2023 Job/Task Analysis Report

The American Board of Surgical Assistants (ABSA)

Surgical Assistant – Certified Certification (SA-C) Exam

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ABSA

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Executive Summary

This report describes a job task analysis study completed by the American Board of Surgical Assistants (ABSA) for the Surgical Assistant – Certified certification (SA-C). This study was conducted to obtain detailed empirical data regarding the profession, which will be used to design a certification exam. A job analysis is the first step in the process of credentialing exam development, and essential to establishing validity because it provides a link between the exam process and professional practice.

First, a list of tasks was generated by a panel of experienced subject matter experts (SMEs) that outlined what they believed were key tasks, skills and knowledge that were required for an individual to be a successful surgical first assistant. This list was used to create a survey regarding the importance of each task and the time spent on each task. The survey was sent to approximately 4,500 surgical first assistants (SA-Cs). Of these, 1,954 individuals partially or fully completed the survey. The survey results provide empirical information regarding what tasks are most important and require the most time. Those tasks or knowledge statements with higher relevancy as measured by importance and frequency (times) deserve more weight on the exam. This report provides details on the methodology and results of this survey.

The Validity Argument

Validity refers to whether there is evidence to support given interpretations of test scores. The modern conceptualization of validity views is from an argumentative perspective (Kane, 1992; 2004). There are several types of validity, each contributing to the overall quality of the test. Figure 1 illustrates the several components that each contribute to the overall quality and validity of any test.

As the goal of professional credentialing is to correctly assert that someone who passes the test has a certain level of knowledge regarding the content and the skills required to do their job adequately, an integral part of the test development process is providing evidence of content validation—does the content of the test assess all relevant parts of the intended construct?

Figure 1. Chain of validity

It is critical for professional organizations to provide evidence that links the test scores back to the job or professional role. To do this, an empirical analysis of what the job entails should be conducted. This process is known as job analysis or practice analysis.

All accreditation agencies require evidence of content validation. The National Commission for Certifying Agencies (NCCA), Standard 10A requires that '*A job/practice analysis must be conducted leading to clearly delineated performance domains and tasks, associated knowledge and/or skills, and sets of content/item specifications to be used as the basis for developing each type of assessment instrument (e.g., multiple-choice, essay, oral examination)'.* Additionally, Standard 14.14 under the Standards for *Educational and Psychological Testing* (AERA, APA, NCME, 1999) explicitly states that '*The content domain to be covered by a credentialing test should be defined clearly and justified in terms of importance of the content for the credential-worthy performance in an occupation or profession.'*

To provide a psychometrically sound foundation for the development of an updated Surgical Assistant – Certified (SA-C) certification exam, ASC helped facilitate a job/task analysis survey for the ABSA. This report details the design and results of this study, and the implications for future exam designs. Future efforts will document further development along the exam process outlined above.

Study Design

A standard textbook on job analysis (Brannick, Levine, & Moregeson, 2007) describes several designs for a job analysis study; a model commonly used for credentialing exams is a **task inventory** (Raymond & Neustel, 2006). The goal of this approach is to produce a comprehensive list of professional tasks performed on the job, then have a wide range of incumbents rate each task on aspects such as **importance** and **time spent** on the task in a normal work week. This provides empirical evidence as to which tasks are more important or more frequent in the job; those tasks should obviously have more weight on the final exam than rare or unimportant tasks.

Subject Matter Expert Recruitment and Participation

To complete the job/task analysis, it was essential to recruit a committee of subject matter experts (SMEs) that had knowledge in the field to oversee the process. The SMEs were recruited for the job/task analysis panel based on the number of years as a Surgical Assistant – Certified (SA-C) and their general understanding of the Surgical First Assistant professional role and setting. ABSA attempted to recruit SMEs across various regions and demographic profiles to ensure representativeness. Table 1 presents the experienced professionals who served on the panel for this study.

Table 1. Subject Matter Expert (SME) committee members

Name	Credentials	Location	Yrs as SA-C
Aide Paula	MD, SA-C	Northeast	7
Anietie Ufot	MD, SA-C	South	24
Antonio Martinez	MD, SA-C	Other	18
Chika Anthony Obimah	MD, SA-C	South	6
Daniel Segui	MD, IFAANS, SA-C	South	21
Darwin Nelson	DO, SA-C	Northeast	1
Dmytro Bogunov	MD, BS, SA-C	Northeast	6
Dusko Mirjanic	BS, SA-C	Midwest	8
Fahad Anwer	BS, SA-C	Midwest	2
Francis Ezekwueme	MD, SA-C	Northeast	5
Jean Guy Honore	MD, SA-C	South	2

Name	Credentials	Location	Yrs as SA-C
John Kane	MD, SA-C	Midwest	8
Kevin Santos	BS, SA-C	Midwest	2
Maria Nela Rivera Miranda	RN/BSN, SA-C, RMA	South	3
Martha Weeks	BSN/RNC	Midwest	< 1
Mubashir Chaudhry	MD, SA-C	South	23
Paul Weeks	MD, ScD/PhD, SA-C	Midwest	35
Preston Gantt	MD. SA-C	South	5
Ravindranath Draksharam	MD, SA-C	South	14
Ronald Zapata	MD, SA-C	other	2
Salam Abdo	MD, PhD, BSN, RN, SA-C	South	10
Shawn Ellen Collins	CST, SA-C	South	2
Sherral Hudson-Colbert	CST, SA-C	South	2
Tim Roselez	SA-C	South	5
Victor Escalante	MD, Phd, EdD, SA-C	South	18

The SME panel had specific responsibilities during this study, including the following:

- Each member was required to attend the job/task analysis meetings (3 in total).
- Each member was required to provide demographic information about themselves, their specialties, practice setting, experience in the industry and their professional affiliations in survey form.
- Each SME was required to complete a task list on their own time to help facilitate discussions.
- Each SME was required to attend three meetings. In the first meeting, the SMEs were first trained on the job/task analysis process. During this training, the SMEs were engaged by a facilitator that led them through how to identify and understand what was expected from them in the study. In this meeting, the SMEs began defining tasks and skills that they believed were essential in the role of a Surgical First Assistant (SA-C). The second meeting presented the list of tasks and knowledge statements that the panel had worked on and included a debrief and Q&A period.

- The last meeting presented the results of the survey to the SMEs and garnered feedback on what their thoughts were on the included tasks and skills. All relevant feedback was considered and notated.
- Each SME was required to be free of conflicts of interest and each was required to sign confidentiality and conflicts of interest statements.

Methodology

The following presents the overall procedures followed in this study:

- The definition and use of the exam was defined and a broad outline of areas that were deemed relevant to the profession were identified.
- An exhaustive list of tasks and/or knowledge statements for the professional role were generated.
- Rating scales for tasks and knowledge statements, as well as relevant demographic questions were created to assess sampling.
- The SMEs reviewed and finalized the survey that was published and administered to the target audience.
- Results were collected, analyzed and a final report was published.

Defining the Task Statements

A task statement is a phrase that describes a discrete activity on the job that has a beginning and an end and typically produces some sort of finished product (report, brief, plan, diagnosis, measurement, etc.) or works toward a goal (Gael, 1983). The phrase typically has three parts: an action verb, a direct object noun, and an (optional) qualifier or descriptor (Brannick, Levine, & Moregeson, 2007, p. 50). This is depicted in the following example.

Figure 2. Parts of a task statement

Determining Domains

In the initial panel meeting, the SMEs along with the facilitators of the meeting reviewed the tasks identified by the SMEs. The items were organized and combined to establish broad domains that were presumed to measure the same content. Five domains were established based on the structure of the current ABSA exam, the goal of the future ABSA exam, and the panel discussions (Table 2).

Table 2. Domains established by the SME panel

Domain
1. Perioperative Skills
2. Surgical Specializations
3. General Surgical and Medical Knowledge
4. Professional Practice Knowledge
5. Equipment and Technology Knowledge

Creation and review of a task list

The next step in the process was for the SME panel to define a comprehensive list of professional task and knowledge statements (often simply called “tasks”). A total of 86 task and knowledge statements made up the final list for the survey. Table 3 highlights the domains and the number of task statements that were finalized for the survey.

Table 3. Tasks by domains

Domain (Content Area)	Tasks
1. Perioperative Skills	52
2. Surgical Specializations	11
3. General Surgical and Medical Knowledge	12
4. Professional Practice Knowledge	9
5. Equipment and Technology Knowledge	2

Rating Scale Determination

As above, the job/analysis survey is designed to assess a target audiences' beliefs about the importance or frequency of the task or knowledge they feel is required to do their job. Table 4 provides the rating scales for both Time (frequency) and Importance that were developed for this job/task analysis.

Table 4. Rating scales for Importance, Frequency and Estimated Time Spent

Frequency	Description
In a given month, what percentage of time do you perform the following tasks?	
1	Never
2	Up to 25% of my time
3	26 – 50% of my time
4	51 – 75% of my time
5	Greater than 75% of my time
Frequency	Description
How important is the following task for an individual in the role of a Surgical Assistant?	
1	Not important
2	Minimally important
3	Moderately important
4	Very important
5	Critically important
Frequency	Description
Estimate how often you assist with the following specialties during a typical month.	
1	Never
2	Up to 25% of my time
3	26 – 50% of my time
4	51 – 75% of my time
5	Greater than 75% of my time

Demographic Characteristics of Interest

Demographic questions were created to add to the survey to assess the characteristics of the target population. These demographic variables included Gender, Age, Region of Profession, Years of Experience, Professional Role, Type of Training, Education Level and Types of Credentials held were created to add to the survey to gather information to be able to evaluate the demographic characteristics of the sample participants.

Survey Delivery

The survey was published using LimeSurvey. The URL to the survey was then disseminated, with an email invitation to 4,500 professionals identified by ABSA. The survey was active for 30 days before data was accessed for analysis.

Results

The first section below presents a summary of the sample who responded to the survey. This is followed by a summary of the demographic questions asked on the survey. The final section presents descriptive statistics related to the task analysis questions. These results include average Importance, average Frequency, and the different combined metrics (e.g., Importance x Frequency, Importance + Frequency) for each task statement.

Sample

A total of 1,954 professionals partially or fully completed the survey. All the results presented below are based on those respondents who completed the entire survey (*n* = 1,118).

Demographics

Employment Type, Years of Experience and Work Location

The primary employment type and years of experience of the sample is shown in Tables 5 and 6 and is illustrated in Figures 2 and 3. As can be seen, most of the individuals responded that their primary employment type was in a Hospital/Medical Center.

Table 5. Primary Employment Type

Primary Employment Type	N	Percent
Hospital/Medical Center	509	45.53%
Self Employed	158	14.13%
Not employed at this time	119	10.64%
Surgical Assistant Group	95	8.50%
Private Physician Practice	93	8.32%
Ambulatory Surgical Center	83	7.42%
Other	31	2.77%
Staffing Agency	27	2.42%
Military/Government Practice	3	0.27%

Table 6. Years of experience

Years of Experience	N	Percent
0 - 2 years	224	20.04%
3 - 5 years	206	18.43%
6 - 8 years	148	13.24%
Greater than 8 years	540	48.30%

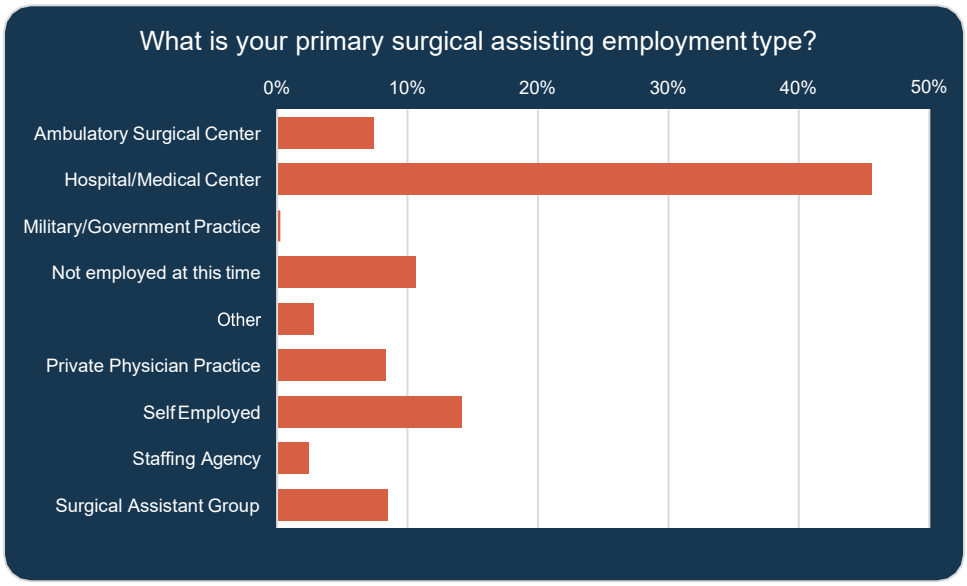


Figure 2. Visual depiction of respondents Primary Employment Type

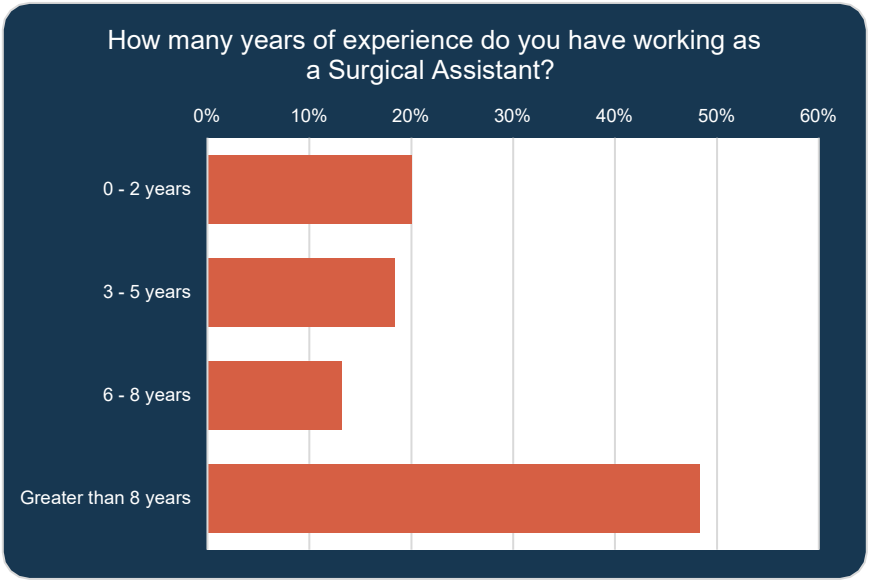


Figure 3. Visual depiction of respondents Years of Experience

Region

Respondents from the survey were distributed across the United States, with the largest portion of the sample coming from the South.

Table 7. Region

Region	2N1	Percent
South (AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, SC, TN, TX, VA, WV)	679	60.73%
Midwest (IA, IL, IN, KS, MI, MN, MO, NE, ND, OH, OK, SD, WI)	201	17.98%
West (AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY)	103	9.21%
Outside of the United States of America	88	7.87%
Northeast (CT, MA, ME, NH, NJ, NY, PA, RI, VT)	47	4.20%

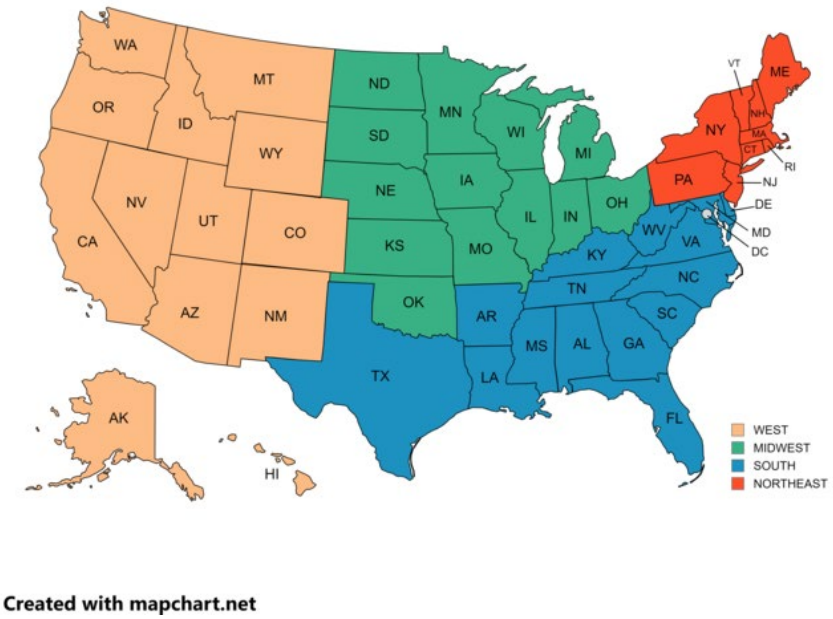


Figure 4. Geographical regions

Education, Training and Credentials Held

In this sample, most respondents indicated that they held a Medical Degree (43.83%). One hundred and eighty-two respondents indicated they held a graduate degree and above (Master's or Ph.D.). Only about 3% of the sample indicated that they only had a High School diploma (Table 8).

Table 8: Education distribution

Education	N	Percent
Medical Degree	490	43.83%
Bachelor's Degree	144	12.88%
Associate's Degree	140	12.52%
Technical College	133	11.90%
Doctoral Degree	100	8.94%
Master's Degree	82	7.33%
High School Diploma	29	2.59%

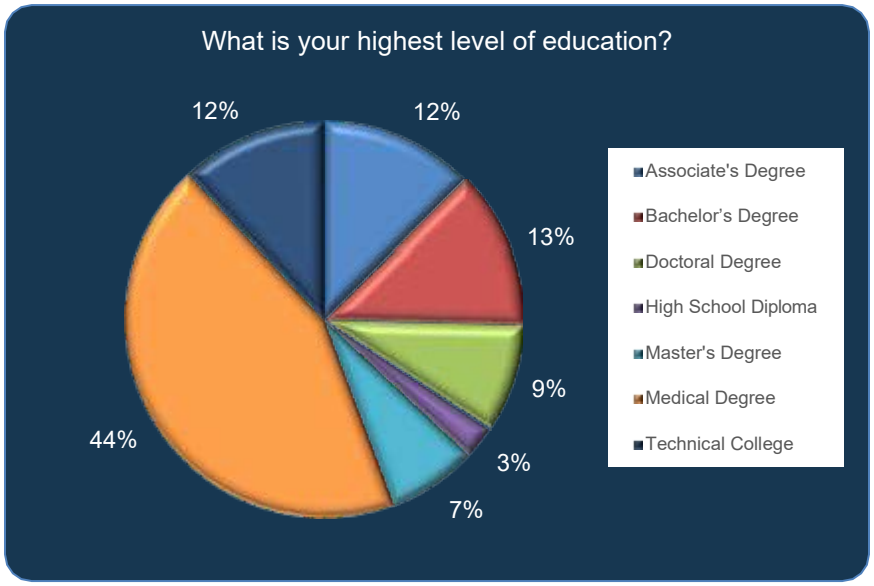


Figure 5. Visual depiction of Highest Level of Education

In this sample, most respondents indicated that they were trained in Medical School. The next largest group in the training distribution was on-the-job experience. Approximately 27% of the same went through a formal CAAHEP training program whereas 17% reported that they went through a Non-CAAHEP training program.

Table 9. Type of Training Program

Training	N	Percent
Medical School	564	50.45%
On-the-Job Experience	329	29.43%
Formal surgical assistant training program (CAAHEP)	298	26.65%
Formal surgical assistant training program (Non-CAAHEP)	191	17.08%
Military Training Program	26	2.33%

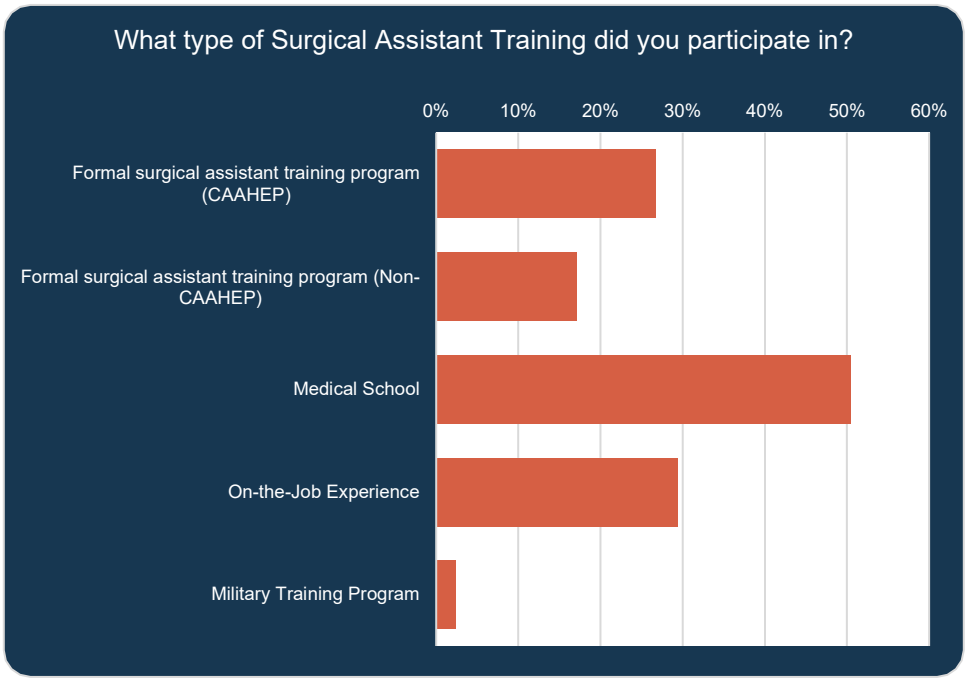


Figure 6. Visual depiction of Type of Training Program

When asked about what type of other credentials the respondents had, over 50% said they held a medical degree. Approximately 24% of the respondents indicated that they held a Surgical Technologists certificate. Only about 8% of the sample said they did not hold any other type of credential.

Table 10: Credential

Credential	N	Percent
Doctor of Medicine	576	51.52%
Surgical Technologist	266	23.79%
Other	214	19.14%
CSA	126	11.27%
CSFA	99	8.86%
Registered Nurse	87	7.78%
No Other	86	7.69%
Physician Assistant	50	4.47%
Nurse Practitioner	23	2.06%
Licensed Practice Nurse	16	1.43%

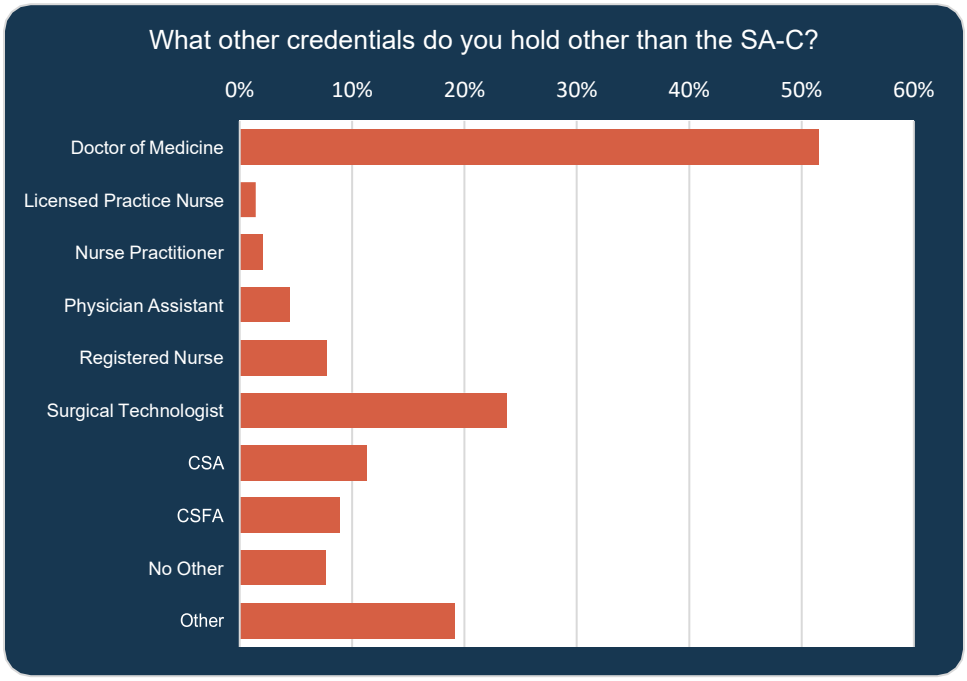


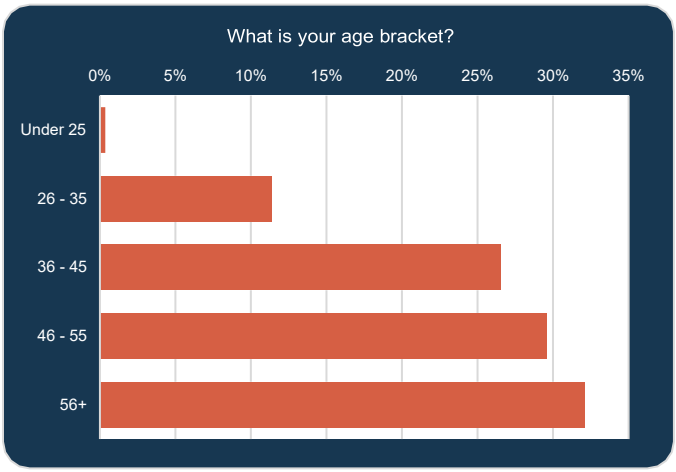
Figure 7. Visual depiction of Credentials held

Age and Gender

Table 11 presents the Age and Gender breakdown of the individuals that responded to the survey. In respect to Age, the majority of the sample was above 36 years old, with those indicating they were older than 56 being the largest group across the respondents. Approximately 68% of the respondents indicated they were Male, and approximately 32% of the sample indicated they were Female.

Table 11. Age and Gender distributions

Age	N	Percent
Under 25	4	0.36%
26 - 35	127	11.36%
36 - 45	297	26.57%
46 - 55	331	29.61%
56+	359	32.11%
Gender	**N**	**Percent**
Male	759	67.89%
Female	356	31.84%
Prefer not to answer	3	0.27%



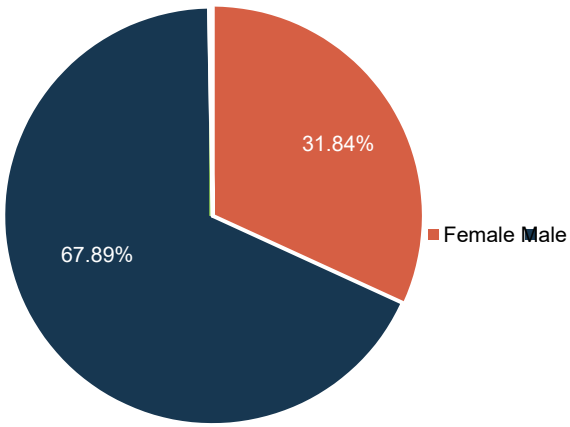


Figure 8. Visual depiction of Age and Gender

Surgical Specializations

Included in the survey there were 12 task statements that asked the respondents to estimate the amount of time they spent in a month working in certain surgical specialties. This information was important to ABSA as it is helpful to understand which generalizable tasks and knowledge statements can also be attributed to further specializations. It is helpful to understand at a general level the time that is spent by surgical first assistants across specialties to make sure the appropriate content, and the appropriate amount of content, is asked on the exam. For example, if most respondents don't spend time assisting in pediatric surgery but the majority respond they assist in general surgery, then it would be appropriate to include more questions on the exam that cover general surgery skills and knowledge than questions that cover pediatric skills and knowledge.

Figures 9 and 10 present the data across the sample in response to the respondents estimated time spent in any respective specialization. This data is presented in two different ways. The first plot shows the percent of respondents that said they participated in a specialty at any level (> 0%). The second plot breaks down the responses by the percentage of estimated time the respondent said they participated in the respective specialty. As can be seen from both plots, most respondents assist in General Surgery, Orthopedics, Plastic Surgery and Gynecological Surgery, with respondents indicating that they spend the least amount of time assisting in Pediatric Surgery and Cardio-Thoracic Surgery.

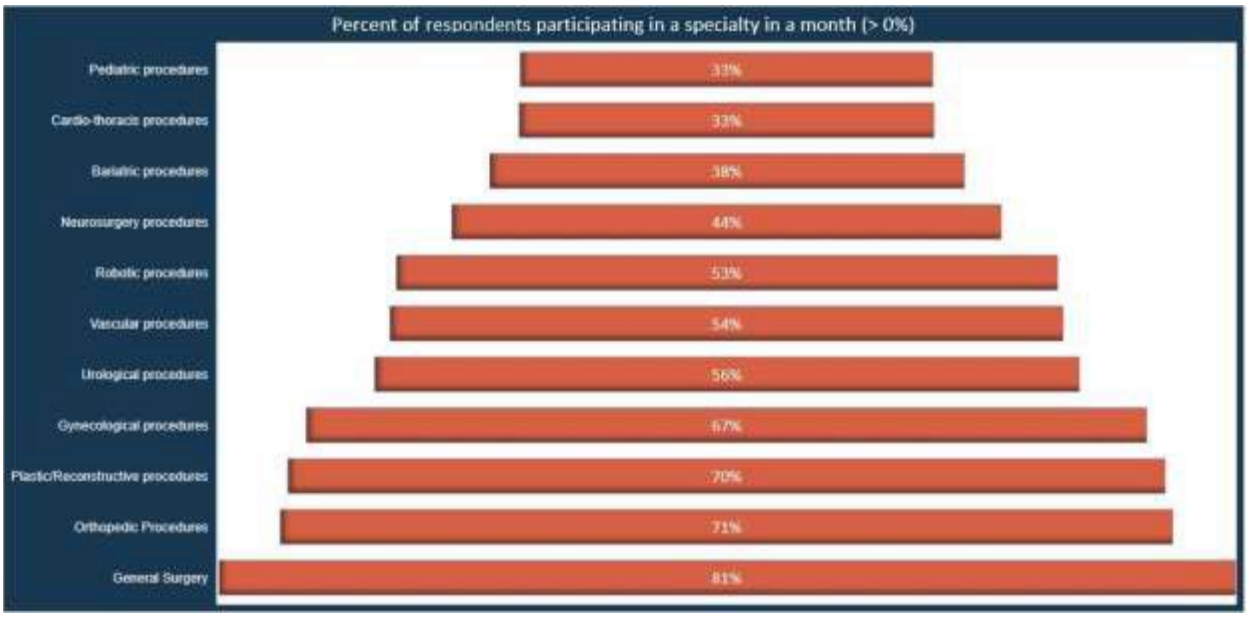


Figure 9. Estimated time spent in Surgical Specialties

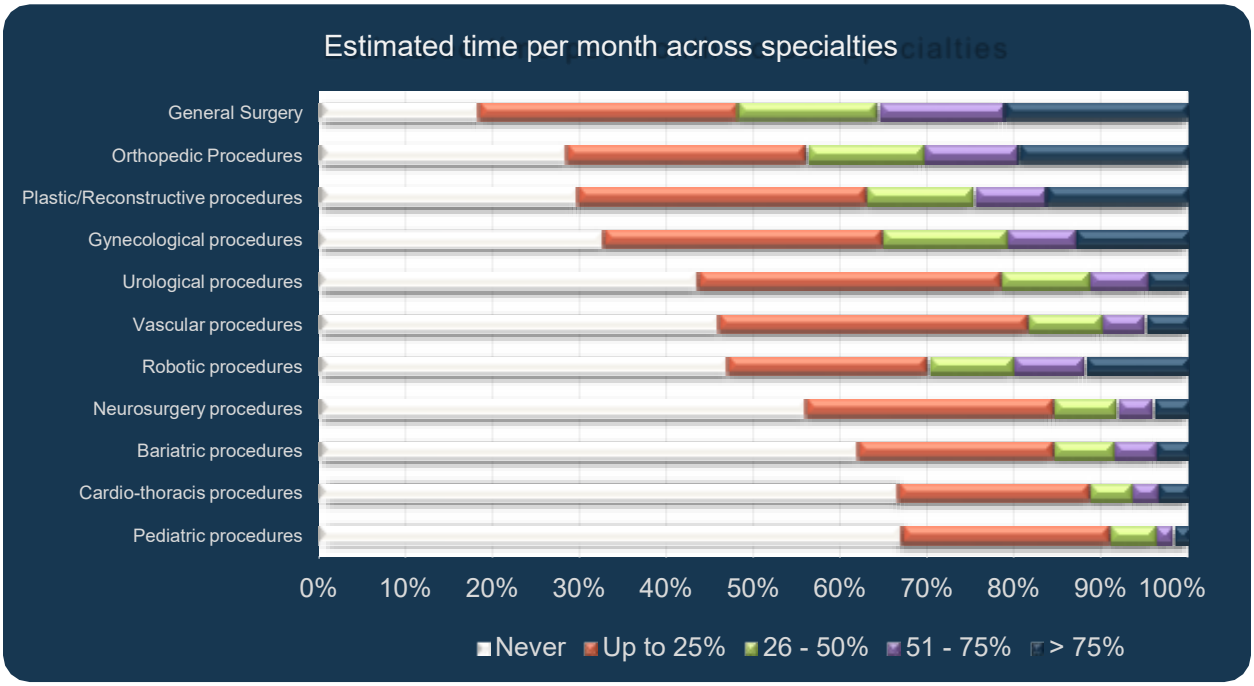


Figure 10. Estimated time spent in Surgical Specialties

Table 12 below shows results from a slightly different perspective. Results in this table are broken down by the percentage of individuals responding to each of the frequency categories, broken down by specialty. In addition, an aggregate variable was created to indicate the frequency of respondents participating in the specialization 50% of the time or less during a typical month, versus those participating in the specialization greater than 50% of the time.

As can be seen, for the most part, the same pattern arises that was shown above. Most of the sample indicated that the respondents predominantly assist in General and Orthopedic surgeries. One key difference from the below results is that the percentage of individuals assisting in robotic surgery more than 50% of the time is elevated. One important thing to note in these results is that Robotic Surgery is not necessarily mutually exclusive from other specialties. After expert led discussions, one thing that was highlighted was a need to disaggregate the robotic procedures by specializations in future studies.

Table 12. Percentage of time spent in Surgical Specialties by frequency category

Surgical Specialty	Never	Up to 25%	26 - 50%	51 - 75%	> 75%	Less than 51%	Greater or equal to 51%
General surgery procedures	18.52%	29.61%	16.10%	14.58%	21.20%	64.22%	35.78%
Orthopedic procedures	28.53%	27.46%	13.51%	10.91%	19.59%	69.50%	30.50%
Gynecological procedures	32.74%	32.02%	14.31%	7.87%	13.06%	79.07%	20.93%
Neurosurgery procedures	55.99%	28.44%	7.25%	4.11%	4.20%	91.68%	8.32%
Cardio-thoracic procedures	66.73%	21.82%	4.83%	2.95%	3.67%	93.38%	6.62%
Robotic procedures	47.05%	22.90%	9.84%	8.23%	11.99%	79.79%	20.21%
Vascular procedures	46.06%	35.42%	8.50%	4.92%	5.10%	89.98%	10.02%
Bariatric procedures	61.99%	22.45%	6.89%	4.83%	3.85%	91.32%	8.68%
Plastic/Reconstructive procedures	29.79%	33.09%	12.34%	8.41%	16.37%	75.22%	24.78%
Pediatric procedures	66.99%	23.88%	5.37%	1.88%	1.88%	96.24%	3.76%
Urological procedures	43.56%	34.70%	10.29%	6.62%	4.83%	88.55%	11.45%

Task ratings & Test Specification Weights

The mean rating of both time and importance was calculated for each task statement on the survey. In addition, mean time and importance were combined with both an additive model (T + I) and multiplicative model (T × I), as mentioned in Raymond and Neustel (2006). Each of these metrics provides an index of the significance of the task in the role of a professional

Table 13 presents the mean statistics of these indices for each of 5 domains as well as the number of tasks included in each domain on the final survey. It also includes the sum of the Importance x Time index across all tasks within a domain, which provides a quantification of the importance and time for tasks in that domain. This will be used in a later report to derive test specifications.

Results show that the domains *Perioperative Skills* (52), *General Surgical and Medical Knowledge* (12) areas on the survey had the largest number of task questions. The highest average Time x Frequency ratings were the highest for the *Professional Practice* and *General Surgical and Medical Knowledge* domains.

Evaluation of Importance and Frequency averages across each domain individually shows that both the mean importance and mean frequency is the highest for *Professional Practice Knowledge and Equipment and Technology Knowledge.* Although these areas only have 9 and 2 survey tasks, respectively, evaluation of whether to increase the proportion of items on the exam in this category is warranted. It is important to note here that the linear model calculations for the knowledge domains are based only on the importance variable, so caution should be taken when making assumptions about the meaning of the linear model results. This type of information will be important when determining the relative weight of the examination devoted to each domain.

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Table 13: Task rating means for content areas

Domain	Total	Mean Imp.	Mean Freq.	Mean I + F	Mean I x F	Sum I x F
1. Perioperative Skills	52	4.12	3.99	8.11	16.58	862.31
a. Preoperative	10	4.10	4.19	8.29	17.28	172.78
b. Operative	38	4.15	3.99	8.14	16.74	635.94
c. Postoperative	4	3.79	3.53	7.32	13.40	53.59
2. Surgical Specializations[1]	11	2.07	2.07	4.14	4.50	49.49
3. General Surgical and Medical Knowledge	12	4.54	4.54	9.09	20.70	248.36
4. Professional Practice Knowledge	9	4.58	4.58	9.15	20.96	188.65
5. Equipment and Technology Knowl*edge*	2	4.48	4.48	8.96	20.05	40.10

[1] The statement asking about surgical specialization was an estimated frequency of time spent during a typical month in different specializations. The importance and frequency means should be evaluated in that context.

Table 14 provides information on the mean frequencies broken down by Surgical Specialization. Note that this question was asked in a different context than the task statement frequency questions but is provided as ancillary information to show how the sample responded. The mean frequencies are in line with the presentation above in relation to the distribution of Surgical Specialties.

Table 14: Frequency rating means for Surgical Specializations

Domain	Total	Mean Imp.	Mean Freq.	Mean I + F
General surgery procedures	2.90	2.90	5.81	8.43
Orthopedic procedures	2.66	2.66	5.31	7.05
Plastic/Reconstructive procedures	2.48	2.48	4.97	6.17
Gynecological procedures	2.36	2.36	4.73	5.59
Robotic procedures	2.15	2.15	4.30	4.63
Urological procedures	1.94	1.94	3.89	3.78
Vascular procedures	1.88	1.88	3.75	3.52
Neurosurgery procedures	1.72	1.72	3.44	2.96
Bariatric procedures	1.66	1.66	3.32	2.76
Cardio-thoracic procedures	1.55	1.55	3.10	2.40
Pediatric procedures	1.48	1.48	2.96	2.18

Appendix A lists the tasks sorted by content areas (domains) as arranged in Table 12 below, while Appendix B lists the same data but sorted by the Time x Importance rating

Summary

This report describes a job/task analysis study that was conducted by the American Board of Surgical Assistants (ABSA) for the Surgical Assistant - Certified certification exam. The goal of the study was to produce a comprehensive list of professional tasks performed by a Surgical First Assistant (SA-C) professional, so as to provide empirical data to support (or negate) the Importance and Frequency of tasks that are relevant to the professional role.

The first step in this study was the development of a set of domains, or content areas, that were deemed appropriate for the exam. An expert panel of SMEs used these domains as well as historical job/task analysis information to facilitate an exhaustive list of tasks they felt were reflective of the tasks required for the Surgical First Assistant role. After the task list was vetted, a survey was conducted that presented this list of tasks to respondents, asking them to gauge each task's importance and frequency in their role. Survey responses for the task statements as well as responses to key demographic variables of interest were analyzed.

Demographic results indicated that the sample was an adequate representation of the target population. Results evaluating the importance and frequency (I x F) of the tasks across domains indicated that Professional Knowledge and General Surgical and Medical Knowledge contributed the most based on the linear multiplicative model. Given these knowledge statements were weighted only by Importance ratings, these results should be critically evaluated taking the Perioperative domain tasks and overall ratings into account.

In the Perioperative domain, when evaluating the average importance and average frequencies by sub-domain (Preoperative, Operative and Postoperative), there were more overall tasks within the Operative domain than the other two areas, however respondents' average ratings of Frequency were found in the Preoperative domain.

Results from this job analysis should be used to identify which tasks should be covered by the Surgical Assistant - Certified certification exam and to assign the relative weights associated with finalized domains. This is not directly part of the job analysis study, but of the exam design step. The goal of task inclusion is not analyzing the job but rather producing the blueprints for the exam. Following, selection of tasks for inclusion should be documented in a separate exam design report.

References

AERA, APA, NCME, 1999. Standards for Educational and Psychological Testing.

ANSI National Accreditation Board (2022). Standard 4.5. Retrieved from http://www.foodprotect.org/media/managercert/fpmcc-standard-10-26-21.pdf

Brannick, M.T., Levine, E.L., & Moregeson, F.P. (2007). Job and Work Analysis (2nd Ed.). Thousand Oaks, CA: Sage.

Gael, S. (1983). Job analysis: A guide to assessing work activities. San Francisco: Jossey-Bass.

Kane, M. (1992). An argument-based approach to validity. Psychological Bulletin, 112, 527-535.

Kane, M. (2004). Certification testing as an illustration of argument-based validation. Measurement: Interdisciplinary Research and Perspectives, 2, 135-170.

Raymond, M. & Neustel, S. (2006). Determining the content of credentialing examinations. In Downing, S.M., & Haladyna, T.M. (Eds.) Handbook of Test Development. Mahwah, NJ: Erlbaum.

Appendix A: Tasks listed by content area

Table A.1. Tasks by domain

Task Num.	Domain	Task Statement	Imp	Freq	I+F	I x F
1	Perioperative	Monitor OR status and notify surgeon appropriately.	3.95	4.02	7.97	15.88
2	Perioperative	Conduct operative permit and chart review.	3.67	3.30	6.96	12.09
3	Perioperative	Review and understand scheduled procedure.	4.34	4.53	8.87	19.65
4	Perioperative	Introduce yourself to surgical team stating your name and role on the surgical team.	4.11	4.39	8.50	18.06
5	Perioperative	Assess the operating table position and select appropriate extremity supports.	4.39	4.55	8.94	19.98
6	Perioperative	Consult in a preoperative briefing with operating surgeon regarding the specifics/preferences of the procedure and review possible complications of the surgery.	4.27	4.26	8.53	18.20
7	Perioperative	Introduce yourself to the patient and describe your role in the procedure.	3.92	4.20	8.12	16.46
8	Perioperative	Review and select appropriate ancillary studies before procedure.	3.84	3.78	7.62	14.52
9	Perioperative	Evaluate the completeness of the surgical equipment and instrumentation.	4.38	4.48	8.86	19.63
10	Perioperative	Assist staff in setting up the room (e.g., procedure equipment).	4.16	4.40	8.56	18.30
11	Perioperative	Assist nursing in positioning patient.	4.32	4.60	8.92	19.89
12	Perioperative	Assist in transferring the patient to the operating room table.	4.04	4.39	8.43	17.75
13	Perioperative	Manage and/or assist in patient positioning given the surgeons preferences and the procedure.	4.40	4.66	9.06	20.52
14	Perioperative	Conduct a safety time-out.	4.39	4.27	8.65	18.72
15	Perioperative	Set up the OR table and select appropriate extremity supports.	4.27	4.36	8.63	18.61
16	Perioperative	Anticipate the needs of the surgeon during the procedure.	4.55	4.77	9.32	21.72
17	Perioperative	Perform Sterile Gowning and Gloving (open & closed).	4.54	4.69	9.24	21.32
18	Perioperative	Assist the anesthesiologist during induction by applying cricoid pressure or helping with intubation.	3.78	3.38	7.17	12.81
19	Perioperative	Test and apply operative tourniquet when required for the procedure.	4.09	3.89	7.98	15.92

Task Num.	Domain	Task Statement	Imp	Freq	I+F	I x F
20	Perioperative	Perform bladder catheterization (i.e., Foley catheter).	3.63	3.12	6.75	11.32
21	Perioperative	Prepare the surgical site (e.g., hair removal, skin prep).	4.08	4.08	8.16	16.64
22	Perioperative	Drape the operative site based on the specified procedure.	4.43	4.71	9.14	20.85
23	Perioperative	Inject surgical incision site with local anesthetics.	3.95	3.80	7.75	14.99
24	Perioperative	Independently perform docking and undocking of robotic platform.	3.55	2.88	6.43	10.22
25	Perioperative	Incise skin for exposure and/or trocar insertion for the given procedure.	3.94	3.53	7.47	13.91
26	Perioperative	Place retractors using appropriate techniques.	4.42	4.57	8.99	20.22
27	Perioperative	Clamp bleeding vessels using appropriate techniques.	4.50	4.39	8.89	19.75
28	Perioperative	Independently perform hemostasis measures using sponges.	4.43	4.49	8.92	19.90
29	Perioperative	Use hemostatic materials as indicated in a laparoscopically/robotic procedure.	3.99	3.56	7.56	14.23
30	Perioperative	Clamp tissues for ligation and/or resection using appropriate instrumentation and techniques.	4.35	4.27	8.62	18.58
31	Perioperative	Operate intra-abdominal stapling devices.	3.96	3.18	7.14	12.60
32	Perioperative	Independently cut tissues.	3.99	3.45	7.44	13.76
33	Perioperative	Perform freehand tying (one and two hand tying).	4.30	4.29	8.58	18.42
34	Perioperative	Perform instrument tying.	4.28	4.31	8.59	18.44
35	Perioperative	Perform suture ligation.	4.31	4.11	8.42	17.69
36	Perioperative	Perform vascular suturing.	3.85	2.74	6.59	10.54
37	Perioperative	Independently cut sutures.	4.25	4.55	8.80	19.32
38	Perioperative	Independently insert drains.	4.01	3.62	7.63	14.52
39	Perioperative	Use appropriate suctioning devices based on procedure.	4.34	4.64	8.98	20.14
40	Perioperative	Use the appropriate electrocautery device (monopolar and/or bipolar) based on procedural needs.	4.38	4.44	8.82	19.45
41	Perioperative	Independently use drills and/or saws.	3.76	2.90	6.66	10.92
42	Perioperative	Independently manipulate robotic instruments.	3.64	2.77	6.41	10.09
43	Perioperative	Close skin incisions using various techniques (staples and/or sutures).	4.45	4.63	9.08	20.59
44	Perioperative	Manipulate endoscopy camera and/or instruments.	4.06	3.73	7.79	15.14
45	Perioperative	Surgical graft harvesting & preparation.	3.88	3.04	6.92	11.81

Task Num.	Domain	Task Statement	Imp	Freq	I+F	I x F
46	Perioperative	Maintain Proper communication with anesthesiologist, surgeons and nursing.	4.55	4.66	9.21	21.19
47	Perioperative	Inject tissues/joints with local anesthetics post-operatively.	3.88	3.48	7.36	13.50
48	Perioperative	Dress wounds appropriately given the procedure (including ace wraps and slings).	4.33	4.61	8.94	19.95
49	Perioperative	Assist with cast applications, splinting, and braces.	3.96	3.56	7.52	14.09
50	Perioperative	Transport and/or accompany patient to recovery room.	3.54	3.36	6.90	11.90
51	Perioperative	Communicate presence of drains and anticipated drainage amount.	3.85	3.67	7.52	14.12
52	Perioperative	Communicate with the postoperative team about the specifics of the surgery.	3.81	3.54	7.35	13.48
53	General Surgical and Medical Knowledge	Knowledge of various surgical devices (staplers, suctions, electrocauteries, drills & saws)	3.57	3.57	7.14	12.76
54	General Surgical and Medical Knowledge	Knowledge of commonly used surgical instrumentation	3.59	3.59	7.19	12.92
55	General Surgical and Medical Knowledge	Medical and Surgical Anatomy	3.69	3.69	7.38	13.63
56	General Surgical and Medical Knowledge	Medical and Surgical Terminology	3.63	3.63	7.26	13.17
57	General Surgical and Medical Knowledge	Basic Human Physiology and Common Lab Values	3.31	3.31	6.62	10.96
58	General Surgical and Medical Knowledge	Practice Principles of Personal Protective Equipment (e.g., gloves, masks, eyewear)	3.64	3.64	7.29	13.28
59	General Surgical and Medical Knowledge	Sharps Safety and Safe Injection Practices	3.69	3.69	7.38	13.61
60	General Surgical and Medical Knowledge	Sterilization and Disinfection	3.56	3.56	7.11	12.65
61	General Surgical and Medical Knowledge	Practice Principles of Sterile and Aseptic Technique, Environmental Infection Protection and Control	3.73	3.73	7.45	13.89
62	General Surgical and Medical Knowledge	Cardiopulmonary resuscitation (CPR)	3.65	3.65	7.30	13.31
63	General Surgical and Medical Knowledge	Anesthesia and Pharmacology	2.98	2.98	5.95	8.86
64	General Surgical and Medical Knowledge	Wound Healing and Infection Control	3.50	3.50	7.00	12.24
65	Professional Practice Knowledge	Emergency Protocols	3.59	3.59	7.17	12.86

Task Num.	Domain	Task Statement	Imp	Freq	I+F	I x F
66	Professional Practice Knowledge	Safety and Environmental Hazards	3.51	3.51	7.03	12.34
67	Professional Practice Knowledge	Hospital Rules and Regulations	3.41	3.41	6.82	11.61
68	Professional Practice Knowledge	Act in accordance with the ABSA Code of Ethics	3.67	3.67	7.33	13.44
69	Professional Practice Knowledge	Understand the Surgical Assistant Scope of Practice	3.64	3.64	7.29	13.27
70	Professional Practice Knowledge	Patient Safety	3.76	3.76	7.51	14.11
71	Professional Practice Knowledge	OSHA Regulations and Personal Safety	3.58	3.58	7.16	12.80
72	Professional Practice Knowledge	Understand HIPPA Regulations	3.62	3.62	7.24	13.12
73	Professional Practice Knowledge	Knowledge of Medical Malpractice Insurance	3.42	3.42	6.84	11.71
74	Equipment and Technology Knowledge	Commonly used monitoring equipment	3.43	3.43	6.85	11.74
75	Equipment and Technology Knowledge	Maintain knowledge of operative equipment	3.53	3.53	7.06	12.45

Appendix B: Tasks listed by Time x Importance

Table B.1. Tasks sorted by average Importance x Frequency

Task Num.	Domain	Task Statement	Imp	Freq	I+F	I x F
16	Perioperative	Anticipate the needs of the surgeon during the procedure.	4.55	4.77	9.32	21.72
17	Perioperative	Perform Sterile Gowning and Gloving (open & closed).	4.54	4.69	9.24	21.32
46	Perioperative	Maintain Proper communication with anesthesiologist, surgeons and nursing.	4.55	4.66	9.21	21.19
22	Perioperative	Drape the operative site based on the specified procedure.	4.43	4.71	9.14	20.85
43	Perioperative	Close skin incisions using various techniques (staples and/or sutures).	4.45	4.63	9.08	20.59
13	Perioperative	Manage and/or assist in patient positioning given the surgeons preferences and the procedure.	4.40	4.66	9.06	20.52
26	Perioperative	Place retractors using appropriate techniques.	4.42	4.57	8.99	20.22
39	Perioperative	Use appropriate suctioning devices based on procedure.	4.34	4.64	8.98	20.14
5	Perioperative	Assess the operating table position and select appropriate extremity supports.	4.39	4.55	8.94	19.98
48	Perioperative	Dress wounds appropriately given the procedure (including ace wraps and slings).	4.33	4.61	8.94	19.95
28	Perioperative	Independently perform hemostasis measures using sponges.	4.43	4.49	8.92	19.90
11	Perioperative	Assist nursing in positioning patient.	4.32	4.60	8.92	19.89
27	Perioperative	Clamp bleeding vessels using appropriate techniques.	4.50	4.39	8.89	19.75
3	Perioperative	Review and understand scheduled procedure.	4.34	4.53	8.87	19.65
9	Perioperative	Evaluate the completeness of the surgical equipment and instrumentation.	4.38	4.48	8.86	19.63
40	Perioperative	Use the appropriate electrocautery device (monopolar and/or bipolar) based on procedural needs.	4.38	4.44	8.82	19.45
37	Perioperative	Independently cut sutures.	4.25	4.55	8.80	19.32
14	Perioperative	Conduct a safety time-out.	4.39	4.27	8.65	18.72
15	Perioperative	Set up the OR table and select appropriate extremity supports.	4.27	4.36	8.63	18.61

Task Num.	Domain	Task Statement	Imp	Freq	I+F	I x F
30	Perioperative	Clamp tissues for ligation and/or resection using appropriate instrumentation and techniques.	4.35	4.27	8.62	18.58
34	Perioperative	Perform instrument tying.	4.28	4.31	8.59	18.44
33	Perioperative	Perform freehand tying (one and two hand tying).	4.30	4.29	8.58	18.42
10	Perioperative	Assist staff in setting up the room (e.g., procedure equipment).	4.16	4.40	8.56	18.30
6	Perioperative	Consult in a preoperative briefing with operating surgeon regarding the specifics/preferences of the procedure and review possible complications of the surgery.	4.27	4.26	8.53	18.20
4	Perioperative	Introduce yourself to surgical team stating your name and role on the surgical team.	4.11	4.39	8.50	18.06
12	Perioperative	Assist in transferring the patient to the operating room table.	4.04	4.39	8.43	17.75
35	Perioperative	Perform suture ligation.	4.31	4.11	8.42	17.69
21	Perioperative	Prepare the surgical site (e.g., hair removal, skin prep).	4.08	4.08	8.16	16.64
7	Perioperative	Introduce yourself to the patient and describe your role in the procedure.	3.92	4.20	8.12	16.46
19	Perioperative	Test and apply operative tourniquet when required for the procedure.	4.09	3.89	7.98	15.92
1	Perioperative	Monitor OR status and notify surgeon appropriately.	3.95	4.02	7.97	15.88
44	Perioperative	Manipulate endoscopy camera and/or instruments.	4.06	3.73	7.79	15.14
23	Perioperative	Inject surgical incision site with local anesthetics.	3.95	3.80	7.75	14.99
8	Perioperative	Review and select appropriate ancillary studies before procedure.	3.84	3.78	7.62	14.52
38	Perioperative	Independently insert drains.	4.01	3.62	7.63	14.52
29	Perioperative	Use hemostatic materials as indicated in a laparoscopically/robotic procedure.	3.99	3.56	7.56	14.23
51	Perioperative	Communicate presence of drains and anticipated drainage amount.	3.85	3.67	7.52	14.12
70	Professional Practice Knowledge	Patient Safety	3.76	3.76	7.51	14.11
49	Perioperative	Assist with cast applications, splinting, and braces.	3.96	3.56	7.52	14.09
25	Perioperative	Incise skin for exposure and/or trocar insertion for the given procedure.	3.94	3.53	7.47	13.91
61	General Surgical and Medical Knowledge	Practice Principles of Sterile and Aseptic Technique, Environmental Infection Protection and Control	3.73	3.73	7.45	13.89
32	Perioperative	Independently cut tissues.	3.99	3.45	7.44	13.76

Task Num.	Domain	Task Statement	Imp	Freq	I+F	I x F
55	General Surgical and Medical Knowledge	Medical and Surgical Anatomy	3.69	3.69	7.38	13.63
59	General Surgical and Medical Knowledge	Sharps Safety and Safe Injection Practices	3.69	3.69	7.38	13.61
47	Perioperative	Inject tissues/joints with local anesthetics post-operatively.	3.88	3.48	7.36	13.50
52	Perioperative	Communicate with the postoperative team about the specifics of the surgery.	3.81	3.54	7.35	13.48
68	Professional Practice Knowledge	Act in accordance with the ABSA Code of Ethics	3.67	3.67	7.33	13.44
62	General Surgical and Medical Knowledge	Cardiopulmonary resuscitation (CPR)	3.65	3.65	7.30	13.31
58	General Surgical and Medical Knowledge	Practice Principles of Personal Protective Equipment (e.g., gloves, masks, eyewear)	3.64	3.64	7.29	13.28
69	Professional Practice Knowledge	Understand the Surgical Assistant Scope of Practice	3.64	3.64	7.29	13.27
56	General Surgical and Medical Knowledge	Medical and Surgical Terminology	3.63	3.63	7.26	13.17
72	Professional Practice Knowledge	Understand HIPPA Regulations	3.62	3.62	7.24	13.12
54	General Surgical and Medical Knowledge	Knowledge of commonly used surgical instrumentation	3.59	3.59	7.19	12.92
65	Professional Practice Knowledge	Emergency Protocols	3.59	3.59	7.17	12.86
18	Perioperative	Assist the anesthesiologist during induction by applying cricoid pressure or helping with intubation.	3.78	3.38	7.17	12.81
71	Professional Practice Knowledge	OSHA Regulations and Personal Safety	3.58	3.58	7.16	12.80
53	General Surgical and Medical Knowledge	Knowledge of various surgical devices (staplers, suctions, electrocauteries, drills & saws)	3.57	3.57	7.14	12.76
60	General Surgical and Medical Knowledge	Sterilization and Disinfection	3.56	3.56	7.11	12.65
31	Perioperative	Operate intra-abdominal stapling devices.	3.96	3.18	7.14	12.60
75	Equipment and Technology Knowledge	Maintain knowledge of operative equipment	3.53	3.53	7.06	12.45
66	Professional Practice Knowledge	Safety and Environmental Hazards	3.51	3.51	7.03	12.34
64	General Surgical and Medical Knowledge	Wound Healing and Infection Control	3.50	3.50	7.00	12.24
2	Perioperative	Conduct operative permit and chart review.	3.67	3.30	6.96	12.09
50	Perioperative	Transport and/or accompany patient to recovery room.	3.54	3.36	6.90	11.90

Task Num.	Domain	Task Statement	Imp	Freq	I+F	I x F
45	Perioperative	Surgical graft harvesting & preparation.	3.88	3.04	6.92	11.81
74	Equipment and Technology Knowledge	Commonly used monitoring equipment	3.43	3.43	6.85	11.74
73	Professional Practice Knowledge	Knowledge of Medical Malpractice Insurance	3.42	3.42	6.84	11.71
67	Professional Practice Knowledge	Hospital Rules and Regulations	3.41	3.41	6.82	11.61
20	Perioperative	Perform bladder catheterization (i.e., Foley catheter).	3.63	3.12	6.75	11.32
57	General Surgical and Medical Knowledge	Basic Human Physiology and Common Lab Values	3.31	3.31	6.62	10.96
41	Perioperative	Independently use drills and/or saws.	3.76	2.90	6.66	10.92
36	Perioperative	Perform vascular suturing.	3.85	2.74	6.59	10.54
24	Perioperative	Independently perform docking and undocking of robotic platform.	3.55	2.88	6.43	10.22
42	Perioperative	Independently manipulate robotic instruments.	3.64	2.77	6.41	10.09
63	General Surgical and Medical Knowledge	Anesthesia and Pharmacology	2.98	2.98	5.95	8.86