surveys)	

Figure 1 and Figure 2 show a representation of the frequency and importance rating tasks for tasks within work activities (Figure 1) and for knowledge, skills, and abilities (KSAs) within content domains (Figure 2).

Figure 1. Sample of Task Ratings within Work Activities

Job Analysis 2023 Survey #1: Work Activities - Updated

WORK ACTIVITY. 1. TAKE PATIENT HISTORY

12. Take patient history:

Frequency	Importance

Task 1.1. Conduct a comprehensive history of the chief complaint; neurological, pain or physical disorders; pain; past medical: family, social, travel, and review of symptoms. A comprehensive history should be done to gather relevant information about the autonomic nervous system, basal ganglia, brainstem, cranial nerves, cerebellar-vestibular system, head and face pain, limbic system, lobes of the brain, neuroendocrine system, pain, peripheral nervous system, receptor systems, reflexogenic systems, and spinal cord to guide a comprehensive neurological and physical examination.

Task 1.2. Conduct a problem-focused history at subsequent visits to document patient progress and guide neurological rehabilitation.

Other (please specify)

Figure 2. Sample KSA ratings within Content Domains

Job Analysis 2023 Survey #2: Content Domains - Updated

CONTENT DOMAIN: 4. BRAINSTEM

* 16. Brainstem (Cognitive Information and Treatment Modalities)

Frequency   Importance

4.1. **Brainstem anatomy,** which includes afferent and efferent neurons and pathways, cranial nerves, vasculature, ventricles, vestibular neurons, and reticular formation.

[   ]   [   ]

4.2. **Brainstem functional integration**, which includes: brainstem integrative connectivity with the cortex (neocortical, paleocortical), basal ganglia, midbrain neurons, vestibular neurons, cerebellum, and spinal cord, central integration with thalamocortical, corticostriatal, cranial nerve nuclei, central modulation, and includes integration of cerebellar feedforward to the cerebral cortex and cortical to cerebellum efferent copy.

[   ]   [   ]

4.3. **Brainstem disease processes and diagnoses**, including ablative pathologies, and states of increased or decreased activation, and what those neurological signs indicate diagnostically.

[   ]   [   ]

4.4. **Brainstem diagnostic methods**, including knowledge of history and physical exam findings indicative of brainstem function and needed special studies utilized for brainstem diagnosis.

[   ]   [   ]

4.5. **Brainstem treatment modalities,** including rehabilitation activities within the metabolic capacity of the patient by inhibiting or increasing activation of regions of dysfunction utilizing methods specific to that function.

[   ]   [   ]

Other (please specify)

[   ]

Survey Sampling Plan and Dissemination of the Survey

The sampling plan aimed to ensure a fair representation of the entire population of Diplomates of the American Chiropractic Neurology Board (DACNBs) in response to both the work activity and content domain validation surveys. To achieve this, the surveys were disseminated to all 584 active DACNBs. This approach allowed for a comprehensive assessment of the profession's practices and expertise, minimizing bias that might arise from sampling a smaller or non-representative group.

To maximize participation, a series of email reminders were sent every five days to those who had not yet completed the surveys. This regular follow-up helped boost response rates and ensured that a larger portion of the DACNB population was given the opportunity to provide feedback.

The surveys were available for nearly two months, from June 13, 2023, to August 2, 2023, offering ample time for DACNBs to participate. By keeping the surveys open for this extended period, the sampling plan accounted for potential delays due to professional schedules or personal commitments, increasing the likelihood of obtaining a broad and representative sample of responses from the target population.

Results

This section of the report presents the results of the background and demographic survey questions, and the results of the validation ratings of the major domains, tasks, and knowledge statements. Survey respondents' comments in response to open-ended questions and "Other, please specify" options to multiple-choice questions are presented "verbatim."

Survey response rates

The response rates for the two surveys, though measured, cannot account for how many recipients actually opened the surveys. Despite this, participation numbers were recorded. As shown in Table 5, for the first survey, focused on work activities, 214 DACNBs responded, representing a 37% response rate. The second survey, which addressed the content domains, saw slightly fewer responses, with 192 participants, equating to a 33% response rate.

The resulting margin of error for the work activities survey was calculated at 5%, while the margin of error for the content domains survey was 6%, both at a 95% confidence level. These margins reflect the level of precision in estimating the feedback of the broader DACNB population based on the survey results. While not all potential respondents participated, the data gathered provides a reliable foundation for making informed decisions about the content outline.

Table 5. Survey response rates

	Work Activity Survey	Content Domain Survey
Number of Surveys Sent	584	584
Total Number of Respondents	214	192
Response Rate*	37%	33%
Confidence Interval at 95% confidence level	+/-5%	+/-6%

*The response rate was calculated by dividing the total number of respondents by the total number of surveys sent. Not everyone opened the survey invitations, so the response rate underestimates the response rate for opened survey invitations.

Characteristics of the Survey Respondents

The background and demographic questions were designed to collect data about the survey respondents' credentials (i.e., certifications), years of experience, type of work setting, role, geographical location, and highest level of education, etc. Table 6 to Table 14 present the results of the background and demographic questions, separately for the work activity survey and content domain survey.

Type of Credentials

Table 6 indicates the number of survey respondents who hold, or ever held the Diplomate of the American Chiropractic Neurology Board (DACNB). All of the survey respondents responded "Yes" to the question.

Table 6. Are you now or have you ever been a Diplomate of the American Chiropractic Neurology Board (including DACNB, DABCN or DACAN)?

	Work Activity Survey	Content Domain Survey	Work Activity Survey	Content Domain Survey
Yes	214	192	100%	100%
No	0	0	0%	0%

Number of Years Holding ACNB Certification

Table 7 indicates the number of years holding ACNB certification and the distribution of responses among the ranges of years offered as choices to the survey question are well distributed. The highest number of responses was 6 to 10 years (i.e., approximately 31% to 37% on the work activity and content domain surveys, respectively), and the lowest number of responses was less than 1 year (i.e., approximately 1%). Since the same group of survey recipients responded to both surveys, the distribution of responses are comparable on the work activity survey and content domain survey.

Table 7. How many years have you held the certification from the ACNB?

	Work Activity Survey	Content Domain Survey	Work Activity Survey	Content Domain Survey
Less than 1 year	2	1	1%	1%
1 to 2 years	14	8	7%	4%
3 to 5 years	36	36	17%	19%
6 to 10 years	67	71	31%	37%
11 to 15 years	25	18	12%	9%
16 to 20 years	31	26	14%	14%
More than 20 years	40	32	19%	17%
Total	215	192	100%	100%

Work Location

Table 8 to Table 10 present information about geographic location. Most survey respondents work in the U.S. (76-79%), as shown in Table 8.

Table 8. Do you work in the United States of America?

Work in USA?	Work Activity Survey	Content Domain Survey	Work Activity Survey	Content Domain Survey
Yes	169	145	79%	76%
No	46	47	21%	24%
Total	215	192	100%	100%

In the U.S., the number of survey respondents are distributed among the majority of states, which the largest numbers coming from California and Texas, as shown in Table 9, which is sorted by frequency on the Work Activities survey.

Table 9. State in which you work

Sorted by Frequency of Work Activities Survey	Work Activity Survey	Content Domain Survey	Work Activity Survey	Content Domain Survey
California	31	18	18%	12%
Texas	21	17	13%	12%
Oregon	12	10	7%	7%
Pennsylvania	11	10	7%	7%
Florida	9	11	5%	8%
Colorado	8	5	5%	3%
Illinois	7	7	4%	5%
Georgia	5	5	3%	3%
Massachusetts	5	4	3%	3%
Michigan	5	5	3%	3%
Minnesota	5	5	3%	3%
New Jersey	5	6	3%	4%
North Carolina	4	3	2%	2%
Ohio	4	5	2%	3%
Arizona	3	1	2%	1%
Connecticut	3	3	2%	2%
Missouri	3	3	2%	2%
New York	3	2	2%	1%
Alabama	2	2	1%	1%
Nebraska	2	3	1%	2%
New Mexico	2	1	1%	1%
Utah	2	2	1%	1%
Vermont	2	1	1%	1%
Virginia	2	2	1%	1%
Washington	2	2	1%	1%
Wisconsin	2	2	1%	1%
Hawaii	1	1	1%	1%
Idaho	1	3	1%	2%
Iowa	1	2	1%	1%

Kansas	1	1	1%	1%
Louisianna	1		1%	0%
Nevada	1	1	1%	1%
North Dakota	1		1%	0%
Rhode Island	1		1%	0%
Delaware		1	0%	1%
Maryland		1	0%	1%
Total	168	145	100%	100%

As shown in Table 10, for the respondents who lived outside the United States, the majority lived in Canada (20-21%) or Australia (17 to 19%).

Table 10. Country in which you work

		Work Activity Survey	Content Domain Survey	Work Activity Survey	Content Domain Survey
(Drop down menu options)	Australia	9	8	19%	17%
	Canada	20	21	43%	45%
	Denmark	1	1	2%	2%
	Italy	2	3	4%	6%
	Japan	3	3	6%	6%
	Netherlands	1	2	2%	4%
	Norway	4	3	9%	6%
	Switzerland	1	1	2%	2%
	United Kingdom	1	1	2%	2%
Other	Cyprus	1	1	2%	2%
	Finland	1		2%	0%
	Guam	1	1	2%	2%
	Hong Kong	1	1	2%	2%
	Puerto Rico	1	1	2%	2%
	Total	47	47	100%	100%

Years as a chiropractic/functional neurologist

As shown in Table 11, there was a range of years of experience, with the largest number or respondents having 6 to 10 years of experience.

Table 11. How many years have you worked as a chiropractic/functional neurologist?

	Work Activity Survey	Content Domain Survey	Work Activity Survey	Content Domain Survey
Less than 1 year	1	0	0%	0%
1 to 2 years	9	5	4%	3%
3 to 5 years	32	31	16%	16%
6 to 10 years	59	68	29%	35%
11 to 15 years	23	20	11%	10%
16 to 20 years	36	31	18%	16%
More than 20 years	44	37	22%	19%
Total	204	192	100%	100%

Work Status

Table 12 shows work status, with the majority of respondents working full time as a chiropractic/functional neurologist (79-80%) or part time (17 to 18%).

Table 12. Which of the following best describes your current work status? (Select all that apply.)

	Work Activity Survey	Content Domain Survey	Work Activity Survey	Content Domain Survey
I am currently practicing **full time** as a chiropractic/functional neurologist.	162	154	79%	80%
I am currently practicing **part time** as a chiropractic/functional neurologist.	34	34	17%	18%
I am currently **retired** from my practice as a chiropractic/functional neurologist.	2	1	1%	1%
I am currently **teaching** chiropractic/functional neurology didactic courses at a chiropractic college/school.	4	5	2%	3%
I am currently a **clinical supervisor** at a chiropractic/functional neurology college/school.	0	0	0%	0%
I am **not working in the field** of chiropractic/functional neurology.	0	1*	0%	1%
I am a **student** pursuing a course of study outside of chiropractic/functional neurology.	0	0	0%	0%
Other (please specify)	7	5	3%	3%
Total	205	192	100%	100%

*Note: this person had no other data in the survey.

Type of Practice

As shown in Table 13, the majority of respondents work in private practice (88 to 91%).

Table 13. Which of the following best describes your practice?

	Work Activity Survey	Content Domain Survey	Work Activity Survey	Content Domain Survey
Other (please specify)	3	2	1%	1%
Private practice	179	175	88%	91%
Clinic	21	15	10%	8%
College/University	1		0%	0%
Total	204	192	100%	100%

Highest Level of Education

As shown in Table 14, the majority of respondents have DC as their highest level of education (90 to 91%).

Table 14. What is your highest level of education?

	Work Activity Survey	Content Domain Survey	Work Activity Survey	Content Domain Survey
DC	183	175	90%	91%
MD	3	1	1%	1%
Ph.D.	1	1	0%	1%
Other (please specify)	17	15	8%	8%
Total	204	192	100%	100%

Percentage of Work by Chiropractic/Functional Neurology Category

Figure 3 shows the responses to: What percentage of your work in chiropractic/functional neurology fall into the following categories?

Figure 3. What percentage of your work in chiropractic/functional neurology fall into the following categories?
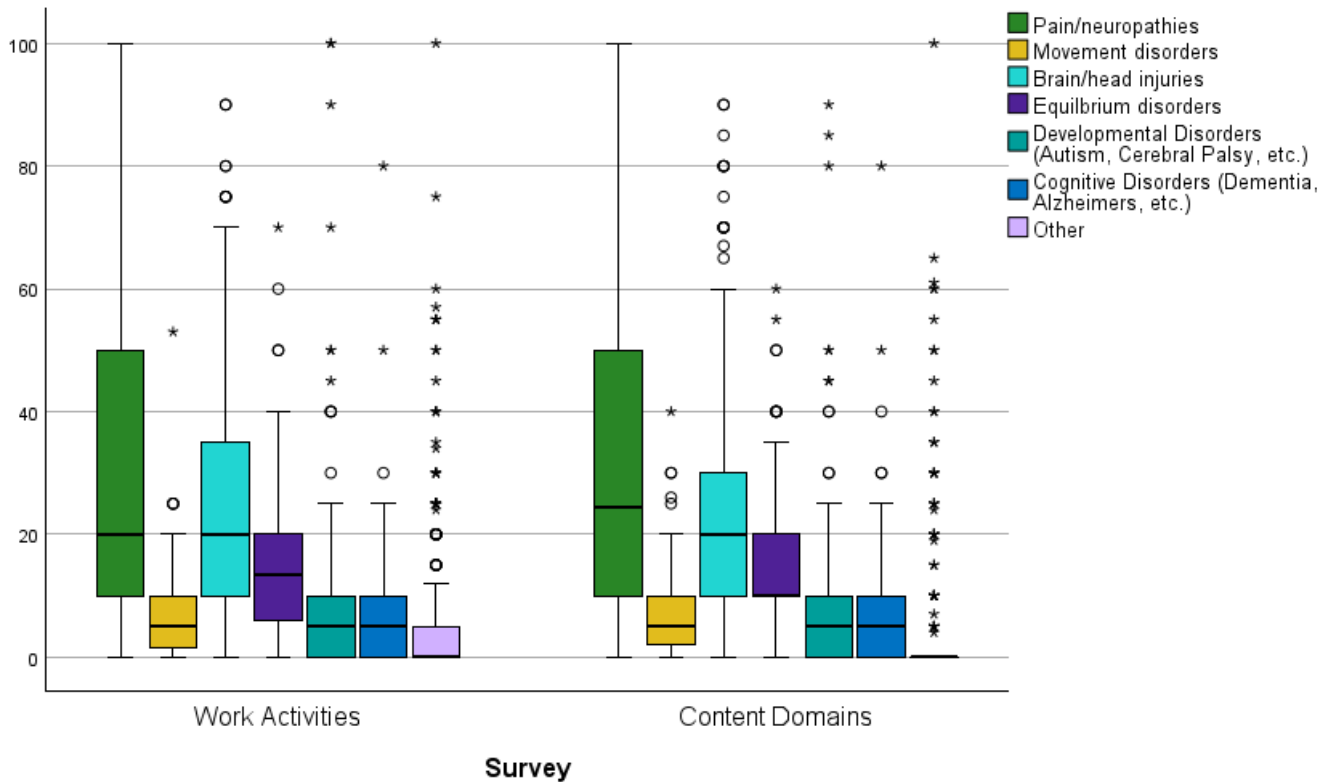
Responses for those selected "other" may be summarized as follows:

1. Very Common:

   - Chiropractic/Musculoskeletal: General chiropractic care, mechanical dysfunctions, MSK (musculoskeletal) injuries, and maintenance.

   - Dysautonomia/Autonomic Dysfunction: Includes POTS (Postural Orthostatic Tachycardia Syndrome) and other dysautonomia-related disorders.

   - Mental Health and Mood Disorders: Depression, anxiety, organic brain dysfunction, and psychophysiologic disorders.

   - Performance and Rehabilitation: Sports-related injuries, performance enhancement, and rehabilitation.

2. Common:

   - Autoimmune and Neurodegenerative Conditions: Autoimmune disease, neurodegenerative cases, and conditions like Lyme Disease, often linked to brain autoimmunity or chronic infections.

   - Functional Medicine: Endocrine disorders and nutrition.

- Headaches/Migraines: Including migraine disorders and cases involving both dysautonomia and migraines.

3. Less Common:

- Childhood Developmental Delays

- Sleep Disorders: Including insomnia and sleep disorder breathing.

- Neurological Disorders: Seizures, stroke, spinal cord injuries, and multiple sclerosis (MS).

- Pregnancy and Infant Chiropractic Care

- Electrodiagnosis Medicine

4. Rare:

- Animal Chiropractic Care

- Terminal Care

- General Wellness

Analysis of the Job Analysis Validation Data

Tasks within Work Activities

Frequency and Importance Ratings for Tasks

On **Survey 1: Work Activities**, the survey respondents were asked to rate the relative importance of the tasks that are associated with the major work activities and the frequency in which the tasks are performed using the following scales:

Frequency
    0 = I do not perform this task
    1 = Once or twice per year
    2 = Quarterly
    3 = Monthly
    4 = Weekly or Daily

Importance
    0 = Not important
    1 = Somewhat important
    2 = Important
    3 = Very Important

Table 15 summarizes the mean frequency and importance ratings by work activity, with frequency values of 1.5 or less and importance values of 1.0 or less in red font. Interpretation:

- The work activities are shown in the first column.

  o Note that the work activity "Physical Examination" was further separated into 10 sub-work activities on the survey, allowing a more detailed summary of that work activity.

- The second column shows the number of tasks with each work activity

  o The total number of tasks with Physical Examination was 117 out of the 148 total tasks.

- The next three columns show the minimum, maximum, and mean of the mean frequency ratings.

  o For example, in the first row, for the two tasks within Patient History, the minimum mean frequency rating was 3.6, and the maximum mean frequency rating was 3.8, with a mean of the mean frequency ratings of 3.7.

- The last three columns show the minimum, maximum, and mean of the mean importance ratings.

- The minimum, maximum, and mean values of mean frequency and mean importance can be interpreted by referring to the numeric values on the previous page.

  o A mean frequency rating of 3.0, for example, indicates monthly frequency, on average, and a 3.5 is halfway between "monthly" and "weekly/daily."

o   A mean importance rating of 2.0 indications "important," on average, and a 2.5 is
    half-way between "important" and "very important."

Table 15. Summary of Mean Frequency and Importance of Tasks, Grouped by Work Activity

Work Activity	N	Mean Frequency			Mean Importance		
		Min	Max	Mean	Min	Max	Mean
Patient History	2	3.6	3.8	3.7	2.8	2.9	2.9
Physical Examination: General	4	3.4	3.7	3.5	2.6	2.8	2.7
Physical Examination: Cranial Nerves	30	0.9	3.7	2.7	1.3	2.8	2.1
Physical Examination: Sensory	4	2.3	3.5	3.2	2.0	2.6	2.5
Physical Examination: Motor Systems	25	2.6	3.6	3.3	2.2	2.7	2.5
Physical Examination: Reflexes	4	2.3	3.7	3.0	2.1	2.7	2.5
Physical Examination: Evaluate Cerebellum & Vestibular	21	2.8	3.7	3.3	2.2	2.7	2.5
Physical Examination: Tests of Cerebellum & Vestibular	3	0.5	2.0	1.4	1.3	2.0	1.8
Physical Examination: Basal Ganglia	10	3.1	3.6	3.4	2.2	2.6	2.5
Physical Examination: Limbic System	3	3.2	3.3	3.3	2.3	2.3	2.3
Physical Examination: Cognitive	13	1.3	3.3	2.4	1.5	2.5	2.0
Special Studies	2	2.7	3.4	3.1	2.5	2.9	2.7
Diagnosis	14	2.6	3.7	3.3	2.3	2.8	2.6
Treatment & Rehabilitation	10	2.5	3.8	3.4	2.3	2.8	2.6
Referrals	3	2.4	2.7	2.6	2.8	2.9	2.8
Total	**148**						

There were several tasks that had low frequency ratings (within **Physical Examination: Cranial Nerves, Physical Examination: Tests of Cerebellum & Vestibular,** and **Physical Examination: Cognitive,** as indicated by the low minimum values in Table 15), all of which were reviewed at the JTA follow-up meeting discussed later in this report.

Representativeness of the Tasks

After completing the importance and frequency ratings for each task, survey respondents were asked to rate how well the tasks represent the specialty practice of chiropractic/functional neurology, and 88% said 'well' or 'very well,' as shown in Table 16.

Table 16. How well do the tasks in this survey represent the specialty practice of chiropractic/functional neurology?

	Frequency	Percent
Very poorly	0	0%
Poorly	3	2%
Adequately	14	8%
Well	41	22%
Very well	121	66%
Other (please specify)	4	2%
Total	183	100%

Additional Tasks

After rating the frequency and importance of the tasks, respondents were asked to "list any additional tasks you believe should have been included in this survey." The main themes of the comments on additional tasks are:

1. Integration with Other Systems: Consider including evaluations that consider the impact of neurological issues on cardiovascular, gastrointestinal, and metabolic health.

2. Patient Engagement: Emphasize tasks related to patient education, explaining treatments, and reviewing imaging or lab results.

3. Multidisciplinary Coordination: Reflect coordination of care in a multidisciplinary setting rather than defaulting to outside referrals.

4. Communication and Comforting Skills: Address patient emotions and communication skills during evaluations.

5. Expanded Diagnostics: Consider adding more advanced testing techniques such as electrodiagnostics, quantitative EEG, and expanded vestibular and saccadic testing.

6. Functional and Baseline Testing: Include baseline functional wellness testing and specific proprioceptive assessments.

7. Telemedicine Consideration: Include telemedicine options for practices using virtual care.

Additional Work Activities

Survey respondents were next asked to "Please list any additional work activities you believe should have been included in the survey and indicate its associated task." The key themes from the additional work activities suggested are:

1. **Advanced Diagnostics and Lab Testing:** Adding tasks related to performing and interpreting advanced lab tests and diagnostic imaging (e.g., QEEG, neuroimaging, electrodiagnostics, and specific functional labs).

2. **Patient Engagement and Education:** Incorporating activities like patient education, lifestyle coaching, nutrition guidance, and strategies for encouraging patient follow-through on recommendations.

3. **Rehabilitation and Therapy Modalities:** Including various therapy applications (e.g., dry needling, acupuncture, interactive metronome, saccadometer testing, and other modalities).

4. **Care Coordination:** Emphasizing coordination of care in multidisciplinary practices and management of complex cases.

5. **Treatment Plan Development:** Tasks related to detailed treatment planning, modality selection, and patient management strategies.

To the extent that these comments are accurate and relevant, the themes highlight potential gaps in the current task list and suggest a broader scope that includes more diagnostic, therapeutic, and patient management activities.

Importance of Work Activities

Survey respondents (on both surveys) were asked to indicate the importance of each work activity in the specialty practice of chiropractic/functional neurology (Table 17), with very similar results across surveys.

Table 17. How important is this major work activity in your current chiropractic/functional neurology practice?

	Work Activity Survey (N=184)					Content Domain Survey (N=174)				
	N.I.	S.I.	I.	V.I.	Mean	N.I.	S.I.	I.	V.I.	Mean
Take a Patient History	0	1	4	179	3.0	0	0	9	165	2.9
Perform a Physical Exam	0	2	8	174	2.9	0	0	16	158	2.9
Conduct or Order Special Studies	2	30	63	89	2.3	4	43	67	60	2.1
Identify Diagnosis(es), Differential Diagnosis(es), Disease Processes, Metabolic Rate, Pathways	2	4	36	142	2.7	1	11	34	128	2.7
Treatment and Rehabilitation	0	0	10	174	2.9	0	0	19	155	2.9
Referral	0	17	67	100	2.5	4	36	61	73	2.2

N.I. = Not important (0)
S.I. = Somewhat important (1)
I. = Important (2)
V.I. = Very Important (3)

The lowest mean ratings were for Conduct or Order Special Studies (mean = 2.1 to 2.3) and Referral (mean = 2.2 to 2.5), but they were still high enough to justify retaining these work activities.

Respondents on both surveys were then asked to indicate the percentage of time they personally spend performing tasks in each work activity (Figure 4 and Table 18) and what percentage of the written exam they believe should come from each work activity (Figure 5 and Table 19), again with very similar results across surveys.

The importance ratings and percentages of time spent are more than sufficient to justify retention of all the work activities in the draft test specifications.

Time Spent on Work Activity in Office

Figure 4. For each patient, approximately what percentage of time do you spend performing tasks in each of the following major work activities?
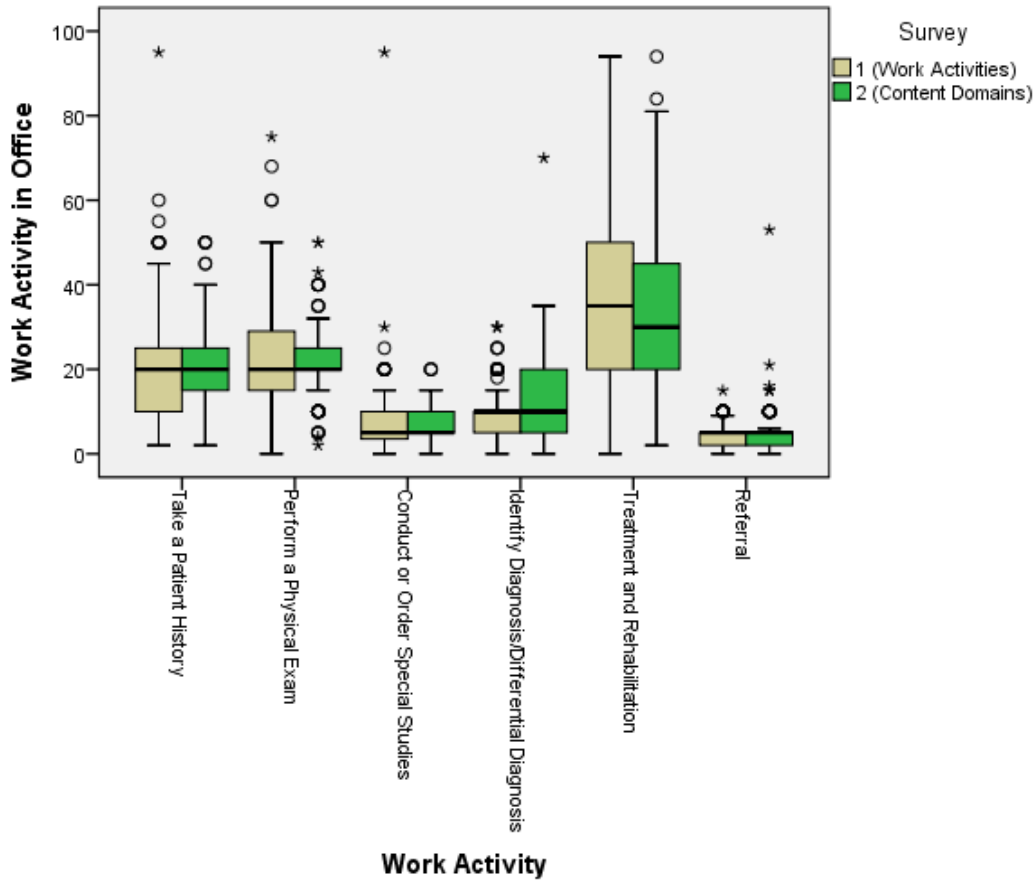
Table 18. For each patient, approximately what percentage of time do you spend performing tasks in each of the following major work activities?

Work Activity	Survey	N	Minimum	Maximum	Mean	Std. Deviation
Take a Patient History	1 (Work Activities)	182	2	95	20.4	12.5
	2 (Content Domains)	174	2	50	20.7	10.4
Perform a Physical Exam	1 (Work Activities)	182	0	75	22.5	11.2
	2 (Content Domains)	174	2	50	21.9	8.4
Conduct or Order Special Studies	1 (Work Activities)	180	0	95	7.1	8.4
	2 (Content Domains)	174	0	20	6.0	4.0
Identify Diagnosis/ Differential Diagnosis	1 (Work Activities)	181	0	30	9.7	6.3
	2 (Content Domains)	174	0	70	12.3	8.5
Treatment and Rehabilitation	1 (Work Activities)	182	0	94	36.7	19.7
	2 (Content Domains)	174	2	94	34.1	17.7
Referral	1 (Work Activities)	174	0	15	4.5	3.1
	2 (Content Domains)	174	0	53	5.0	5.1

Representation on Written Exam

Figure 5. What percentage of the Written Examination should be devoted to each area?
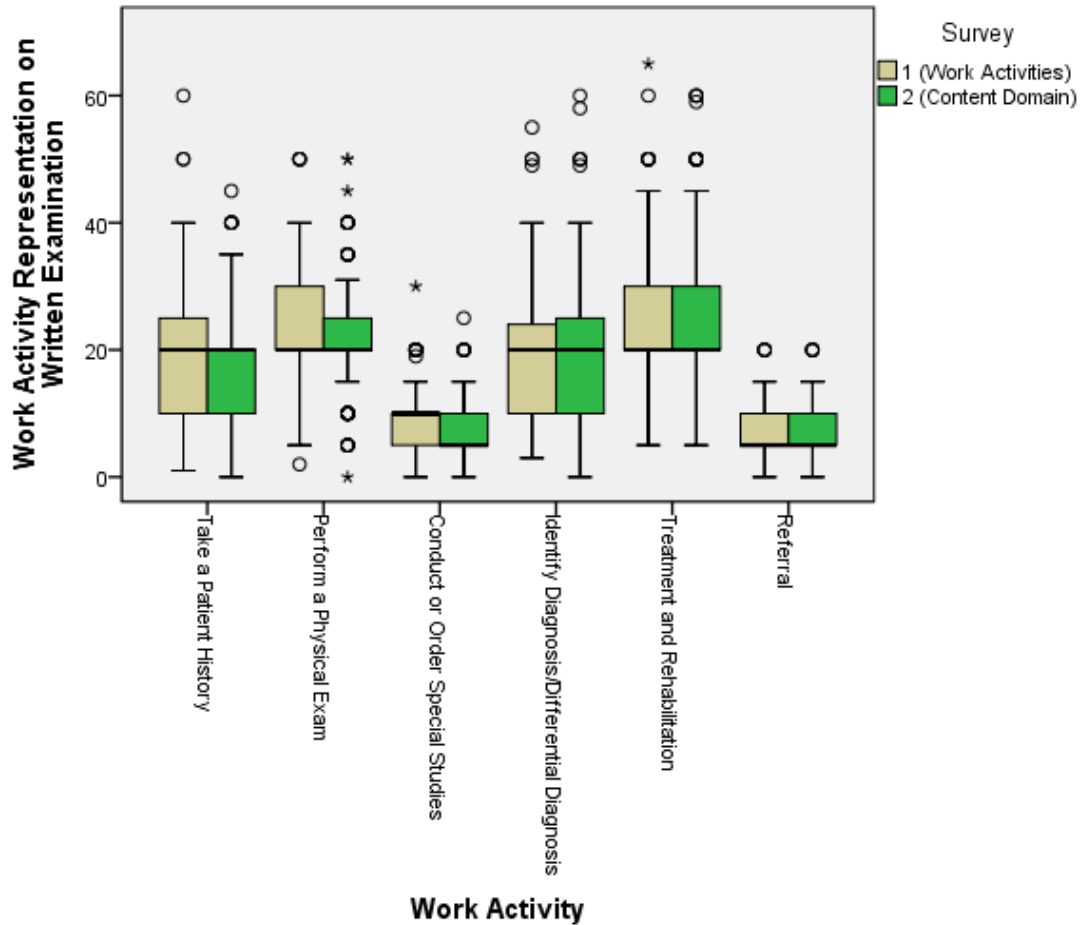
Table 19. What percentage of the Written Examination should be devoted to each area?

Work Activity	Survey	N	Minimum	Maximum	Mean	Std. Deviation
Take a Patient History	1 (Work Activities)	179	1	60	19.3	9.2
	2 (Content Domains)	172	0	45	18.2	8.4
Perform a Physical Exam	1 (Work Activities)	179	2	50	23.7	8.8
	2 (Content Domains)	172	0	50	22.0	8.5
Conduct or Order Special Studies	1 (Work Activities)	179	0	30	8.6	4.8
	2 (Content Domains)	172	0	25	7.6	4.2
Identify Diagnosis/ Differential Diagnosis	1 (Work Activities)	179	3	55	18.2	10.2
	2 (Content Domains)	172	0	60	20.0	10.4
Treatment and Rehabilitation	1 (Work Activities)	179	5	65	24.1	10.7
	2 (Content Domains)	172	5	60	25.8	11.8
Referral	1 (Work Activities)	179	0	20	6.3	3.9
	2 (Content Domains)	172	0	20	6.3	3.9

Content Domains and KSAs

Frequency and Importance Ratings for the KSAs

On the Content Domain survey (Survey 2), the survey respondents were asked to rate the importance of the knowledge, skills, and abilities (KSAs) associated with each content domain and the frequency in which the KSAs are used in practice, using the same scales as for the tasks described previously.

Table 20 summarizes the mean ratings by content domain (in the order they were asked in the survey), which can be interpreted the same as the mean frequency and importance ratings for tasks described above Table 15). No values were flagged for being low (mean frequency values of 1.5 or less and mean importance values of 1.0 or less), suggesting that all content domains should be retained.

Table 20. Summary of Mean Frequency and Importance of KSAs within Each Content Domain

	Content Domain	N	Mean Frequency			Mean Importance		
			Min	Max	Mean	Min	Max	Mean
1	Autonomic Nervous System	16	2.5	3.8	3.2	2.1	2.8	2.5
2	Basal Ganglia	3	2.9	3.5	3.1	2.4	2.6	2.5
3	Brain and Its Environment	16	1.7	3.6	2.5	1.7	2.8	2.3
4	Brainstem	5	3.1	3.6	3.4	2.6	2.7	2.7
5	Cerebellar/Vestibular	6	3.1	3.8	3.5	2.5	2.8	2.7
6	Cranial Nerves	24	1.7	3.8	3.0	1.8	2.8	2.5
7	Head and Face Pain	21	1.9	3.7	3.2	2.3	2.7	2.5
8	Limbic System	9	2.3	2.8	2.5	2.1	2.5	2.3
9	Lobes of the Brain	8	2.8	3.6	3.3	2.3	2.6	2.5
10	Neuroendorcrine System	10	1.8	3.6	2.5	2.1	2.6	2.3
11	Neuron Theory	4	2.6	3.4	2.9	2.1	2.5	2.3
12	Pain	38	1.6	3.8	3.2	2.0	2.8	2.5
13	Peripheral Nerves	8	2.1	3.7	3.2	2.1	2.8	2.5
14	Receptor Systems	5	2.5	3.6	3.2	2.1	2.6	2.4
15	Reflexogenic Systems	8	3.0	3.4	3.3	2.2	2.6	2.4
16	Spinal Cord	7	2.1	3.7	3.0	2.5	2.7	2.6

Representativeness of the Content Domains

After completing the importance and frequency ratings of the KSAs, survey respondents were presented with a question asking to apply a rating scale to indicate how well the content domains in the survey represent the specialty practice of chiropractic/functional neurology. The majority of those responding to the question (85%) indicated that the survey represents the specialty practice "very well" or "well," as shown in Table 21.

Table 21. How well do the content domains in this survey represent the specialty practice of chiropractic/functional neurology?

	Frequency	Percent
Very poorly	1	1%
Poorly	2	1%
Adequately	22	13%
Well	55	31%
Very well	95	54%
Total	175	100%

Additional Content Domains and KSAs

The survey respondents were then prompted to provide "any additional content domains you believe should have been included in the survey," and "additional knowledge, skills and/or abilities you believe should have been included in the survey and indicate its associated content domain." The responses are summarized as follows:

KSAs Suggested from Comments:

1. Adjunctive Therapies and Diagnostic Techniques:
   o Include therapies such as Low Level Laser Therapy, Photobiomodulation, and Acupuncture.
   o Incorporate additional electrodiagnosis techniques and functional diagnostic testing (e.g., VNG, CAPS, Bertec).
   o Expand radiological competency (e.g., MRI, CT, PET, SPECT, tractography).
2. Mental and Emotional Health:
   o Address mental and emotional health as it relates to neuropsychology, symptom manifestation, and treatment outcomes.
   o Consider including psychophysiological disorders and referral to neuropsychological or counseling services (e.g., EMDR, CBT).
3. Patient Education and Care Coordination:
   o Emphasize patient education on lab results and diagnostic tests.
   o Incorporate principles of continuity of care, coordination with other providers, and staff support/training.
4. Metabolic and Nutritional Considerations:
   o Include metabolic/nutritional strategies for receptor-based rehabilitation and neuroendocrine health, particularly in managing diabetes or blood sugar levels.
5. Rehabilitation Techniques and Vestibular Focus:
   o Increase emphasis on vestibular rehabilitation techniques and cerebellar rehabilitation.
   o Expand on oculomotor evaluations (e.g., saccades, pursuits, OPKs).
6. Functional and Sports-Related Injuries:
   o Consider the inclusion of sports-related injury management and diagnostic elements related to injury mechanisms.

To the extent that these comments are accurate and relevant, these comments suggest expanding on existing KSAs in areas of advanced diagnostic techniques, mental health integration, metabolic considerations, and patient education.

Importance and Frequency of Content Domains

Survey respondents were asked to rate the frequency and importance of the content domains. Specifically, respondents on both surveys were asked to "Please indicate how frequently you use of each of the following content domains and how important each of the following content domains is to your practice of chiropractic/functional neurology," with results from these ratings shown in Table 22 (frequency) and Table 23 (importance). The first two data columns show the mean frequency (Table 22) or mean importance (Table 23) from Survey 1 (S1) and Survey 2 (S2).

Results show high consistency between surveys for both metrics. Domains like **Cerebellar/Vestibular**, **Brainstem**, **Peripheral Nerves**, and **Autonomic Nervous System** were rated the highest in frequency and importance. Meanwhile, **Limbic System** and **Neuroendocrine System** scored lower in both frequency and importance (but still high). Overall, most domains were frequently used and considered important by practitioners, with only minor variations between the two surveys.

Table 22. Frequency Ratings for Content Areas from Each Survey

	Survey 1 (N = 180)							Survey 2 (N = 174)				
	Mean S1	Mean S2	0 = I do not perform this task	1 = Once or twice a year	2 = Quarterly	3 = Monthly	4 = Weekly or Daily	0 = I do not perform this task	1 = Once or twice a year	2 = Quarterly	3 = Monthly	4 = Weekly or Daily
Neuron Theory	3.4	3.4	2%	6%	10%	14%	68%	2%	7%	11%	14%	66%
Receptor Systems	3.6	3.6	1%	1%	8%	20%	70%	1%	4%	6%	14%	75%
Peripheral Nerves	3.6	3.7	0%	2%	6%	18%	74%	0%	3%	4%	14%	79%
Spinal Cord	3.5	3.5	2%	2%	9%	20%	67%	1%	3%	9%	21%	65%
Brainstem	3.8	3.8	0%	1%	4%	12%	82%	0%	2%	3%	10%	84%
Cranial Nerves	3.6	3.7	1%	2%	8%	16%	74%	0%	3%	4%	14%	79%
Head and Face Pain	3.5	3.5	1%	2%	7%	25%	64%	1%	3%	6%	22%	68%
Cerebellar/Vestibular	3.9	3.8	0%	1%	1%	9%	89%	0%	2%	0%	10%	88%
Basal Ganglia	3.4	3.3	1%	3%	14%	23%	59%	1%	5%	12%	28%	55%
Reflexogenic System	3.5	3.5	1%	2%	9%	21%	67%	0%	2%	10%	22%	66%
Autonomic Nervous System	3.7	3.7	1%	1%	4%	12%	82%	1%	2%	3%	14%	79%
Limbic System	3.0	3.0	3%	8%	21%	22%	47%	2%	11%	16%	26%	44%
Lobes of the Brain	3.6	3.5	1%	3%	8%	17%	72%	0%	4%	10%	18%	68%
Brain and Its Environment	3.4	3.3	2%	4%	12%	22%	61%	1%	8%	14%	19%	59%
Neuroendocrine System	2.9	2.8	4%	9%	21%	23%	43%	5%	14%	20%	25%	37%
Pain	3.7	3.8	1%	1%	4%	13%	81%	1%	2%	4%	6%	87%

Table 23. Importance Ratings for Content Areas from Each Survey

	Mean S1	Mean S2	Survey 1 (N = 180)				Survey 2 (N = 174)			
			0 = Not important	1 = Somewhat important	2 = Important	3 = Very important	0 = Not important	1 = Somewhat important	2 = Important	3 = Very important
Neuron Theory	2.4	2.5	1%	14%	29%	56%	1%	11%	29%	60%
Receptor Systems	2.5	2.6	0%	7%	38%	56%	1%	5%	32%	63%
Peripheral Nerves	2.6	2.7	0%	5%	29%	66%	0%	4%	26%	70%
Spinal Cord	2.6	2.6	0%	3%	37%	60%	1%	2%	31%	66%
Brainstem	2.7	2.8	0%	3%	21%	76%	0%	1%	21%	78%
Cranial Nerves	2.7	2.7	0%	3%	26%	71%	0%	2%	26%	72%
Head and Face Pain	2.6	2.6	0%	7%	29%	64%	0%	4%	30%	66%
Cerebellar/Vestibular	2.8	2.8	0%	1%	14%	84%	0%	1%	20%	79%
Basal Ganglia	2.6	2.6	1%	3%	32%	64%	0%	5%	34%	61%
Reflexogenic System	2.6	2.5	1%	4%	36%	60%	0%	6%	33%	60%
Autonomic Nervous System	2.7	2.7	1%	3%	21%	76%	0%	3%	24%	74%
Limbic System	2.3	2.3	1%	14%	39%	46%	2%	13%	38%	48%
Lobes of the Brain	2.6	2.5	1%	5%	31%	63%	0%	7%	30%	62%
Brain and Its Environment	2.4	2.4	1%	10%	34%	55%	1%	10%	33%	56%
Neuroendocrine System	2.3	2.3	1%	18%	34%	46%	1%	16%	35%	48%
Pain	2.7	2.7	1%	4%	24%	71%	0%	2%	22%	76%

Representation on Written Exam

On Survey 2 (the Content Domain survey), respondents were asked "What percentage of the Written Examination should be devoted to each area?" Figure 6 and Table 24 show the results.

Figure 6. What percentage of the Written Examination should be devoted to each area?
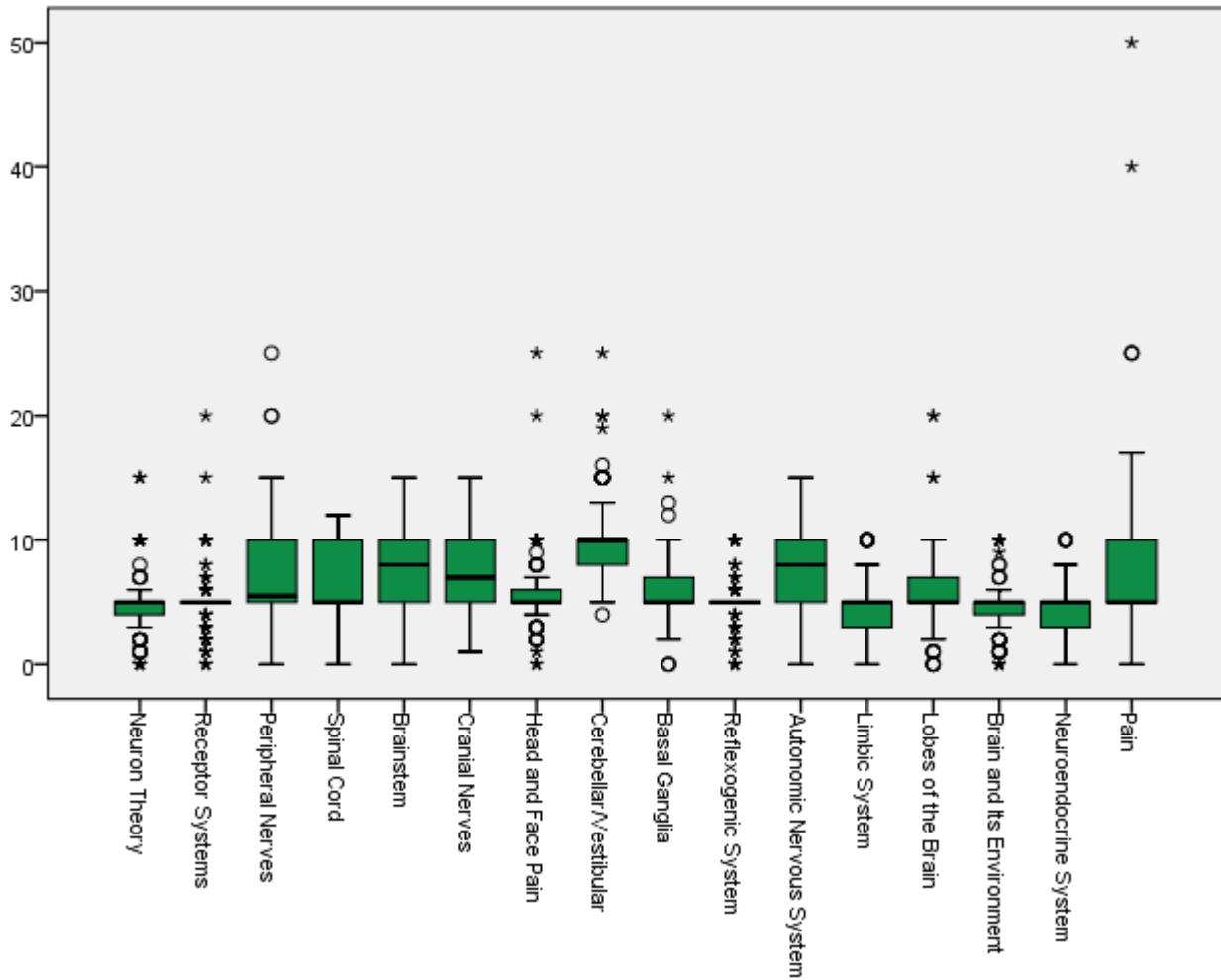
Table 24. What percentage of the Written Examination should be devoted to each area?

Content Domain	N	Minimum	Maximum	Mean	Std. Deviation
Neuron Theory	174	0	15	5.0	2.8
Receptor Systems	174	0	20	5.1	2.5
Peripheral Nerves	174	0	25	7.0	3.3
Spinal Cord	174	0	12	6.5	2.4
Brainstem	174	0	15	7.8	2.6
Cranial Nerves	174	1	15	7.4	2.6
Head and Face Pain	174	0	25	5.7	2.8
Cerebellar/Vestibular	174	4	25	9.6	3.4
Basal Ganglia	174	0	20	6.1	2.6
Reflexogenic System	174	0	10	5.1	2.0
Autonomic Nervous System	174	0	15	7.9	2.8
Limbic System	174	0	10	4.5	2.1
Lobes of the Brain	174	0	20	6.0	3.1
Brain and Its Environment	174	0	10	4.8	2.4
Neuroendocrine System	174	0	10	4.1	2.1
Pain	174	0	50	7.4	5.6

These results indicate that the highest emphasis should be placed on **Cerebellar/Vestibular** and **Autonomic Nervous System**, while areas like **Neuroendocrine System** and **Limbic System** are given less weight.

Practical Examination

Respondents on both surveys were asked what percentage of the Physical Examination portion of the Performance Examination they believe should be devoted to each component, and the results are provided in Figure 1 and Table 25.

Figure 7. What percentage of the Physical/Performance Examination should be devoted to each component?
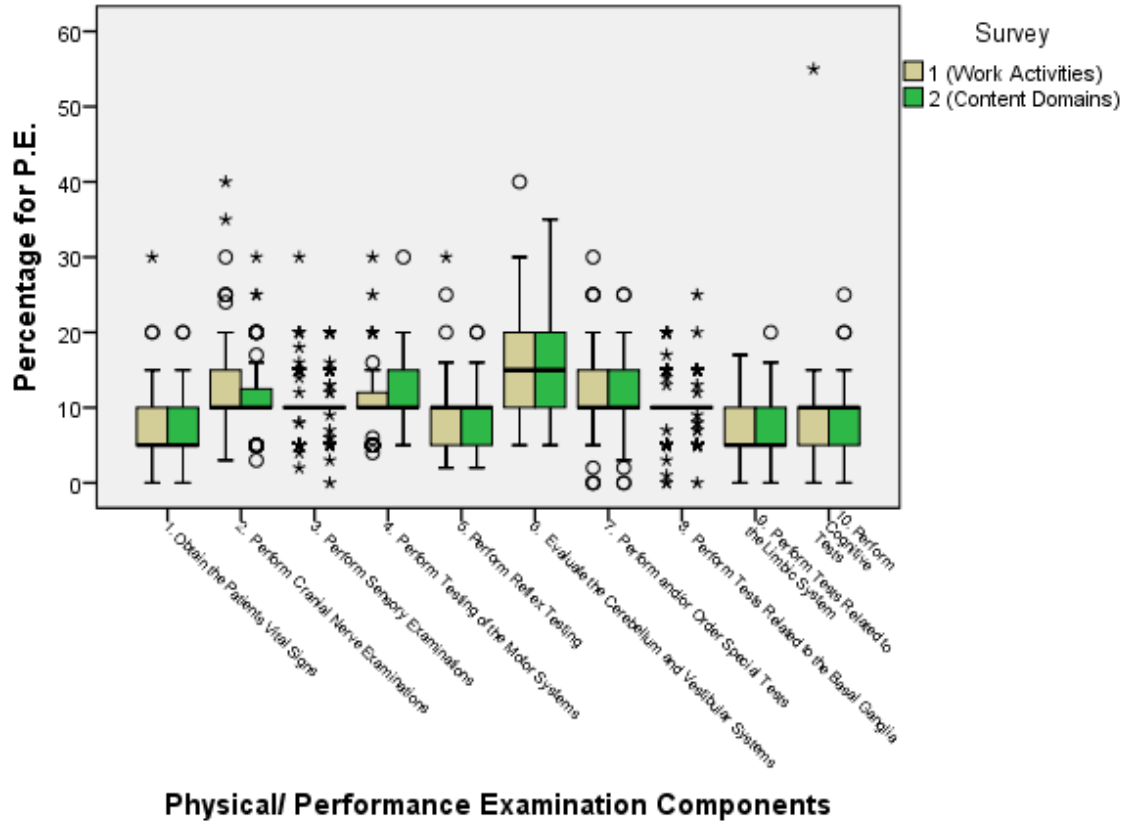
Table 25. What percentage of the Physical/Performance Examination should be devoted to each component?

Physical/ Performance Examination Components	S1 (Work Activities; N = 179)			S2 (Content Domains; N = 172)		
	Minimum	Maximum	Mean	Minimum	Maximum	Mean
1. Obtain the Patients Vital Signs	0	30	7.2	0	20	7.0
2. Perform Cranial Nerve Examinations	3	40	11.8	3	30	11.2
3. Perform Sensory Examinations	2	30	10.1	0	20	10.4
4. Perform Testing of the Motor Systems	4	30	10.9	5	30	11.6
5. Perform Reflex Testing	2	30	8.4	2	20	8.8
6. Evaluate the Cerebellum and Vestibular Systems	5	40	15.4	5	35	14.7
7. Perform and/or Order Special Tests	0	30	11.3	0	25	11.5
8. Perform Tests Related to the Basal Ganglia	0	20	9.8	0	25	9.5
9. Perform Tests Related to the Limbic System	0	17	7.0	0	20	7.2
10. Perform Cognitive Tests	0	55	8.1	0	25	8.2

Test Specifications

Multiple-Choice Examination

Preliminary test percentages were derived for the work activities and the content domains, as the current multiple-choice examination is assembled according to both components. (Each test question is coded to a work activity and content domain.) To derive preliminary test percentages for the multiple-choice examination, multiple methods were used to calculate preliminary test percentages, and the JTA committee convened to review the results and make the final determination.

Preliminary percentages for work activities are shown in Table 26, which first shows the number and percentage of tasks within each work activity. Next it shows a series of preliminary test percentages:

o   Task Frequency Ratings: the frequency ratings for the tasks within each work activity were averaged, then divided by the sum of the frequency ratings to produce test percentages. Note that these are unweighted: they do not take into account the number of tasks within each work activity.

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o   Task Importance Ratings: the importance ratings for the tasks within each work activity were averaged, then divided by the sum of the importance ratings to produce test percentages. Note that these are unweighted: they do not take into account the number of tasks within each work activity.

o   Work Activity Importance Ratings: the importance ratings for the work activity were averaged across surveys, then divided by the sum of the ratings to produce test percentages. Note that these are unweighted: they do not take into account the number of tasks within each work activity.

o   Respondent % Time in Office: the mean percentage of time respondents spend performing tasks in each of the work activities was averaged across surveys, then divided by the sum of the averages to produce test percentages. Note that these are unweighted: they do not take into account the number of tasks within each work activity.

o   Respondent Recommended Test %: the mean percentage of examination respondents believed should be devoted to each of the work activities was averaged across surveys, then divided by the sum of the averages to produce test percentages. Note that these are unweighted: they do not take into account the number of tasks within each work activity.

o   Prior (2019): The percentage of the examination that has been allocated to each work activity since the last JTA in 2019.

o   2024 Final: The final recommendation of the JTA committee after reviewing the other results, as will be discussed later in this document. The percentages are provided here for ease of comparison.

Preliminary percentages for content domains were calculated using the same methods and are shown in Table 27.

Table 26. Recommended Test Percentages for Work Activities – Written Examination

Work Activity	Number of Tasks	Percent of Tasks	Task Frequency Ratings	Task Importance Ratings	Work Activity Importance Ratings	Respondent % Time in Office	Respondent Recommended Test %	Prior (2019)	2024 Final
Take a Patient History	2	1%	19%	18%	18%	20%	19%	5%	5%
Perform a Physical Exam	117	79%	16%	17%	18%	22%	23%	10%	20%
Conduct or Order Special Studies	2	1%	16%	17%	14%	7%	8%	6%	6%
Identify Diagnosis(es), Differential Diagnosis(es), Disease Processes, Metabolic Rate, Pathways	14	9%	17%	16%	17%	11%	19%	45%	42%
Treatment and Rehabilitation	10	7%	18%	16%	18%	35%	25%	30%	24%
Referral	3	2%	14%	17%	15%	5%	6%	4%	3%
Total	148	100%	100%	100%	100%	100%	100%	100%	100%

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Table 27. Recommended Test Percentages for Content Areas - Written Examination

Content Domain	Number of KSAs	Percent of KSAs	KSA Frequency Ratings	KSA Importance Ratings	Content Domain Frequency Ratings	Content Domain Importance Ratings	Respondent Recommended Test %	Prior (2019)	2024 Final
Neuron Theory	4	2%	6%	6%	6%	6%	5%	7%	5%
Receptor Systems	5	3%	7%	6%	6%	6%	5%	6%	5%
Peripheral Nerves	8	4%	7%	6%	7%	6%	7%	5%	7%
Spinal Cord	7	4%	6%	7%	6%	6%	7%	8%	6%
Brainstem	5	3%	7%	7%	7%	7%	8%	8%	8%
Cranial Nerves	24	13%	6%	6%	7%	7%	7%	7%	7%
Head and Face Pain	21	11%	7%	6%	6%	6%	6%	6%	6%
Cerebellar/Vestibular	6	3%	7%	7%	7%	7%	10%	5%	10%
Basal Ganglia	3	2%	6%	6%	6%	6%	6%	6%	6%
Reflexogenic System	8	4%	7%	6%	6%	6%	5%	4%	5%
Autonomic Nervous System	16	9%	7%	6%	7%	7%	8%	5%	8%
Limbic System	9	5%	5%	6%	5%	6%	5%	8%	5%
Lobes of the Brain	8	4%	7%	6%	6%	6%	6%	7%	6%
Brain and Its Environment	16	9%	5%	6%	6%	6%	5%	6%	5%
Neuroendocrine System	10	5%	5%	6%	5%	6%	4%	6%	4%
Pain	38	20%	7%	6%	7%	7%	7%	6%	7%
Total	188	100%	100%	100%	100%	100%	100%	100%	100%

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Practical Examination

The current practical examination consists of two parts: a physical examination and a case study. Each part is currently weighted 50% of the practical examination. For the practical examination, the test weights are used for weighting the components of the examination for scoring, rather than designating a certain number of activities per component of the practical examination (i.e., akin to designating a certain number of items according to a test blueprint for a written examination). The weights are reflective of the relative importance/emphasis of the components of the examination. For example, there may be certain physical examination procedures that are limited in the number of steps but may be more important, and therefore, should have greater emphasis/weight on the examination than a physical examination procedure that has a greater number of steps which may be of lesser importance.

Preliminary Weights – Physical Examination

On both surveys, respondents were asked what percentage examination they believe should be devoted to each of the components of the Physical Examination portion of the Performance Examination. The mean percentages for each component were averaged across surveys, then divided by the total of the percentages to ensure they sum to 100, producing the preliminary weights for the Physical Examination portion of the Performance Examination, as shown in

Table 28. Also shown are the values used since the last JTA in 2019 and the final recommendation of the JTA committee after reviewing the other results, as will be discussed later in this document, which are provided here for ease of comparison.

Table 28. Recommended Test Percentages for Physical Examination – Practical Examination

Physical Exam	Survey Respondent Recommended Test Weights	Prior (2019)	2024 Final
1. Obtain the Patient's Vital Signs	7%	3%	3%
2. Perform Cranial Nerve Examinations	11%	18%	18%
3. Perform Sensory Examinations	10%	10%	10%
4. Perform Testing of the Motor Systems	11%	14%	14%
5. Perform Reflex Testing	9%	5%	6%
6. Evaluate the Cerebellum and Vestibular Systems	15%	15%	17%

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7. Perform and/or Order Special Tests Related to the Cerebellum, Balance and Vestibular Systems**	11%	N/A	N/A
7. Evaluate Cardiovascular, Respiratory, and Abdomen**	N/A	12%*	9%
8. Perform Tests Related to the Basal Ganglia	10%	10%	10%
9. Perform Tests Related to the Limbic System	7%	5%	5%
10. Perform Cognitive Tests	8%	6%	6%
11. Additional Tests		2%	2%
Total	100%	100%	100%

*2019 exam had 12% across separate categories for cardiovascular (5%), respiratory (4%), abdomen (3%).

**In the 2019 test blueprint, there were separate components for cardiovascular (5%), respiratory (4%), abdomen (3%), and additional tests (2%). Prior to the 2023 survey, the JTA committee recommended replacing those four components with "Perform and/or Order Special Tests Related to the Cerebellum, Balance and Vestibular Systems." After reviewing the survey results, the JTA committee decided to keep Additional Tests as a separate component and replace the combined component to "Evaluate Cardiovascular, Respiratory, and Abdomen."

Preliminary Weights – Case Study

The activity "Take a Patient History" was renamed to "Review a Patient History" to accurately reflect what candidates do during the exam, as shown in Table 29.

Table 29. Case Study Weights

Case Study Work Activity	Survey Respondent Recommended Test Weights	Prior (2019)	2024 Weights
Identify Diagnosis(es), Differential Diagnosis(es), Disease Processes, Metabolic Rate, Pathways	19%	45%	45%
Conduct or Order Special Studies	8%	6%	6%
Referral	6%	4%	4%
Treatment and Rehabilitation	25%	30%	30%
Review a Patient History (was Take a Patient History)	19%	5%	5%
Perform a Physical Exam	23%	10%	10%

Practical Examination: Case Study vs. Physical Examination Weights

The survey respondents were also asked to indicate the percentage of practical examination that should be devoted to the case study and physical examination, which comprise the practical examination. As shown in Figure 8 and Table 30, the median was 50% for each.

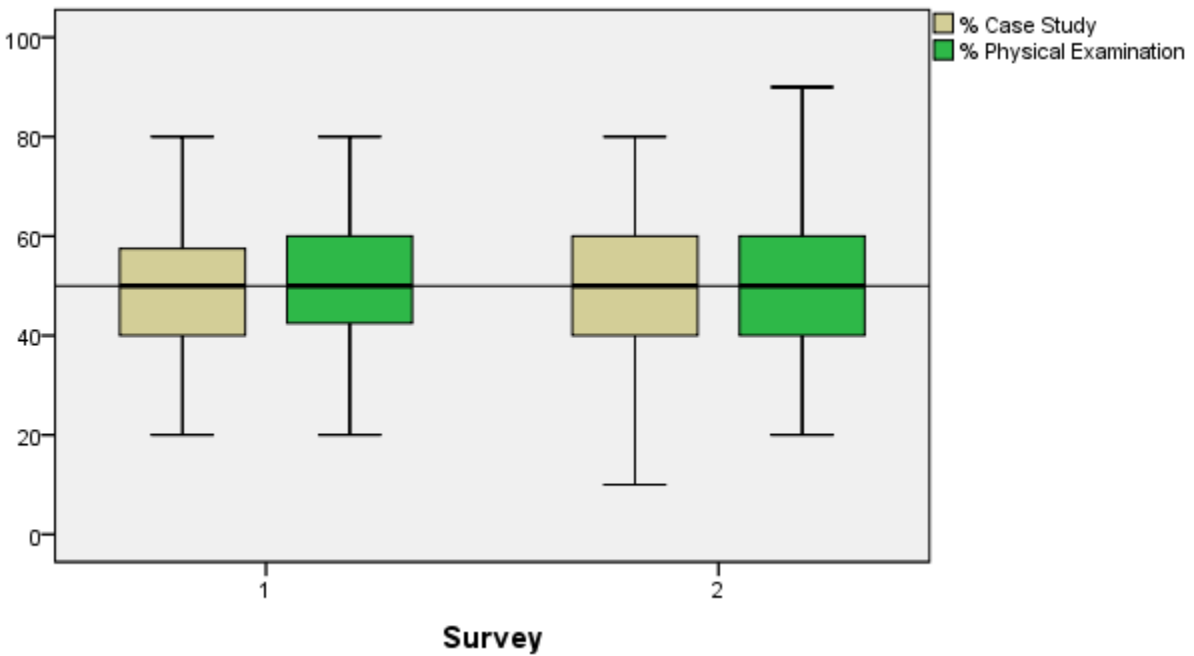Figure 8. Practical Examination: Case Study vs. Physical Examination

Table 30. Practical Examination: Case Study vs. Physical Examination

	Survey	N	Minimum	Maximum	Mean	Median	Std. Deviation
% Case Study	1	180	20	80	48.2	50	13.7
	2	172	10	80	47.1	50	15.3
% Physical Examination	1	180	20	80	51.8	50	13.7
	2	172	20	90	52.9	50	15.3

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Finalization of the Content Outline and Test Specifications

On October 4, 2023, a web-based meeting was held with the job analysis committee to review the results of the study, to finalize the work activities and content domains, and the test specifications for the written and practical examinations based on the data obtained from the study.

The committee first reviewed the results of the background questionnaire and response rate for both surveys (i.e., Table 5 to Table 14) and were reminded that both surveys were disseminated to all potential survey recipients. It was noted that, in general, the response patterns to the background questions were similar for the two surveys. For each background question data table presented, they were asked if the data suggested that the survey respondent group is representative of the population of DACNBs. They responded "yes" after reviewing the data tables for each background question. They noted that the majority of survey respondents are chiropractors practicing chiropractic/functional neurology on a full-time basis and have a private practice.

They also noted the varying years of work experience and geographical locations, which are other characteristics that would be representative of the population of DACNBs. It was the consensus of the committee that the characteristics of the survey respondent group appeared to be reflective of the population of DACNBs.

The committee was then oriented to the qualitative and quantitative data associated with the work activities, tasks, content domains, and KSAs. They were instructed on how to use the validity rating data and the qualitative data (i.e., survey respondents' comments) from the study to finalize the work activities, content domains, and test specifications. The committee was also given guidance on how to identify decision rules concerning the validity rating data that they may use to finalize the work activities (and associated tasks), content domains (and associated KSAs), and test specifications.

As a result of a review of survey respondents' comments concerning the comprehensiveness of the work activities and content domains, and the responses to how well the job analysis represented the practice of chiropractic functional neurology, the committee decided to not make any changes to the work activities and content domains, as the data suggested that the practice of chiropractic functional neurology was well represented on the survey, except that on the case study, the activity "Take a Patient History" was renamed to "Review a Patient History" to accurately reflect what candidates do during the exam.

In addition, after a review of the validity rating data associated with the work activities and content domains, they decided to retain the work activities and content domains, as there were more than sufficient data to justify retention of all of the work activities and content domains.

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Based on a review of the summary data (i.e., the data tables presenting the mean ratings, minimum and maximum ratings, and N) for the importance and frequency ratings of the task statements and KSAs, the committee decided to retain all KSA statements and remove four task statements, all of which had mean frequencies of less than 1.5 (halfway between 'once or twice per year' and 'quarterly').

The committee reviewed the current and preliminary test weights for the written and practical examinations as presented in Table 26 to Table 27. When finalizing the test specifications, in addition to using the results of the job analysis study in making decisions about the test specifications, the committee was advised to take into consideration the practical aspect of test development, as the scope and depth of the subject matter should be taken into consideration when finalizing the test weights. For example, some tasks, although rated high in terms of importance and frequency may be limited in scope, or conversely some tasks may have been rated high in importance but may not be frequently performed, yet may have more breadth and depth of subject matter than a task that is important and is frequently performed. Therefore, the committee could consider adjusting the weights given these considerations.

Work Activities

The committee reviewed the 2019 test blueprint weights and survey respondent recommendations, shown in Table 26, to finalize the 2024 weights, ensuring they accurately reflect the emphasis required for each task in the exam.

1. For **Review a Patient History**, the committee determined that the survey respondents' suggested weight of 19% was too high, given that the task in the exam involves reviewing rather than taking a history; thus, it was adjusted to 5%.

2. The weight for **Performing a Physical Exam** increased to 20%, aligning with both the survey respondents' recommendation and the committee's agreement that this area deserved a higher emphasis compared to the 2019 blueprint.

3. **Conducting or Ordering Special Studies** remained consistent with prior allocations at 6%, as the recommended test weight of 8% was deemed appropriate for this component.

4. For **Identifying Diagnoses, Differential Diagnoses, Disease Processes, Metabolic Rate, and Pathways**, the committee found the 19% suggested by respondents too low, considering the complexity of these tasks. The final weight was set at 42% to reflect their significance in clinical scenarios.

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5. **Treatment and Rehabilitation** was slightly reduced to 24% from the recommended 25%, maintaining its critical role while balancing the focus across other areas.

6. **Referral** was decreased to 3% as it is a minor yet essential component, with the final weight reflecting its appropriate level of importance compared to other activities.

These adjustments ensure the test blueprint is aligned with real-world practice while maintaining fairness and a balanced evaluation of core competencies.

Content Domains

The committee reviewed the content domain weights from the 2019 blueprint and made adjustments for the 2024 blueprint based on the latest survey results. Below is an overview of their decisions:

1. **Decreased Emphasis:**

   o **Neuron Theory**: Reduced from 7% to 5%, reflecting lower emphasis as indicated by survey responses.

   o **Receptor Systems**: Reduced from 6% to 5% due to similar feedback from respondents.

   o **Spinal Cord**: Adjusted from 8% to 6%, aligning with respondent feedback.

   o **Limbic System**: Reduced significantly from 8% to 5% based on its lower priority in the current practice setting.

   o **Lobes of the Brain**: Dropped from 7% to 6%, reflecting decreased need as per survey insights.

   o **Brain and Its Environment**: Decreased from 6% to 5% to better balance focus across content areas.

   o **Neuroendocrine System**: Reduced from 6% to 4%, showing lower relevance in recent practice trends.

2. **Increased Emphasis:**

   o **Peripheral Nerves**: Increased from 5% to 7% to reflect higher reported importance.

   o **Cerebellar/Vestibular**: Significantly increased from 5% to 10%, as respondents emphasized its critical role.

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- **Reflexogenic System**: Increased from 4% to 5% based on survey feedback indicating its growing significance.

- **Autonomic Nervous System**: Boosted from 5% to 8% to reflect its expanded focus in practice.

- **Pain**: Increased from 6% to 7%, as respondents highlighted its central role in patient care.

3. **Unchanged Areas:**

- **Brainstem** and **Cranial Nerves**: Maintained at 8% and 7%, respectively, as these were consistently rated high in importance and frequency.

- **Head and Face Pain** and **Basal Ganglia**: Both remained at 6%, indicating a stable need for knowledge in these domains.

These adjustments ensure that the 2024 blueprint better aligns with current practice trends and respondent priorities, emphasizing content areas that are more relevant while appropriately reducing focus in less critical areas.

Physical Examination

In the 2019 test blueprint, there were separate components for cardiovascular (5%), respiratory (4%), abdomen (3%), and additional tests (2%). Prior to the 2023 survey, the JTA committee recommended to replace those four components with "Perform and/or Order Special Tests Related to the Cerebellum, Balance and Vestibular Systems." After reviewing the survey results, the JTA committee decided to keep Additional Tests as a separate component and replace the combined component to "Evaluate Cardiovascular, Respiratory, and Abdomen" which was reduced from 12% (in the 2019 blueprint) to 9%.

In general, the weights based on the survey respondents' ratings were not reflective of the importance and depth and breadth of activities associated with the components comprising the examination. Compared to the 2019 blueprint, Perform Reflex Testing increased by 1% and Evaluate the Cerebellum and Vestibular Systems increased by 2%, and all other components were the same as in the 2019 blueprint.

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Case Study

SMEs reviewed the Survey Respondent Recommended Test Weights for the case study and decided to retain the prior 2019 weights, as they better align with the exam's focus and effort required. The SMEs noted that some areas, like Reviewing a Patient History and Performing a Physical Exam, were given disproportionately high weights by survey respondents compared to their practical emphasis in a case-based exam, and Identifying Diagnosis(es) was underemphasized in the survey respondents' weights. Thus the 2024 weights retain the structure from 2019, ensuring that the most critical elements are appropriately weighted without overemphasizing history and exam review.

Eligibility and Recertification Requirements

Eligibility Requirements

Survey respondents were asked if they believe that the eligibility requirements (see below) to take the examination are necessary to achieve competence as a DACNB.

Eligibility requirements:

- Hold the degree of Doctor of Chiropractic or an equivalent doctorate degree in medicine or osteopathy

- Is duly licensed or registered in their state or country from a CCE-accredited college (USA) or its equivalent

- The candidate must also show evidence of having successfully completed a post-doctoral program in neurology of at least 300 credit hours from a chiropractic college, university, institution, foundation, or agency whose program is accredited by the Commission for the Accreditation of Graduate Education in Neurology (CAGEN) or by the Accreditation Council for Continuing Medical Education (ACCME) in the field of neurology.

As indicated in Table 31, the majority (approximately 94-96%) agreed with the eligibility requirements.

Table 31. Do you believe that the eligibility requirements listed above are necessary for achieving competence as a DACNB?

	Survey 1		Survey 2	
	Frequency	Percent	Frequency	Percent
Yes	172	95.6	161	93.6
No	8	4.4	11	6.4
Total	180	100.0	172	100

For the survey respondents who indicated that they did not agree with the eligibility requirements, they were presented with a question asking them to provide a reason for not agreeing with the requirements. Their responses are summarized below.

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Summary of Disagreements with Eligibility Requirements:

1. Flexibility in Accreditation and Education Sources
   - Many respondents expressed concern over the restriction to CAGEN and ACCME-accredited courses only.
   - There was a call for more diverse educational opportunities, including chiropractic college programs and other accredited sources, to be eligible for meeting educational requirements.
2. Licensing Requirements
   - Several comments argued against the need for an active state license to maintain certification, citing it as an unnecessary barrier, particularly in regions where chiropractic neurology is not fully recognized or regulated.
3. Inclusion of Clinical Experience
   - There were multiple suggestions that clinical experience, observation, or rounds should be a required component for eligibility.
   - Respondents felt this would enhance practical knowledge and ensure a minimum standard of clinical competency.
4. Concerns Over Insufficient Educational Standards
   - Some respondents felt that the current 300-credit-hour requirement is too low, allowing candidates to hyperfocus on specific topics without gaining adequate breadth and depth of knowledge.
   - They suggested establishing a more standardized and comprehensive educational requirement to prevent substandard care.
5. Eligibility for Doctoral Students
   - Several comments supported allowing doctoral students within six months of graduation to sit for the exam, with a conditional pass upon completing their degree.
   - This was viewed as a way to streamline the certification process for new graduates and help them transition more smoothly into practice.

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Recertification Requirements

Survey respondents were asked if they believe that the recertification requirements (see below) are necessary to achieve competence as a DACNB.

Submit to the ACNB for **Annual Recertification Requirements**:

- Proof of attendance for at least 30 hours of continuing education from a CAGEN accredited or ACCME-accredited source

- A bibliography listing of at least 24 neurology-related journal articles from peer reviewed publications

- A copy/image/picture of your unexpired DC or medical license

As indicated in Table 32, the majority (approximately 72-74%) agreed with the recertification requirements, although the percentage is much lower than for those agreeing with the eligibility requirements.

Table 32. Do you believe that the recertification requirements listed above are necessary for achieving competence as a DACNB?

	Survey 1		Survey 2	
	Frequency	Percent	Frequency	Percent
Yes	134	74.4	124	72.1
No	46	25.6	48	27.9
Total	180	100.0	172	100

For the survey respondents who indicated that they did not agree with the recertification requirements, they were presented with a question asking them to provide a reason for not agreeing with the requirements. Their responses are summarized below.

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Summary of Disagreements with Recertification Requirements:

1. Reduction in Continuing Education (CE) Hour Requirements
   - Many respondents suggested reducing the annual CE requirement from 30 hours to 15-20 hours.
   - Several comments mentioned that 30 hours is excessive and challenging to complete, especially considering the cost and time constraints.
2. Criticism of the Bibliography Requirement
   - Numerous comments highlighted that the 24-article bibliography is seen as unnecessary busywork.
   - Respondents argued that the bibliography does not effectively demonstrate competency and can be easily fabricated.
3. Concerns Over Cost and Accessibility
   - High costs of required courses were a frequent concern, with respondents noting that this makes it difficult to maintain certification.
   - Many suggested allowing more CE sources beyond those accredited by CAGEN/ACCME to provide flexibility and reduce financial burden.
4. Preference for Biennial Recertification
   - Several comments suggested that recertification should occur every two years instead of annually.
   - Respondents believed this would provide more flexibility and reduce the strain on practitioners.
5. Desire for Acceptance of Alternative CE Options
   - Multiple respondents expressed a desire to use more diverse CE options, such as self-study or courses from other accredited institutions.
   - There was a sentiment that the current requirements are too restrictive and should be expanded.

Summary and Recommendations

Using job (practice) analysis data as a basis for developing a content outline (i.e., work activities and content domains) and test specifications will contribute to the validity of the examination. As described in this report, the job analysis data were used to validate the contents of the draft content outline and draft test specifications and produce preliminary test weights for the written and practical examinations. The results were used and considered by ACNB JTA Committee in the finalization of the content outline and test specifications. Data were also collected to validate the eligibility and recertification requirements. The final determination of the changes to the job analysis (i.e., content outline and test specifications) and the requirements for the certification program are determined by the ACNB.

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Appendix A. Qualifications of Psychometric Consultant

Deborah L. Schnipke, PhD
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Dr. Schnipke has over 20 years of experience working in measurement, providing psychometric expertise for all aspects of the test development process in a variety of fields, especially within certification and licensure testing. Her work includes conducting job task analyses studies (focus groups and surveys), developing test specifications, training item writers and reviewers, performing classical and IRT item and test analyses, assembling balanced test forms, conducting standard setting meetings, scaling and equating test forms, investigating test security breaches, providing guidance and psychometric services for third-party accreditation, auditing testing programs for adherence to psychometric standards, and performing differential item functioning analyses, timing analyses, etc. She has conducted and published research on a variety of topics, including job task analyses, item selection algorithms, adaptive testing, response time analyses, differential item function, test security, test design, etc. She is invested in ensuring that exams are reliable, valid, and fair, and in compliance with industry standards, such as the AERA/APA/NCME standards and NCCA accreditation standards. She has experience as a speaker, reviewer, discussant, and author for major psychometric journals and conferences. Dr. Schnipke earned her B.S. in psychology and statistics at Bowling Green State University and her M.A. and Ph.D. in Quantitative Psychology from Johns Hopkins University.