



AMERICAN  
SPEECH-LANGUAGE-  
HEARING  
ASSOCIATION

# CCCs, Jobs, & Careers Mini-Survey 2017

## Summary Report: Numbers and Types of Responses

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## Executive Summary

### Maintaining CCCs

- Survey respondents were asked to indicate why they had maintained their CCCs. About 42% of audiologists selected *increased opportunities for student supervision*; 39% of audiologists selected *commitment to remaining current in the field*. Most SLPs (74%) selected *value of being highly qualified/credentialed*. Most respondents who held dual certification (65%) also selected *value of being highly qualified/credentialed*. (Q. 2)

### Value of the CCCs Campaign

- Overall, most respondents (56%) had never heard of ASHA's *Value of the CCCs* campaign.
- The *Value of the CCCs* campaign promotes certification to professionals who hire, supervise, or refer to audiologists and SLPs. Respondents were asked to indicate how important to them this type of outreach was from their national organization. About 40% of audiologists selected *very important* or *extremely important*, compared with 68% of SLPs and 66% of respondents who held dual certification (Qs. 3–4).

### Career Management

- Respondents were asked to choose up to four topics related to career management that they would like to learn more about. Overall, the top four topics they selected were *work life balance*, *transitioning between work settings (e.g., schools, health care)*, *negotiating and self-advocacy*, and *leadership* (Q. 5).

### Job and Career Satisfaction

- Overall, most respondents (92%) were satisfied or very satisfied with their career choice so far.
- Overall, most respondents (86%) were satisfied or very satisfied with their current job.
- Overall, most respondents (89%) were likely or very likely to stay with their current employer through the next 12 months.
- Overall, respondents' top three reasons for staying in a job were *interesting/exciting/challenging work*, *good relationship with co-workers*, and *convenient work location*.
- Aside from career advancement and better pay/benefits, respondents' top three reasons for leaving a job were *dissatisfaction with boss/leadership*, *lack of work life balance*, and *lack of appreciation/recognition* (Qs. 6–10).

### Demographics

- Audiologists had been employed in the professions for a median of 21 years. Their median age was 48. Most audiologists (83%) were female.
- SLPs had been employed in the professions for a median of 17 years. Their median age was 43. Most SLPs (96%) were female.
- Respondents who held dual certification had been employed in the professions for a median of 32 years. Their median age was 60. Most respondents who held dual certification (83%) were female.
- Overall, survey respondents' work settings were in the Northeast (22%), Midwest (26%), South (34%), and West (18%) (Qs. 11–14).

## Methodology

In the fall of 2017, four short surveys were mailed to samples of ASHA constituents:

- *Technology Mini-Survey* (sample size = 1,500)
- *Early Intervention Mini-Survey* (sample size = 1,000)
- *School Practice Mini-Survey* (sample size = 1,000)
- *CCCs, Jobs, & Careers Mini-Survey* (sample size = 2,000)

The samples were drawn in the order shown above, with no one being selected for more than one mini-survey.

The mini-surveys were fielded via postal mail. The first fielding was sent to sample members on September 13, 2017. Second (October 11) and third (November 7) mailings were smaller because respondents and refusals were removed from the list. Each mailing consisted of a personalized cover letter, a numbered survey, and a #10 postage-paid business return envelope inserted into a #11 window envelope with an ASHA return address. Metered postage was at the full, first-class rate.

This report provides data from the *ASHA 2017 CCCs, Jobs, & Careers Mini-Survey*. Stratified random sampling without replacement was used to select a sample of ASHA-certified constituents who lived in the United States and were employed full time or part time. Names of constituents who had been selected for the *Technology Mini-Survey*, *Early Intervention Mini-Survey*, or *School Practice Mini-Survey* were removed from the population before the sample of 2,000 was drawn from the remaining population of 127,895 constituents. The sample was stratified by type of certification—that is, CCC-SLP, CCC-A, or CCC-Dual (see Table 1).

Strata	Population Size	Sample Size	Completed Surveys
CCC-A	8,655	700	315
CCC-SLP	118,642	800	444
CCC-Dual	598	500	262
Total	127,895	2,000	1,021

The overall response rate was 51%, ranging from 45% among certified audiologists to 56% among speech-language pathologists (see Table 2).

Disposition	Total	CCC-A	CCC-SLP	CCC-Dual
Original (gross) sample size	2,000	700	800	500
No longer employed in the field	1	0	1	0
Undeliverable addresses	8	4	4	0
Retired	0	0	0	0
Ineligible for other reasons	0	0	0	0
Net sample size	1,991	696	795	500
Number of respondents	1,021	315	444	262
Response Rate	<b>51.3%</b>	<b>45.3%</b>	<b>55.8%</b>	<b>52.4%</b>

\*Note. Three respondents ripped off their identification numbers but identified themselves on their returned surveys as CCC-A ( $n = 1$ ), CCC-SLP ( $n = 1$ ), and CCC-Dual ( $n = 1$ ).

To ensure the highest quality data reasonably possible, each of the 1,021 completed postal mail surveys was checked, and erroneous responses were corrected or deleted by the ASHA staff member with primary responsibility for the survey. The forms were then sent to an outside firm for two-pass (key and verify) data entry. This process was completed by January 16, 2018.

In the following report, table column headers with specific certification category subtitles, such as “CCC-SLP” and “CCC-A,” reflect results based on unweighted data. The “All” column reflects results for respondents based on weighted data. The “All” column throughout the report reflects results for respondents from the three categories of ASHA certification types. Weighting was used to adjust representation from each certification group to its actual proportion within the Association.

Data are not reported for cells with fewer than 25 responses.

Tests of statistical significance are presented throughout the report as appropriate. Conclusions are not presented with each significance test in order to keep the data tables as clear as possible. However, the following conclusions can be used, depending on the result of the significance testing (see Table 3 for examples). In the first row, where the probability is less than .05 and is bolded, it is possible to discuss differences in responses by certification; in the second and third rows, that is not the case.

<b>Table 3. Significance Tests and Conclusions</b>	
<b>Sample Significance Test</b>	<b>Sample Conclusion</b>
Statistical significance: $\chi^2(2) = 114.9$ , <b><math>p = .000</math></b> , Cramer’s $V = .336$	Conclusion: There is adequate evidence from the data to say that the responses vary by CCCs.
Statistical significance: $\chi^2(2) = 2.3$ , $p = .320$	Conclusion: There is not enough evidence from the data to say that the responses vary by CCCs.
Too many cells (25%) have an expected count of fewer than 5.	Conclusion: Too little data are available in some certification categories to test whether responses vary by CCCs.

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A description of statistical terms used in the report can be found at the end of the report.



## ASHA SERVICES AND PROGRAMS

1. Which ASHA Certificate of Clinical Competence do you currently hold? <i>Select all that apply.</i> (Percentages)	
Response (Unweighted)	All (n = 1,021)
CCC-A	31.0
CCC-SLP	43.4
CCC-Dual	25.7
Response (Weighted)	All (n = 1,021)
CCC-A	6.8
CCC-SLP	92.7
CCC-Dual	0.5

2. Why have you maintained your CCCs? <i>Select all that apply.</i> (Percentages) Responses were in alphabetic order on survey instrument.				
Reasons	All (n = 1,021)	CCC-A (n = 316)	CCC-SLP (n = 443)	CCC-Dual (n = 262)
Value of being highly qualified/credentialed	71.2	35.8	73.8	64.9
		Statistical significance: $\chi^2(2) = 114.9$ , $p = .000$ , Cramer's $V = .336$		
Commitment to remaining current in the field	69.5	39.2	71.8	64.1
		Statistical significance: $\chi^2(2) = 84.0$ , $p = .000$ , Cramer's $V = .287$		
Overall value of the credential	50.2	24.1	52.1	46.2
		Statistical significance: $\chi^2(2) = 62.4$ , $p = .000$ , Cramer's $V = .247$		
Required by my employer	47.6	38.6	48.3	40.8
		Statistical significance: $\chi^2(2) = 8.0$ , $p = .018$ , Cramer's $V = .088$		
Portability for obtaining state licensure	36.5	35.4	36.6	41.2
		Statistical significance: $\chi^2(2) = 2.3$ , $p = .320$		
Consumer recognition	24.3	17.1	24.8	27.9
		Statistical significance: $\chi^2(2) = 10.5$ , $p = .005$ , Cramer's $V = .101$		
Required by third-party payers	22.1	14.9	22.6	29.4
		Statistical significance: $\chi^2(2) = 17.8$ , $p = .000$ , Cramer's $V = .132$		
Increased opportunities for student supervision	17.4	41.5	15.6	21.0
		Statistical significance: $\chi^2(2) = 68.9$ , $p = .000$ , Cramer's $V = .260$		

3. How aware are you of ASHA's *Value of the CCCs* campaign? (Percentages)

Awareness	All (n = 1,019)	CCC-A (n = 314)	CCC-SLP (n = 442)	CCC-Dual (n = 260)
Have never heard of it	55.6	66.2	54.8	60.8
Have heard of it but don't know much about it	37.1	28.0	37.8	29.6
Know pretty much about it	6.1	5.4	6.1	8.8
Know a lot about it	1.3	0.3	1.4	0.8
		Too many cells (25%) have an expected count of fewer than 5.		

4. The *Value of the CCCs* campaign promotes your certification to those professionals who hire, supervise, or refer to you. How important to you is this type of outreach from your national organization on your behalf? (Percentages)

Importance	All (n = 1,014)	CCC-A (n = 314)	CCC-SLP (n = 440)	CCC-Dual (n = 255)
Not important	7.5	19.4	6.6	12.5
Slightly important	26.9	40.4	25.9	21.6
Very important	45.9	30.3	47.0	41.2
Extremely important	19.8	9.9	20.5	24.7
		Statistical significance: $\chi^2(6) = 77.2$ , $p = .000$ , Cramer's $V = .196$		



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5. Select up to four (4) topics related to career management that you would like to learn more about. (Percentages) Responses were in alphabetic order on survey instrument.				
Topics	All (n = 968)	CCC-A (n = 281)	CCC-SLP (n = 422)	CCC-Dual (n = 247)
Work life balance	36.6	39.1	36.5	31.2
		Statistical significance: $\chi^2(2) = 3.7$ , $p = .153$		
Transitioning between work settings (e.g., schools, health care)	32.4	15.7	33.6	21.9
		Statistical significance: $\chi^2(2) = 31.0$ , $p = .000$ , Cramer's $V = .181$		
Negotiating and self-advocacy	31.8	35.6	31.5	29.6
		Statistical significance: $\chi^2(2) = 2.4$ , $p = .308$		
Leadership	28.9	32.0	28.7	21.5
		Statistical significance: $\chi^2(2) = 7.6$ , $p = .022$ , Cramer's $V = .090$		
Mentoring	28.1	21.0	28.7	18.6
		Statistical significance: $\chi^2(2) = 10.4$ , $p = .006$ , Cramer's $V = .105$		
Supervision	27.9	30.6	27.7	18.6
		Statistical significance: $\chi^2(2) = 10.7$ , $p = .005$ , Cramer's $V = .106$		
Use of social media professionally	27.1	31.3	26.8	42.1
		Statistical significance: $\chi^2(2) = 16.9$ , $p = .000$ , Cramer's $V = .133$		
Conflict management	25.8	29.2	25.6	30.8
		Statistical significance: $\chi^2(2) = 2.3$ , $p = .309$		
Communication skills	24.4	17.4	24.9	19.0
		Statistical significance: $\chi^2(2) = 6.5$ , $p = .039$ , Cramer's $V = .083$		
Private practice start up	22.3	9.6	23.2	12.1
		Statistical significance: $\chi^2(2) = 27.1$ , $p = .000$ , Cramer's $V = .169$		
Marketing (personal branding or marketing your practice)	20.5	27.8	19.9	31.2
		Statistical significance: $\chi^2(2) = 11.9$ , $p = .003$ , Cramer's $V = .112$		
Private practice management skills	19.9	23.1	19.7	24.7
		Statistical significance: $\chi^2(2) = 2.6$ , $p = .273$		
Self-assessments	10.6	8.9	10.7	11.7
		Statistical significance: $\chi^2(2) = 1.2$ , $p = .552$		



**JOB AND CAREER SATISFACTION**

6. Overall, how satisfied are you with your <u>career choice</u> so far? (Percentages)				
Satisfaction	All (n = 1,016)	CCC-A (n = 313)	CCC-SLP (n = 441)	CCC-Dual (n = 259)
Very <u>d</u> issatisfied	1.8	1.0	1.8	2.7
<u>D</u> issatisfied	0.5	1.6	0.5	1.5
Neutral	5.9	8.6	5.7	5.8
Satisfied	33.7	39.6	33.3	25.5
Very satisfied	58.1	49.2	58.7	64.5
Too many cells (27%) have an expected count of fewer than 5.				

7. Overall, how satisfied are you with your <u>current job</u> ? (Percentages)				
❖ Analysis removed respondents who were not currently employed.				
Satisfaction	All (n = 950)	CCC-A (n = 304)	CCC-SLP (n = 411)	CCC-Dual (n = 231)
Very <u>d</u> issatisfied	2.0	2.3	1.9	3.5
<u>D</u> issatisfied	2.9	2.0	2.9	5.2
Neutral	9.4	7.9	9.5	6.1
Satisfied	39.9	37.5	40.1	30.3
Very satisfied	45.9	50.3	45.5	55.0
Not currently employed (SKIP to Q. 9.)	Removed from analyses			
Statistical significance: $\chi^2(8) = 14.7$ , $p = .064$				

8. How likely are you to stay with your current employer through the next 12 months? (Percentages)				
❖ Analysis removed respondents who responded <i>not currently employed</i> to Q. 7.				
Response	All (n = 942)	CCC-A (n = 300)	CCC-SLP (n = 408)	CCC-Dual (n = 227)
Not at all likely	2.0	3.0	2.0	3.1
Somewhat likely	4.1	3.3	4.2	4.4
Neutral	4.5	2.3	4.7	3.5
Likely	16.6	12.3	16.9	17.2
Very likely	72.8	79.0	72.3	71.8
Statistical significance: $\chi^2(8) = 8.3$ , $p = .409$				

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9. What are your <u>top three (3)</u> reasons for staying in a job? (Percentages) Responses were in alphabetic order on survey instrument.				
Reasons	All (n = 968)	CCC-A (n = 300)	CCC-SLP (n = 420)	CCC-Dual (n = 240)
Interesting/exciting/challenging work	44.6	45.7	44.5	52.9
		Statistical significance: $\chi^2(2) = 4.6$ , $p = .099$		
Good relationship with co-workers	43.8	32.0	44.8	32.9
		Statistical significance: $\chi^2(2) = 15.4$ , <b><math>p = .000</math></b> , Cramer's $V = .127$		
Convenient work location	35.2	28.7	35.7	30.4
		Statistical significance: $\chi^2(2) = 4.4$ , $p = .109$		
Paid well/receive good benefits	34.3	46.7	33.3	42.9
		Statistical significance: $\chi^2(2) = 14.2$ , <b><math>p = .001</math></b> , Cramer's $V = .122$		
Pleasant work environment/culture	33.6	34.3	33.6	35.0
		Statistical significance: $\chi^2(2) = 0.1$ , $p = .931$		
Work life balance	32.9	33.7	32.9	27.9
		Statistical significance: $\chi^2(2) = 2.4$ , $p = .307$		
Feel appreciated/valued/recognized	32.4	39.3	31.9	37.9
		Statistical significance: $\chi^2(2) = 4.9$ , $p = .087$		
Good relationship with boss	15.5	12.3	15.7	8.8
		Statistical significance: $\chi^2(2) = 7.0$ , <b><math>p = .035</math></b> , Cramer's $V = .084$		
Good mentor/support	6.5	1.0	6.9	3.3
		Statistical significance: $\chi^2(2) = 15.8$ , <b><math>p = .000</math></b> , Cramer's $V = .128$		
Opportunities for career advancement/upward mobility	5.5	5.7	5.5	5.8
		Statistical significance: $\chi^2(2) = 0.0$ , $p = .981$		
Organization is socially responsible	5.3	9.3	5.0	5.4
		Statistical significance: $\chi^2(2) = 6.0$ , <b><math>p = .049</math></b> , Cramer's $V = .079$		

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10. Aside from career advancement and better pay/benefits, what are your <u>top three (3)</u> reasons for leaving a job? (Percentages) Responses were in alphabetic order on survey instrument.				
Reasons	All (n = 982)	CCC-A (n = 293)	CCC-SLP (n = 427)	CCC-Dual (n = 239)
Dissatisfaction with boss/leadership	50.9	55.6	50.6	49.8
		Statistical significance: $\chi^2(2) = 2.4$ , $p = .308$		
Lack of work life balance	41.8	33.8	42.4	29.7
		Statistical significance: $\chi^2(2) = 12.1$ , <b><math>p = .002</math></b> , Cramer's $V = .112$		
Lack of appreciation/recognition	35.3	45.1	34.7	33.5
		Statistical significance: $\chi^2(2) = 10.3$ , <b><math>p = .006</math></b> , Cramer's $V = .103$		
Inflexible schedule	28.6	29.0	28.6	32.6
		Statistical significance: $\chi^2(2) = 1.3$ , $p = .519$		
Boredom/lack of passion for what you do	26.4	28.0	26.2	33.1
		Statistical significance: $\chi^2(2) = 3.6$ , $p = .169$		
Long/difficult commute	26.4	25.9	26.5	21.8
		Statistical significance: $\chi^2(2) = 2.0$ , $p = .377$		
Lack of empowerment to make decisions	24.9	22.2	25.1	36.4
		Statistical significance: $\chi^2(2) = 15.0$ , <b><math>p = .001</math></b> , Cramer's $V = .125$		
Difficult co-workers	22.5	26.3	22.2	25.1
		Statistical significance: $\chi^2(2) = 1.7$ , $p = .431$		
Job description changed after you were hired	12.4	11.6	12.4	13.0
		Statistical significance: $\chi^2(2) = 0.2$ , $p = .889$		
Organization is not socially responsible	10.3	7.5	10.5	5.9
		Statistical significance: $\chi^2(2) = 4.8$ , $p = .090$		
Limited mentoring/support	9.8	3.4	10.3	2.1
		Statistical significance: $\chi^2(2) = 23.4$ , <b><math>p = .000</math></b> , Cramer's $V = .156$		

## DEMOGRAPHICS

11. For how many years have you been employed in the professions?				
Years	All (n = 1,012)	CCC-A (n = 314)	CCC-SLP (n = 439)	CCC-Dual (n = 262)
Mean	18.4	21.1	18.1	31.7
Standard deviation	11.2	11.3	11.1	10.2
Median	17.0	20.5	17.0	32.0
Mode	7.0	20.0	7.0	30.0
		Statistical significance: $F(2, 1012) = 130.9, p = .000$		

12. In what year were you born? (Converted to age)				
Age	Total (n = 1,015)	CCC-A (n = 315)	CCC-SLP (n = 440)	CCC-Dual (n = 260)
Mean	45.6	48.7	45.3	59.1
Standard deviation	11.7	11.3	11.7	9.7
Median	44.0	48.0	43.0	60.0
Mode	31.0	39.0	31.0	65.0
		Statistical significance: $F(2, 1012) = 129.8, p = .000$		

13. What is your sex? (Percentages)				
Sex	All (n = 1,021)	CCC-A (n = 316)	CCC-SLP (n = 443)	CCC-Dual (n = 262)
Female	95.0	82.9	95.9	82.8
Male	5.0	17.1	4.1	17.2
		Statistical significance: $\chi^2(2) = 42.2, p = .000$ , Cramer's $V = .203$		

14. If employed, in what state is your primary employment facility located? Use two-letter postal abbreviation (e.g., NC for North Carolina).(Percentages)				
Region	All (n = 979)	CCC-A (n = 311)	CCC-SLP (n = 424)	CCC-Dual (n = 246)
Northeast	21.9	21.5	21.9	27.2
Midwest	25.9	26.4	25.9	18.3
South	34.2	34.7	34.2	36.6
West	17.9	17.4	17.9	17.9
		Statistical significance: $\chi^2(6) = 7.4, p = .287$		

## **Appendix**

**Regions of the Country**

Northeast

- ◆ Middle Atlantic
  - New Jersey
  - New York
  - Pennsylvania
- ◆ New England
  - Connecticut
  - Maine
  - Massachusetts
  - New Hampshire
  - Rhode Island
  - Vermont

South

- ◆ East South Central
  - Alabama
  - Kentucky
  - Mississippi
  - Tennessee
- ◆ South Atlantic
  - Delaware
  - District of Columbia
  - Florida
  - Georgia
  - Maryland
  - North Carolina
  - South Carolina
  - Virginia
  - West Virginia
- ◆ West South Central
  - Arkansas
  - Louisiana
  - Oklahoma
  - Texas

Midwest

- ◆ East North Central
  - Illinois
  - Indiana
  - Michigan
  - Ohio
  - Wisconsin
- ◆ West North Central
  - Iowa
  - Kansas
  - Minnesota
  - Missouri
  - Nebraska
  - North Dakota
  - South Dakota

West

- ◆ Mountain
  - Arizona
  - Colorado
  - Idaho
  - Montana
  - Nevada
  - New Mexico
  - Utah
  - Wyoming
- ◆ Pacific
  - Alaska
  - California
  - Hawaii
  - Oregon
  - Washington

Statistics used in the frequency report include the following notation and description:

Notation	Description																		
Response rate	<p>The percentage of individuals who were included in the sample, minus any who were ineligible</p> $RR = \frac{(C + P)}{S - (Ret + I)}$ <p>Where</p> <table style="margin-left: 40px;"> <tr><td>RR</td><td>=</td><td>Response rate</td></tr> <tr><td>C</td><td>=</td><td>Number of completed surveys</td></tr> <tr><td>P</td><td>=</td><td>Number of partial surveys</td></tr> <tr><td>S</td><td>=</td><td>Sample size</td></tr> <tr><td>Ret</td><td>=</td><td>Ineligible because of retirement</td></tr> <tr><td>I</td><td>=</td><td>Ineligible for other reasons (e.g., no longer in the field, on leave of absence)</td></tr> </table> $RR = \frac{1,021}{2,000 - (9)} = 51.3\%$	RR	=	Response rate	C	=	Number of completed surveys	P	=	Number of partial surveys	S	=	Sample size	Ret	=	Ineligible because of retirement	I	=	Ineligible for other reasons (e.g., no longer in the field, on leave of absence)
RR	=	Response rate																	
C	=	Number of completed surveys																	
P	=	Number of partial surveys																	
S	=	Sample size																	
Ret	=	Ineligible because of retirement																	
I	=	Ineligible for other reasons (e.g., no longer in the field, on leave of absence)																	
<i>n</i>	The number in the sample. In this report, the number of people who answered a particular question.																		
Mean	<p>A measure of central tendency; an average. Add all the values, and divide the total by the number of items.</p> <p>Example: <math>(1 + 1 + 7 + 34 + 88) / 5 = 26.2</math>      Mean = 26.2</p>																		
Standard deviation	<p>A statistic that shows the spread of scores in a distribution. Used with means. The larger the standard deviation, the more widely the scores are spread out around the mean.<sup>1</sup></p> <p>About 68% of the measurement is between 1 standard deviation greater than and 1 standard deviation smaller than the mean; 95% are plus/minus 2 standard deviations.</p> <p>Example: <math>(1 + 1 + 7 + 34 + 88)</math>      Standard deviation = 37.1</p> <p>Therefore, 68% of the responses are between -10.9 and 63.3 in the example.</p>																		
Median	<p>A measure of central tendency. Arrange the values in order, from lowest to highest. Select the value in the middle position.</p> <p>Example: 1, 1, 7, 34, 88      Median = 7</p>																		
Mode	<p>A measure of central tendency. The value that occurs more frequently than any other value.</p> <p>Example: 1, 1, 7, 34, 88      Mode = 1</p>																		
Statistical significance	<p>Describes whether a value is larger or smaller than would be expected by chance alone.</p> <p>Note that a large sample size can lead to results that are “statistically significant” even though the results themselves may not have substantive or practical significance. This is particularly true for chi square (<math>\chi^2</math>) tests.<sup>1</sup></p>																		
	(Table continues on next page.)																		

Notation	Description
Chi square ( $\chi^2$ )	A test used to assess the statistical significance of a finding where the variables being assessed are nominal (e.g., annual salary and hourly salary) or ordinal (e.g., excellent, good, fair, and poor). It measures whether there are statistically significant differences between the observed frequencies and the expected frequencies of two variables. The larger the observed frequency is in comparison with the expected frequency, the larger the $\chi^2$ statistic and the more likely the difference is statistically significant. When the sample size is large, large $\chi^2$ values (i.e., ones that are statistically significant) can be obtained even for weak associations. <sup>1</sup>
Cramer's <i>V</i> and <i>Phi</i>	A measure of the <u>strength</u> of the association, used with $\chi^2$ statistics to identify the meaningfulness of a relationship. The $\chi^2$ value may be large with a small probability ( $p < .05$ ) of having occurred by chance. That is, it is "statistically significant at the .05 level." Cramer's <i>V</i> and <i>phi</i> are measures of how strong (practically important) the relationship is between the variables. The larger the Cramer's <i>V</i> or <i>phi</i> , the stronger the association.  <i>Phi</i> is used for 2 x 2 tables; Cramer's <i>V</i> is reported for tables larger than 2 x 2. These statistics are presented in this report only when $p \leq .05$ .
<i>p</i>	Probability. Found in expressions such as $p = .003$ , meaning "The probability that this result could have been produced by chance is 1 in 3/1000ths." The smaller the number, the less likely that the result was due to chance. The <i>p</i> value is the actual probability associated with an obtained statistical result, such as $\chi^2$ or <i>F</i> . <sup>1</sup>
<i>df</i>	Degrees of freedom. The number of values that are free to vary when computing a statistic. Used in interpreting both a $\chi^2$ and an <i>F</i> ratio. It is calculated in a cross-tabulation as $(R - 1)(C - 1)$ or (the number of rows minus 1) times (the number of columns minus 1). In a 3 x 4 table, <i>df</i> would be 6.

<sup>1</sup> Vogt, W. P. (1993). *Dictionary of statistics and methodology*. Newbury Park, CA: Sage

