Labor Market Outcomes of Certified Nursing Assistants in Wyoming: A Quasi-Experimental Design

Prepared by Katelynd Faler, Senior Economist

Research & Planning, Wyoming Department of Workforce Services

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Wyoming Department of Workforce Services
Robin Sessions Cooley, Director

Research & Planning
Tony Glover, Manager
Carola Cowan, Bureau of Labor Statistics Programs Supervisor

Prepared by:
Katelynd Faler, Senior Economist
Michael Moore, Editor

Editorial Committee:
David Bullard, Phil Ellsworth, Katelynd Faler, Matthew Halama, Aubrey Kofoed, Chris McGrath, and Michael Moore

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Research & Planning
P.O. Box 2760
Casper, WY 82602
Phone: (307) 473-3807
Fax: (307) 473-3834

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"Your Source for Wyoming Labor Market Information"

Who We Are

Research & Planning (R&P) functions as an exclusively statistical entity within the Wyoming Department of Workforce Services. R&P collects, analyzes, and publishes timely and accurate labor market information (LMI) meeting established statistical standards. We work to make the labor market more efficient by providing the public and the public's representatives with the information needed for evidence-based, informed decision making.

Abstract

Employment, earnings, and retention of nursing assistants in Wyoming are of interest to many groups, including educators, workforce specialists, and health care administrators. This analysis from Research & Planning uses administrative data to look specifically at certified nursing assistants who have not received other postsecondary awards or licenses and compares their outcomes to similar individuals matched by age, gender, and education. Research & Planning used quasi-experimental design and multiple control groups to compare labor market behavior in terms of employment in Wyoming, employment stability in Wyoming, and annual earnings for over 1,000 certified nursing assistants from six years prior to earning a nursing assistant certificate, to three years after earning a certificate. Research & Planning found statistically significant favorable workforce outcomes for female certified nursing assistants as compared to similar individuals in terms of employment and wages. After obtaining a nursing assistant certificate, females were more likely to be employed in Wyoming, had more stable employment interactions, and earned several thousand dollars more in wages in the years following certification than their peers. Statistical differences were not consistently noted for males, largely because fewer males earn a nursing assistant certificate and therefore fewer males could be included in this analysis.

Labor Market Outcomes of Certified Nursing Assistants in Wyoming: A Quasi-Experimental Design

by: Katelynd Faler, Senior Economist

The U.S. Bureau of Labor Statistics classifies nursing assistants as individuals who "perform basic patient care under direction of nursing staff" and "feed, bathe, dress, groom, or move patients, or change linens" (Bureau of Labor Statistics, 2018b). Nationally, about 40.9% of nursing assistants are employed in nursing care facilities (Bureau of Labor Statistics, 2018b), and employment of nursing assistants is expected to grow between 10% and 14% from 2016 to 2026 (O*NET Online, 2018). Ongoing discussions of placement of a state-run nursing home for veterans in Wyoming (King, 2019) have generated questions about the availability of nursing assistants in different areas of Wyoming. As reported by Faler (2018), research from Wyoming Unemployment Insurance Wage Records showed that certified nursing assistants in 2016 working in Wyoming nursing and residential care facilities made a median annual wage of $13,688. The Current Population Survey showed that nursing assistants were part of a minor occupational group of which 89.3% were female in 2018 (Bureau of Labor Statistics, 2019).

The Bureau of Labor Statistics, which assigns nursing assistants the Standard Occupational Classification (SOC) code of 31-1014, reported that there were an estimated 3,070 nursing assistants working in Wyoming in May 2017 earning a median wage of $14.02 per hour, making it the most common occupation after registered nurses (4,910, SOC 29-1141) of the Healthcare Practitioners and Technical Occupations (SOC 29-0000) and Healthcare Support Occupations (SOC 31-0000) (Bureau of Labor Statisticsa, 2018). In addition to being a common healthcare related occupation, Research & Planning (R&P) reported in May 2018 that there were projected to be 745 job openings for nursing assistants in Wyoming between 2017 and 2019, the second most projected openings for jobs requiring a certificate (Manning, 2018).

Nursing as an overall profession, sometimes beginning with a nursing assistant certificate, has been cited as a "pathway out of poverty" (Hawryluk, n.d.), and federal funding through the Workforce Innovation and Opportunity Act is available to some individuals who want to attend a nursing assistant certification class (Icenogle, 2018). The Wyoming State Board of Nursing certifies nursing assistants for Wyoming (Wyoming State Board of Nursing, n.d.); nursing assistants who are certified by the Wyoming State Board of Nursing are known as certified nursing assistants, or CNAs. A list of certified nurse aide programs maintained by the Wyoming Department of Health can be found at https://health.wyo.gov/aging/hls/certified-nurse-aides/. Government funding to train individuals facing barriers to entry into the workforce for a growing profession often yields an interest in program outcomes.

In the past, Research & Planning has done a number of studies on nursing, including topics such as nurses returning to school, healthcare workforce succession planning, and demand, retention and supply of nurses

in Wyoming. R&P's body of research on nursing can be found here: https://doe.state.wy.us/LMI/nursing.htm. A recording of a webinar on nursing assistants given by Research & Planning in 2018, reviewing earnings across industries, employment throughout Wyoming, and injury rates, can be found at https://bit.ly/2My9aSh. The webinar included discussions with participants, including health care administrators, educators, workforce specialists, and nursing professionals, about retention and earnings of nursing assistants in Wyoming. This customer interest prompted Research & Planning to use a quasi-experimental design to determine labor force outcomes of nursing assistants in terms of earnings, employment, and employment stability as compared to control groups.

Methodology

This report uses a quasi-experimental design, chi-square tests of independence, and two-sided Wilcoxon rank sum tests to determine if there is a difference in workforce behavior between individuals who are certified nursing assistants in the state of Wyoming and similar individuals who are not certified nursing assistants.

Data

The administrative data for this research was obtained through Research & Planning's memorandums of understanding and data sharing agreements with numerous agencies. This report primarily uses information from Unemployment Insurance Wage Records, licensing data from the Wyoming State Board of Nursing, and education records from the Wyoming Department of Education and the Wyoming Community College Commission. More information on Research & Planning's memorandums of understanding can be found at https://doe.state.wy.us/LMI/LMIinfo.htm.

CNA Group

According to data from the Wyoming State Board of Nursing, over 18,000 individuals have held a nursing assistant certificate in Wyoming since 1989, and at any given time since 2002 there have been between 5,000 to 6,000 individuals certified as CNAs in Wyoming. However, this study only looks at a specific subset of CNAs. In order to be included in the CNA group for this analysis, R&P had to have administrative records that showed the CNA had a valid and consistent identification number for the Wyoming Integrated Statewide Education Data System (WISE data system, 2018), which often means the individual participated in a Wyoming public school at some point. The CNAs in this analysis also had to have a gender known to R&P, a valid and consistent birthdate, and a certificate with valid and consistent issue and expiration dates. R&P also restricted this analysis to individuals who did not obtain postsecondary award apart from their nursing assistant certification. CNAs were not included in this analysis if they earned a postsecondary degree, obtained an additional postsecondary non-degree award, were issued another license known to R&P (such as another health care license or a commercial driver's license), or if they worked in an occupation known to R&P, other than nursing assistant, where the typical education needed for entry was beyond "some college, no degree" as classified by the Bureau of Labor Statistics (Bureau of Labor Statistics, 2017). The CNA group contained just over 1,000 individuals.

Control Group

R&P then created a pool from which to draw the control groups. Like the CNA group, R&P had to have administrative records that showed the individuals in the potential control group had a valid and consistent Wyoming Integrated Statewide Education Data System identification number, a gender known to R&P, and a valid and consistent birthdate. R&P also had to have administrative records showing that the individual attended a postsecondary institution at some point. However, the control group individuals could not have earned a degree, obtained another postsecondary non-degree award, have been issued another license known to R&P, or worked in any occupation known to R&P where the typical education needed for entry was beyond "some college, no degree" as classified by the Bureau of Labor Statistics (Bureau of Labor Statistics, 2017). The pool from which the control groups were drawn contained almost 24,000 individuals.

For R&P's quasi-experimental design, three distinct control groups, stratified by gender and age, were randomly selected from the control pool and matched to the CNA group. Individuals in the CNA group were randomly matched to an individual in the control pool who shared their gender, birth year, and birth month, which created Control Group 1. The individuals in Control Group 1 were removed from the control pool, and the same procedure was completed two more times to create Control Group 2 and Control Group 3.

The final CNA group included 1017 CNAs who were successfully matched based on age, gender, and education to three distinct, random individuals from the control pool. Each group included 933 females and 84 males born between August 1987 and September 1999 (see Table 1). The CNA group received their initial nursing assistant certification between February 2005 and May 2016 (see Table 2).

Table 1: Demographics of Each CNA and Control Group

Birth Year	Females	Males
1987	16	N/D
1988	62	7
1989	72	6
1990	75	8
1991	90	13
1992	128	11
1993	78	8
1994	82	5
1995	98	7
1996	104	11
1997	80	6
1998	38	N/D
1999	10	0
Total	**933**	**84**

N/D = Not discloseable due to confidentiality.
Source: Custom extract from Workforce Information Database.
Prepared by K. Faler, Research & Planning, WY DWS.

Table 2: Initial Year of Nursing Assistant Certification

Initial Year of Nursing Assistant Certification	Females	Males	Total
2005	N/D	N/D	11
2006	N/D	N/D	24
2007	37	9	46
2008	48	5	53
2009	87	7	94
2010	90	6	96
2011	N/D	N/D	40
2012	33	4	37
2013	22	3	25
2014	246	14	260
2015	226	24	250
2016	73	8	81
Total	**933**	**84**	**1,017**

N/D = Not discloseable due to confidentiality.
Source: Wyoming State Board of Nursing.
Prepared by K. Faler, Research & Planning, WY DWS.

Establishing Relative Year and Quarter

To compare workforce outcomes for individuals who received their initial nursing assistant certificate at different times, the measures in this report are compared by relative time before and after certification. The quarter in which the individual received their initial certificate was considered "Quarter 0," and marked the beginning of the individual's first year ("Year 1") of interacting with the labor force with a CNA certificate. The four quarters immediately prior to receiving a nursing assistant certification (Quarters -1, -2, -3, and -4) make up the year called "1 Year Prior." Table 3 shows a complete list of the relative quarters that were included in each relative year. The last quarter for which data were available for this study was first quarter 2018.

Once relative quarter and year was established for the CNA group, each individual in the control group was assigned the same relative quarters as the CNA to whom they were matched.

Statistical Tests

R&P sought to determine if obtaining a nursing assistant certificate changed labor market behavior compared to other, similar individuals. A chi-square test was used to evaluate whether there was a relationship between earning a nursing assistant certification and being employed anywhere in any industry in Wyoming in a given year. Individuals who earned any wages that were reported in the administrative records of Wyoming Unemployment Insurance Wage Records were considered employed during the year. If an individual did not appear in wage records, they were not considered employed in Wyoming during that year.

A chi-square test was also used to determine whether there was a relationship between employment stability and earning a nursing assistant certificate. Employment stability only considers individuals who appear in Wage Records, and specifically looks at how individuals interact with employers in Wage Records. A stable, or continuous, interaction occurs when an individual is employed by an entity and the individual neither began nor left their tenure with that employer in the given quarter. For example, a teacher, who has been employed for a number of years by the same school district, would have four quarters of continuous employment in that school district each year. However, if that teacher also works a summer job, one beginning in the second quarter and ending in the third quarter of the year, then the teacher would have two quarters of unstable, or non-continuous, interactions with another employer, in addition to the four quarters of continuous employment with the school district. For more information on employment stability as classified by R&P, please see "The Instability Index as a Measure of Labor Market Activity" (Glover & Peters, 2000). The chi-square test as it relates to employment stability evaluates whether there is a difference in the share of continuous,

Table 3: Quarters Included in Each Relative Year

Relative Year	Beginning Relative Quarter	Ending Relative Quarter
6 Years Prior	-24	-21
5 Years Prior	-20	-17
4 Years Prior	-16	-13
3 Years Prior	-12	-9
2 Years Prior	-8	-5
1 Year Prior	-4	-1
Year 1	0	3
Year 2	4	7
Year 3	8	11

Note: Individuals received their initial nursing assistant certification in Quarter 0 of Year 1.
Source: Custom extract from Workforce Information Database.
Prepared by K. Faler, Research & Planning, WY DWS.

or stable, employment interactions between those who earned a nursing assistant certification and those who did not.

A two-sided Wilcoxon rank sum test was used to compare whether there were systematic differences in annual income between the CNA group and the three control groups. Annual income for individuals was calculated as the sum of all the wages a person earned by all employers in all industries over the course of their relative year. The Wilcoxon rank sum test was chosen because annual income is a continuous variable that was not normally distributed. The analysis was done using matched control groups.

These tests were performed on the CNA and the control groups at several points in time: during the sixth and third years prior to receiving a nursing assistant certificate, and in the first, second, and third years after receiving certificate. Analysis of the sixth and third years prior to receiving a nursing assistant certificate was done to establish whether there were already differences between the CNA and control groups that were not accounted for in R&P's data. Analysis only extends from the sixth year prior to the third year after receiving a nursing assistant certificate because there are not yet enough data points to provide a robust analysis beyond this timeframe.

Results

Summary

Statistically significant differences between nursing assistants and the corresponding control groups were most consistently detected for females in tests of employment, employment stability, and wages. As the nursing assistant occupation is largely female dominated, the low numbers of males made it difficult to prove whether the calculated differences were statistically significant; the only statistically significant differences for males were inconsistent across control groups, and only occurred when comparing employment of male CNAs to employment in male control groups.

For females, those who later received a nursing assistant certification were not statistically different from their control groups six years prior to receiving their certification in any of the three tests administered. Statistically significant differences consistently appeared in employment of females three years prior to receiving a certificate: females who later received a nursing assistant certification were more likely to be employed three years prior to receiving their certificate than comparable individuals who did not receive a nursing assistant certification. In the three years immediately following their certification, female CNAs were more likely to be employed and earned systematically higher wages than their counterparts at the 99.9% confidence level. Female CNAs had more continuous employment interactions compared to the female control groups in Year 2, a finding significant at the 97.5% level.

Employment

A chi-square test was used to evaluate whether there was a relationship between earning a nursing assistant certification and employment in any industry in Wyoming. Software outputs for this test can be viewed in the Appendix A1 and A2. Table 4 shows the percent and number of each group that was employed in Wyoming at some point during the given years. Control groups

that showed statistically significant differences from the CNA group above the 95% level are highlighted. Figure 1 (see page 10) illustrates employment outcomes for females, and Figure 2 (see page 11) illustrates employment outcomes for males.

Females

The chi-square test showed that there were statistically significant differences in employment between the 933 females in each control groups and the 933 females of the CNA group in the third year prior to receiving a nursing assistant certification, and in the three years following certification. Six years prior to receiving a nursing assistant certification, there were no statistically significant differences between the CNA group and the corresponding control groups in terms of whether the groups worked in Wyoming at any point during the year.

Six years prior to receiving a certificate, 18.9% (N= 176) of the 933 future female CNAs worked in Wyoming at some point during the year. The rate of employment in Wyoming for the corresponding control groups varied between 17.7% (N=165) and 19.1% (N=178). These differences were not statistically significant.

There were statistically significant differences for females working in Wyoming three years prior to receiving a nursing assistant certification. For the CNA group, 61.8% (N= 577) of the individuals worked at some point three years prior to receiving a certificate, compared to the control groups, which ranged in rate of employment from 53.4% (N = 498) to 56.7% (N = 529). These differences are statistically significant at or above the 97.5% level.

In the first year after earning a certificate, 886, or 95.0% of the 933 female CNAs were employed in Wyoming, although not necessarily in the health care industry. Corresponding employment in the control groups ranged from 73.7% (N=688) to 75.8% (N=707), a statistically significant difference at the 99.9% level.

Employment in Wyoming for female CNAs at any point in the second year after earning a certificate was 90.3% (N=842), higher than for the control groups,

Table 4: Employment in Wyoming Before and After Nursing Assistant Certification

Female (N=933)								
	CNAs		Control Group 1		Control Group 2		Control Group 3	
Year Relative to Graduation	%	N	%	N	%	N	%	N
6 Years Prior	18.9	176	17.7	165	18.2	170	19.1	178
3 Years Prior	61.8	577	56.7	529	53.8	502	53.4	498
1 Year After	95.0	886	75.8	707	73.7	688	75.5	704
2 Years After	90.3	842	72.2	674	72.7	678	71.1	633
3 Years After	77.0	718	61.6	575	64.0	597	63.1	589

Male (N=84)								
	CNAs		Control Group 1		Control Group 2		Control Group 3	
Year Relative to Graduation	%	N	%	N	%	N	%	N
6 Years Prior	19.1	16	20.2	17	19.1	16	22.6	19
3 Years Prior	48.8	41	48.8	41	53.6	45	58.3	49
1 Year After	85.7	72	72.6	61	76.2	64	78.6	66
2 Years After	77.4	65	72.6	61	77.4	65	83.3	70
3 Years After	61.9	52	64.3	54	77.4	65	75.0	63

Statistically significant above the 95.0% level.
Statistically significant above the 97.5% level.
Statistically significant above the 99.9% level.

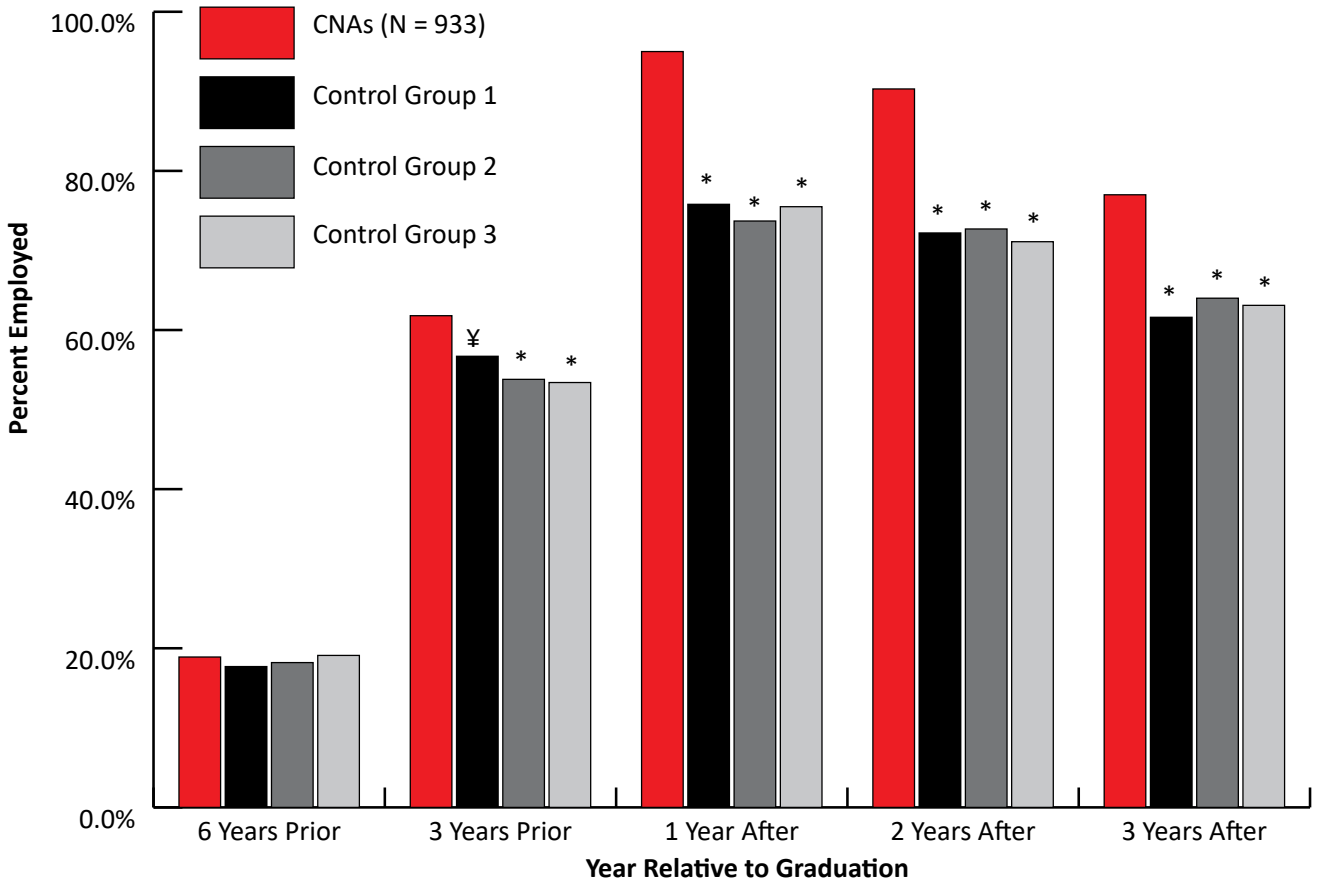
Source: Wyoming Wage Records.
Prepared by K. Faler, Research & Planning, WY DWS.

where between 71.1% (N=633) and 72.7% (N=678) worked in Wyoming. These differences were statistically significant at the 99.9% level.

The number of CNAs found working in Wyoming three years after receiving a nursing assistant certificate was 718, or 77.0%, a ratio much greater than the control groups, which ranged from 61.6% (N=575) to 64.0% (N=597). These differences were statistically significant at the 99.9% level. The availability of data may have contributed to the observed drop in Wyoming employment for both CNAs and the control groups from Year 2 to Year 3, and may not necessarily reflect labor market behavior.

Males

For male CNAs, the statistically significant differences for employment in Wyoming were minimal and inconsistent. Table 4 shows the number and percent of the possible 84 males from each group who could have worked at some point in any industry in Wyoming. There were no statistically significant differences in the sixth and third years prior to receiving a certificate between the CNA group and the corresponding control groups.

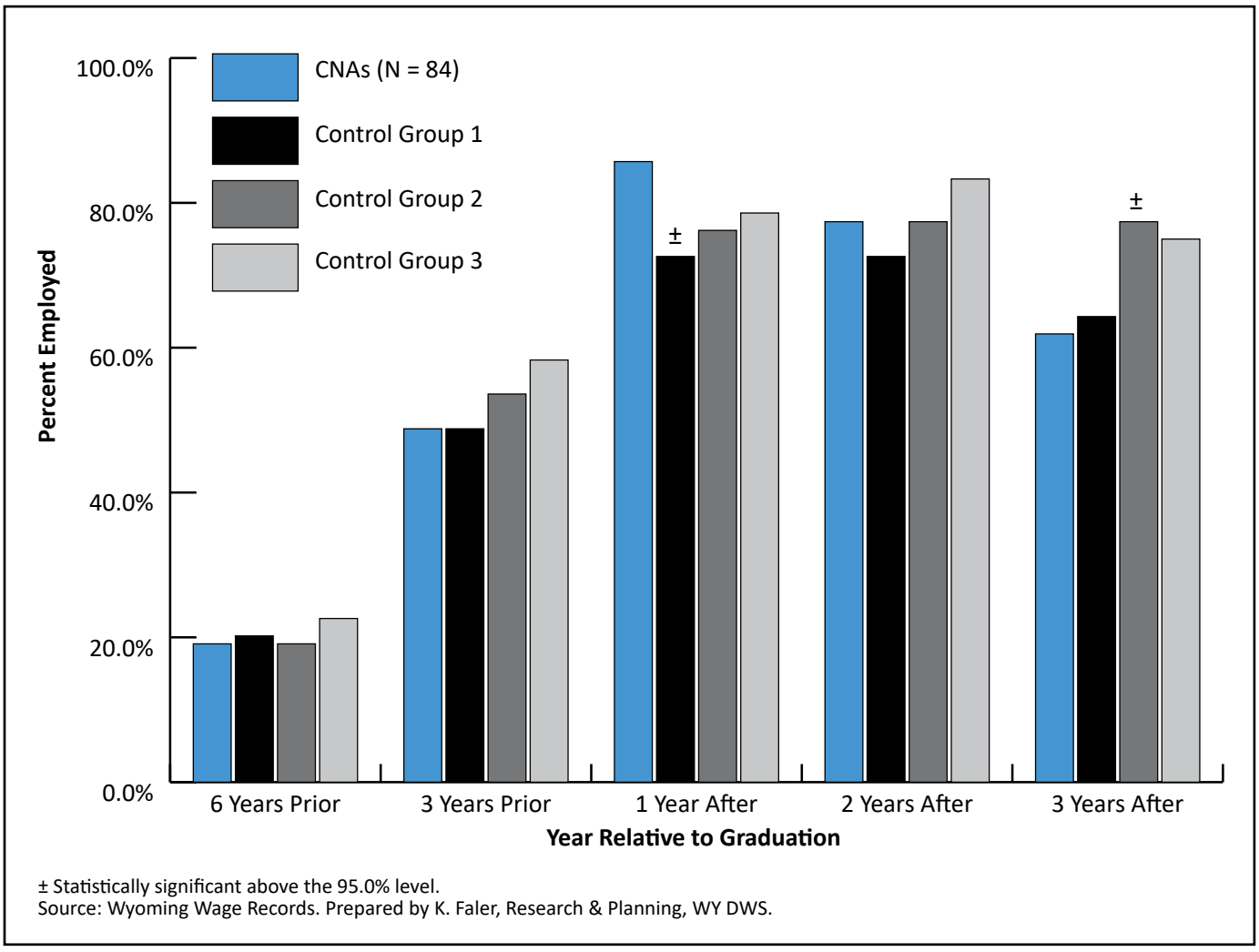


¥ Statistically significant above the 97.5% level.
* Statistically significant above the 99.9% level.
Source: Wyoming Wage Records. Prepared by K. Faler, Research & Planning, WY DWS.

Figure 1: Employment of Females in Wyoming Before and After Nursing Assistant Certfication

In Year 1, only Control Group 1 had a statistically significant difference in employment from the CNA group. From the CNA group, 85.7% of individuals (N=72) were employed at some point in the year following certification, compared to 72.6% of individuals (N=61) in Control Group 1. There were no statistically significant differences between male CNAs and the second and third control groups in terms of employment in the year following certification, nor were there statistically significant differences between CNAs and any control group in Year 2. Control Group 2 showed a statistically significant difference in employment from the CNA group in Year 3 at the 95% level. In this case, the employment rate of male CNAs was 61.9% (N=52), lower than Control Group 2, where the ratio of employment anywhere in Wyoming was 77.4% (N=65). The male CNA group was not significantly different from the first and third control groups in Year 3.

The nursing assistant occupation is a highly female dominated occupation, and there were fewer males who could be included in this analysis, reducing the likelihood that statistically significant differences could be detected for males.



± Statistically significant above the 95.0% level.
Source: Wyoming Wage Records. Prepared by K. Faler, Research & Planning, WY DWS.

Figure 2: Employment of Males in Wyoming Before and After Nursing Assistant Certfication

Stable Employment

For individuals who were employed according to Wyoming Unemployment Insurance Wage Records, a chi-square test was used compare whether there was a relationship between having a nursing assistant certification and having stable employment. Software outputs for this test can be viewed in Appendix B1 and B2. The results are summarized in Table 5, which shows the percent of employment interactions that were continuous for each group. Cases where the control group was statistically different from the CNA group are highlighted. Figure 3 (see page 13) illustrates stable employment interactions for females, and Figure 4 (see page 13)illustrates employment interactions for males.

Females

The chi-square test showed that there were some differences for females in the number of continuous employment interactions between those who received a nursing assistant certification and those who did not, especially in the second year after receiving a certificate where continuous employment was consistently and statistically higher for CNAs than those without a certificate.

In the sixth and third years prior to receiving a nursing assistant certification, close to 40% of employment interactions were continuous for those who later received nursing assistant certification. This figure was not statistically different from the control groups, where six years prior between 36.1% and 36.9% of employment interactions were continuous, and three years prior between 39.3% and 41.5% of employment interactions were continuous.

In the first year after receiving a nursing assistant certification, only Control Group 3 was statistically different from those who received a certificate in terms of continuous employment: 48.7% of employment interactions for the CNA group were continuous compared to 43.5% for Control Group 3. The first and second control groups were not statistically different from those who received a nursing assistant certification.

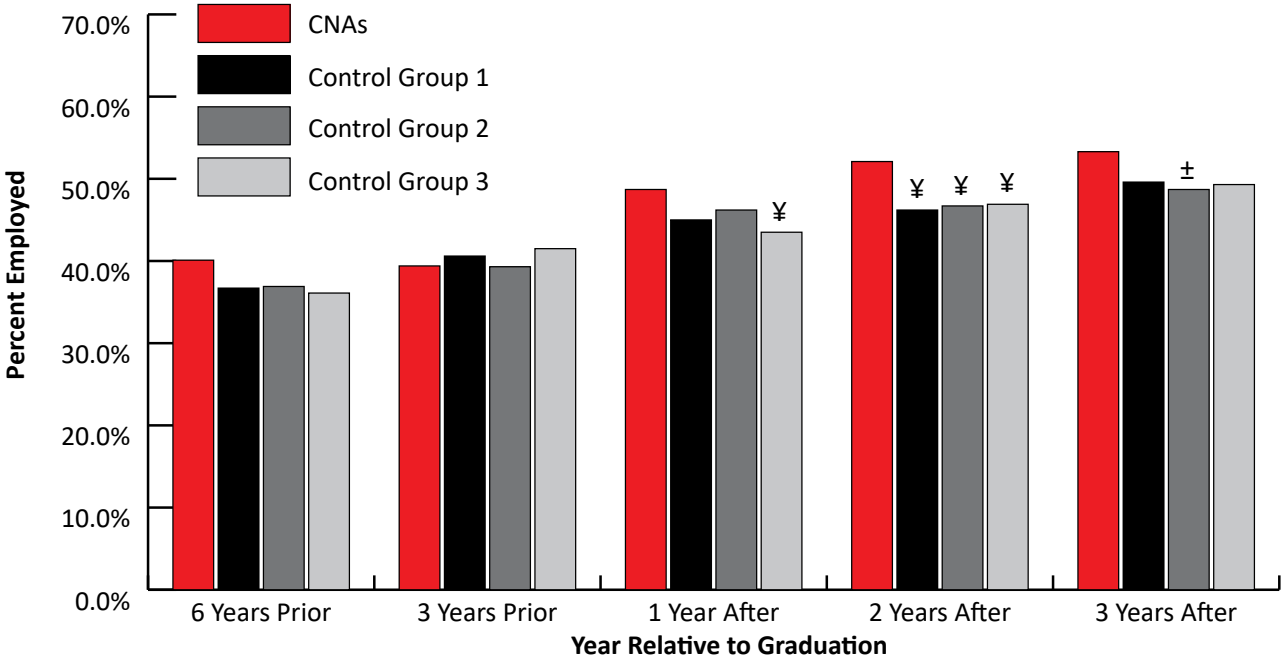
In Year 2, the continuous employment of the CNA group was statistically different at the 97.5% level than all three control groups. Between 46.2% and 46.9% of employment interactions were continuous for the control groups, whereas 52.1% of employment interactions were continuous for those who had received a nursing assistant certification the previous year.

(Text continued on page 14)

Table 5: Percent of Stable Employment Interactions in Wyoming Before and After Nursing Assistant Certification

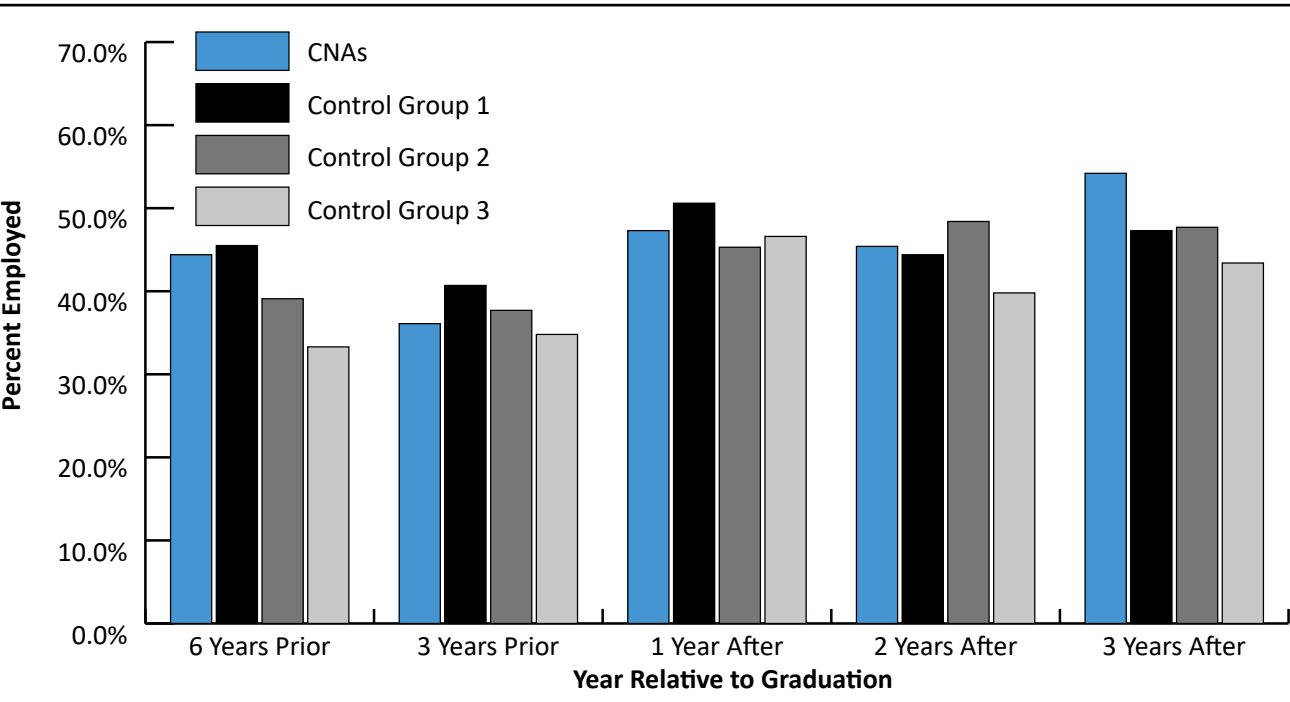
	Female				Male			
Year Relative to Graduation	CNAs	Control Group 1	Control Group 2	Control Group 3	CNAs	Control Group 1	Control Group 2	Control Group 3
6 Years Prior	40.1	36.7	36.9	36.1	44.4	45.5	39.1	33.3
3 Years Prior	39.4	40.6	39.3	41.5	36.1	40.7	37.7	34.8
1 Year After	48.7	45.0	46.2	43.5	47.3	50.6	45.3	46.6
2 Years After	52.1	46.2	46.7	46.9	45.4	44.4	48.4	39.8
3 Years After	53.3	49.6	48.7	49.3	54.2	47.3	47.7	43.4

Source: Wyoming Wage Records.
Statistically significant above the 95.0% level.
Statistically significant above the 97.5% level.



± Statistically significant above the 95.0% level.
¥ Statistically significant above the 97.5% level.
Source: Wyoming Wage Records. Prepared by K. Faler, Research & Planning, WY DWS.

Figure 3: Stable Employment Interactions of Females in Wyoming Before and After Nursing Assistant Certfication



Source: Wyoming Wage Records. Prepared by K. Faler, Research & Planning, WY DWS.

Figure 4: Stable Employment Interactions of Males in Wyoming Before and After Nursing Assistant Certfication

(Text continued from page 12)

Only the second control group was statistically different from the CNA group in Year 3, where 53.3% of the CNA group's employment interactions were continuous, and 48.7% of the employment interactions for Control Group 2 were continuous. This difference was statistically significant at the 95% level.

Males

Table 5 shows the percent of employment interactions that were continuous for males who received a nursing assistant certification and their non-CNA counterparts. There were no statistically significant differences in continuous employment interactions between male CNAs and the corresponding control groups during any time period considered for this analysis. Individuals who obtained a nursing assistant certification had the lowest percent of continuous employment interactions three years prior to receiving a certificate (36.1%) and the highest percentage three years after receiving a certificate (54.2%). As the nursing assistant occupation is highly female dominated, there were fewer males included in this analysis and establishing statistically significant differences is more difficult with fewer observations.

Wages

A two-sided Wilcoxon rank sum test was used to compare whether there were systematic differences in annual income between those who received a nursing assistant certification and each of the matched control groups. Software outputs for this test can be viewed in the Appendix C1 and C2. Table 6 (see page 15) shows the mean, median, and number for individuals in each group who had wages during each time period. Control groups that have systematically different wages above the 95% level are highlighted. Figure 5 (see page 16) illustrates median annual wages for females, and Figure 6 (see page 16) illustrates median annual wages for males.

Females

The Wilcoxon rank sum tests showed there were consistently and systematically higher wages for females who received a nursing assistant certification over the control groups in each of the three years following certification. With one exception, the second control group three years prior to receiving a certificate, the differences between wages earned by future female CNAs and the control group were not statistically significant above the 95% level. This shows that, in terms of wages, the two groups are similar prior to differentiation through receiving a nursing assistant certification.

For females six years prior to receiving a nursing assistant certification, future CNAs earned a mean annual wage of $3,950, compared to a mean annual wage of between $3,333 and $3,778. Median wages for females who later received a certificate were $2,745 during this time period, compared to between $1,827 and $1,975. As a whole group, the Wilcoxon rank sum tests did not show statistically significant systematic differences between future CNAs and the control groups six years prior to receiving a nursing assistant certification.

Three years prior to receiving a certificate, females in the CNA group earned a mean wages of $5,757, and a median wage of $3,306. There were no statistically significant systematic differences between future CNAs and Control Groups 1 and 3, which had mean wages of $4,959 and $5,142, respectively, and median wages of $3,079

and $3,013, respectively. However, there were statistically significant systematic differences between future CNAs and the second control group, which as a whole had a mean wages of $5,015 and a median wages of $2,607.

In the first year after females received a nursing assistant certification, the mean annual wages for the group were $13,246 and the median annual wages were $11,431. The CNA group earned wages that were consistently and systematically higher at the 99.9% level than their peers who did not receive nursing assistant certification. The control groups had mean wages between $8,713 and $9,200, and median wages that were between $6,213 and $6,635.

Wages for female CNAs were also consistently and systematically higher than their peers in the second and third years after receiving a certificate. In Year 2, CNAs earned mean wages of $14,476 and median wages of $12,759, compared to the control groups who had mean wages between $10,449 and $11,331 and median wages between $7,774 and $8,073. In Year 3, CNAs earned mean wages of $15,111 and median wages of $13,611, compared to the control groups with mean wages between $11,680 and $12,445 and median wages between $8,957 and $9,668. The differences in both

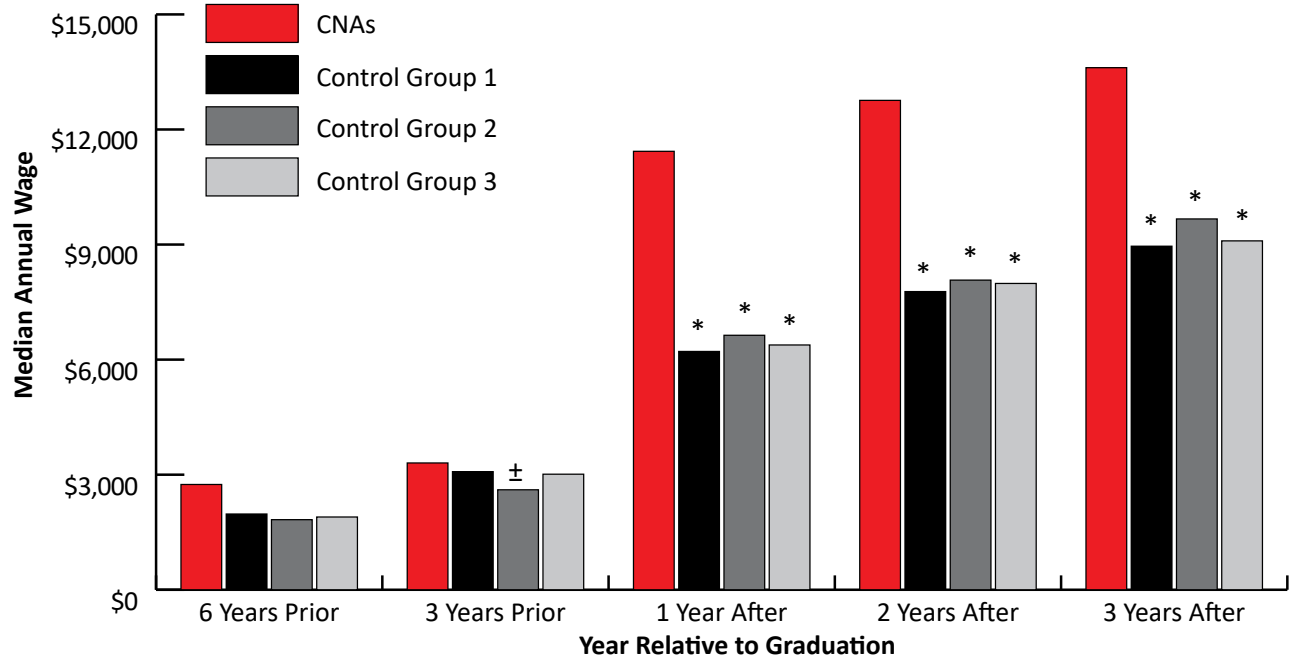
(Text continued on page 17)

Table 6: Annual Wages Earned in Wyoming Before and After Nursing Assistant Certification by Gender

Year Relative to Graduation	Annual Wages and N	Females				Males			
		CNAs	Control Group 1	Control Group 2	Control Group 3	CNAs	Control Group 1	Control Group 2	Control Group 3
6 Years Prior	Mean Wage	$3,950	$3,667	$3,778	$3,333	$3,769	$3,331	$3,305	$3,633
	Median Wage	$2,745	$1,975	$1,827	$1,897	$3,500	$2,849	$2,329	$1,147
	N	176	165	170	178	16	17	16	19
3 Years Prior	Mean Wage	$5,757	$4,959	$5,015	$5,142	$4,581	$6,050	$5,888	$5,771
	Median Wage	$3,306	$3,079	$2,607	$3,013	$3,563	$3,422	$2,877	$2,405
	N	577	529	502	498	41	41	45	49
1 Year After	Mean Wage	$13,246	$9,003	$9,200	$8,713	$10,800	$12,349	$13,013	$13,701
	Median Wage	$11,431	$6,213	$6,635	$6,382	$9,110	$7,134	$6,344	$9,820
	N	886	707	688	704	72	61	64	66
2 Years After	Mean Wage	$14,476	$10,555	$11,331	$10,449	$12,082	$15,083	$15,324	$11,707
	Median Wage	$12,759	$7,774	$8,073	$7,986	$10,567	$6,326	$9,414	$6,847
	N	842	674	678	663	65	61	65	70
3 Years After	Mean Wage	$15,111	$11,680	$12,445	$11,709	$14,306	$17,032	$15,387	$14,756
	Median Wage	$13,611	$8,957	$9,668	$9,096	$12,415	$9,494	$9,450	$9,545
	N	718	575	597	589	52	54	65	63

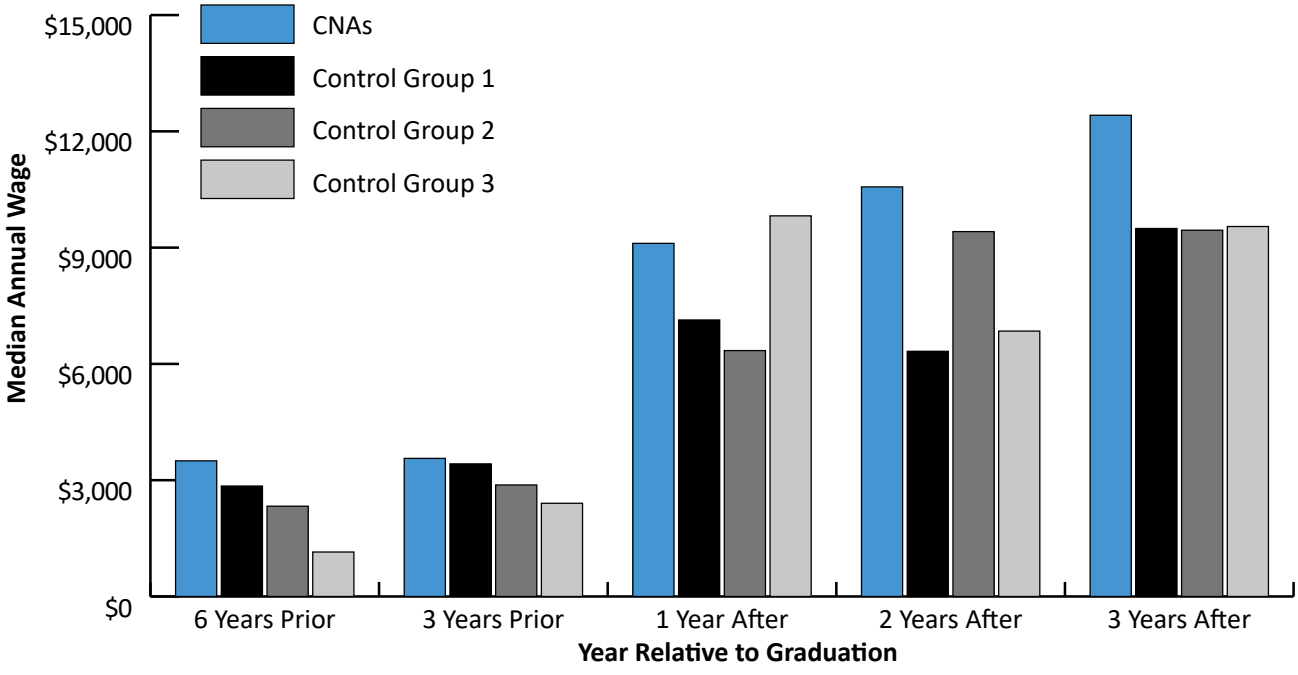
Highlighted cells indicate wages are systematically higher in the CNA group than in the control group.
Statistically significant above the 95.0% level.
Statistically significant above the 99.9% level.

Source: Wyoming Wage Records.
Prepared by K. Faler, Research & Planning, WY DWS.



± Statistically significant above the 95.0% level.
* Statistically significant above the 99.9% level.
Source: Wyoming Wage Records. Prepared by K. Faler, Research & Planning, WY DWS.

Figure 5: **Median Annual Wages of Females in Wyoming Before and After Nursing Assistant Certfication**



Source: Wyoming Wage Records. Prepared by K. Faler, Research & Planning, WY DWS.

Figure 6: **Median Annual Wages of Males in Wyoming Before and After Nursing Assistant Certfication**

(Text continued from page 15)

Year 2 and Year 3 were significant ant the 99.9% level.

Males

Unlike for females there were no statistically significant systematic differences in annual earnings between male CNAs and their peers. Table 6 shows the mean, median, and number for individuals in each group who had wages during each time period, and that there were no statistically significant differences between male CNAs and the corresponding control groups. The nursing assistant occupation is a highly female dominated occupation, and there were fewer males who could be included in this analysis, reducing the likelihood that statistically significant systematic differences could be detected for males.

Discussion

This analysis shows that females who earned a nursing assistant certification in Wyoming consistently had significantly more positive employment and earnings outcomes in the three year following their certification than counterparts who did not receive a certificate or other postsecondary award. Findings were not able to demonstrate consistent statistically significant differences for males. It is not surprising that no consistent statistically significant conclusions could be drawn between the male CNAs and their control groups, as the total number of male CNAs included in this analysis was only 84, compared to the 933 females.

This study directly controlled for gender, education level, and age by year and month of birth, and indirectly controlled for attendance of a Wyoming public school. Based on these variables, CNAs were statistically equivalent to their control groups six years prior to receiving a nursing assistant certification in terms of employment, employment stability, and wages. Differences began to appear, in some cases, between future CNAs and the control groups three years prior to the quarter in which the certificate was earned. Three years prior, future CNAs were more often employed than non-CNAs, and when compared with one of the three control groups, future CNAs had wages that were systematically higher. These differences demonstrate that there were variables this study did not, and could not, control for that may contribute to differences in labor force attachment and earnings. These important but unaccounted for differences may include things like the number of children an individual had, whether they were married, what their household income was, whether they had access to a vehicle, if they depended on means-tested benefits, and even more nebulous factors such as motivation and health. It may also indicate that use the presence and availability of certified nursing assistant training programs had an effect on labor market activity, perhaps on individuals considering an occupational certification in their future.

For employment in Wyoming, female CNAs had better labor market outcomes after receiving a certificate than their counterparts, and this finding is highly significant at the 99.9% level. In Year 1, 95.0% of newly certified nursing assistants were employed in Wyoming, compared to a high of 75.8% among the control groups. Employment stayed much higher for CNAs over the control groups in Years 2 and 3. A shortcoming of this study can be observed the steep decline in the number of CNAs

employed in Wyoming in Year 3 (Table 4): this decline is likely a function of the time-limited data for this study, rather than a finding of major importance. Table 2 shows that 250 individuals received a nursing assistant certificate at some point in 2015. As the last quarter of wage and employment data used in this study was first quarter 2018, only CNAs who received their certificate in the first quarter of 2015 and worked in the first quarter of 2018 would have been considered employed in Year 3. Anyone else not meeting these criteria would not have been counted as employed. A study replicated in the future would likely find this statistic adjusted.

For wages, female CNAs earned systematically higher wages than the control groups after certification, a finding significant at the 99.9% level. In the year following certification, median wages were about $5,000 greater for CNAs than the control groups. Both CNAs and the control groups earn more each year as time progresses, a finding consistent with other research that shows that people tend to earn more as they age and those who earn the least drop out of the labor force, perhaps in favor of unpaid work or other work not capture by Wage Records. The difference in earnings between CNAs and the control groups diminishes slightly to $4,600 in Year 3, but the differences are still statistically significant at the 99.9% level.

Employment stability, or continuous employment, is an important factor to consider as individuals with less stable attachment to an employer may be more likely to leave Wyoming's labor market altogether (Harris, 2015). Individuals tend to have more continuous employer interactions as they age, and across all female control groups there was an increasing ratio of continuous employment interactions overtime. However, females who went on to become CNAs experienced a dip in the number of continuous employment interactions three years prior to receiving a nursing assistant certification. The difference between female CNAs and non-CNAs is not statistically significant three years prior, but the pattern may be important: although future CNAs were still statistically more likely to be employed in Wyoming three years prior to receiving a certificate, they had a decline in employment stability. The decline in employment stability during this period may be the catalyst that encouraged some individuals to eventually seek nursing assistant certification in the first place. Unlike employment and wages in Year 1, continuous employment for female CNAs was not consistently significantly different than the control groups. However, CNAs did have statistically higher stable employment in Year 2. This may be due to individuals changing employers after receiving a certificate, and reducing the first year ratio of employment stability in favor of longer term stability and earnings.

Overall, this study shows that females who received a nursing assistant certificate exhibited different labor market behavior and labor market attachment compared to their female peers. It is important to note that this study does not compare outcomes between males and females, but only compares female CNAs to female non-CNAs, and male CNAs to male non-CNAs. Given the low number of male nursing assistants overall, it is uncertain that future research could be done that would control for age and education, and produce statistically significant results. Outcomes can be compared within the same gender, but not between genders, as age, which is especially important to labor market interactions, is not accounted for between the males and females in this study. Appendix Table 3.2 of the Wyoming Department of Workforce Services, Research & Planning's *A*

Study of the Disparity in Wages and Benefits Between Men and Women In Wyoming: Update 2018 appendix materials (p. 649) indicates female nursing assistants earned mean hourly wages that were $0.72 less per hour than male nursing assistants between 2005 and 2017, a finding that was highly statistically significant. A further breakdown of the differences between wages of male and female nursing assistants by industry and county can be found in Appendix Table 2.1 of the same publication (Wyoming Department of Workforce Services, Research & Planning Sectionb, 2018, p. 206).

Limitations and Future Research

The limitations of this study were broadly the result of the availability and accuracy of the data used to put together the quasi-experimental design aspects of this study. Primarily, the accuracy of these results are dependent upon the accuracy of the data reported to Research & Planning by its partners, including Unemployment Insurance Wage Records, Vital Records, the Wyoming Community College Commission, the Wyoming Department of Education, and the Wyoming State Board of Nursing. A major limitation of this research was the inability to show statistical significance among male CNAs. It is unlikely that future, well-controlled research could produce statistically significant results comparing males with a nursing assistant certificate to males without a nursing assistant certificate in Wyoming, as fewer males earn nursing assistant certificates. Another limitation of this research is that R&P could only accurately report three years of employment history following the year and quarter in which a certificate was earned. Many more individuals, who met the criteria for inclusion in this analysis, were reported as having received nursing assistant certificates in 2014 and 2015 than in other years, which meant that wages and employment inaccurately appeared to drop off when more than three years of post-certification data were evaluated, and even to some extent in Year 3. Further, it is likely that some of these individuals who were included in this analysis, especially those certified more recently, will go on to earn further certifications, and would not be eligible for inclusion in a replicated study. Finally, this study does not compare employment, employment stability, and wages between females and males, and using the data reported in these tables to compare outcomes between genders would not be an accurate representation of what this analysis considered. R&P's most recent study on the gender pay gap, A Study of the Disparity in Wages Between Men and Women in Wyoming: Update 2018, can be found at https://doe.state.wy.us/LMI/WYWageGap2018.htm.

Future research could replicate this study in a similar fashion, as more data would be available to show the progression of labor market behavior before and after receiving a nursing assistant certificate. This information could help employers of nursing assistants better understand the labor market forces that lead to employee turnover. Future research could also attempt to compare outcomes between female and male CNAs. Comparisons could be made between labor market behavior of CNAs and the characteristics of CNAs who go on to earn other health care certifications or degrees, which could be important to those looking to invest in the education of Wyoming's health care workforce. More research into the measurable characteristics of those who earn a nursing assistant certificate in Wyoming but go on to leave Wyoming's labor

market shortly after could be especially useful for program administrators. In addition, outcomes from this research could be compared to programs costs to determine more cost-effective strategies for helping disadvantaged populations enter and maintain their connection with the workforce.

Conclusion

Favorable, statistically significant differences in employment, employment stability, and earnings were found for female certified nursing assistants in this study that utilized quasi-experimental design, multiple control groups, a chi-square test of dependence, and a Wilcoxon rank sum test. Female CNAs earned more than their counterparts, were more likely to be employed in Wyoming after earning a certificate in Wyoming, and often had more stable employment interactions with the Wyoming labor market. Consistent statistical differences were not found for male CNAs when compared to their counterparts, a finding that was likely influenced by the lower numbers of males who earn a nursing assistant certificate. Major limitations to this study include the availability of data, which was limited the scope of this study from six years prior to certification to three years after certification, and that the design of this study does not allow for comparisons of female outcomes to male outcomes.

Acknowledgment

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Wyoming Department of Workforce
Services, Research & Planning
P.O. Box 2760
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Appendix A1

Female Employment, 6 Years Prior, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG1	Total
	Employed	176	165	341
		0.1774	0.1774	
		9.43	8.84	18.27
		18.86	17.68	
	Not Employed	757	768	1525
		0.0397	0.0397	
		40.57	41.16	81.73
		81.14	82.32	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.4342	0.5099
Likelihood Ratio Chi-Square	1	0.4342	0.5099
Continuity Adj. Chi-Square	1	0.3588	0.5492
Mantel-Haenszel Chi-Square	1	0.434	0.5101
Phi Coefficient		0.0153	
Contingency Coefficient		0.0153	
Cramer's V		0.0153	

Pearson Chi-Square Test	
Chi-Square	0.4342
DF	1
Asymptotic Pr > ChiSq	0.5099

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.5431
99% Lower Conf Limit	0.5303
99% Upper Conf Limit	0.5559
Number of Samples	10000
Initial Seed	903180001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.4342
DF	1

Appendix A1

Female Employment, 6 Years Prior, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.5099

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.5545
99% Lower Conf Limit	0.5417
99% Upper Conf Limit	0.5673
Number of Samples	10000
Initial Seed	1545948520

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.434
DF	1
Asymptotic Pr > ChiSq	0.5101

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.5467
99% Lower Conf Limit	0.5339
99% Upper Conf Limit	0.5595
Number of Samples	10000
Initial Seed	532042637

Fisher's Exact Test	
Cell (1,1) Frequency (F)	176
Left-sided Pr <= F	0.7639
Right-sided Pr >= F	0.2746
Table Probability (P)	0.0385
Two-sided Pr <= P	0.5492

Sample Size = 1866

Appendix A1

Female Employment, 6 Years Prior, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG2	Total
	Employed	176	170	346
		0.052	0.052	
		9.43	9.11	18.54
		18.86	18.22	
	Not Employed	757	763	1520
		0.0118	0.0118	
		40.57	40.89	81.46
		81.14	81.78	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.1277	0.7208
Likelihood Ratio Chi-Square	1	0.1277	0.7208
Continuity Adj. Chi-Square	1	0.0887	0.7658
Mantel-Haenszel Chi-Square	1	0.1277	0.7209
Phi Coefficient		0.0083	
Contingency Coefficient		0.0083	
Cramer's V		0.0083	

Pearson Chi-Square Test	
Chi-Square	0.1277
DF	1
Asymptotic Pr > ChiSq	0.7208

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7727
99% Lower Conf Limit	0.7619
99% Upper Conf Limit	0.7835
Number of Samples	10000
Initial Seed	909109001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.1277
DF	1

Appendix A1

Female Employment, 6 Years Prior, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.7208

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7652
99% Lower Conf Limit	0.7543
99% Upper Conf Limit	0.7761
Number of Samples	10000
Initial Seed	1350401037

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.1277
DF	1
Asymptotic Pr > ChiSq	0.7209

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7715
99% Lower Conf Limit	0.7607
99% Upper Conf Limit	0.7823
Number of Samples	10000
Initial Seed	420213494

Fisher's Exact Test	
Cell (1,1) Frequency (F)	176
Left-sided Pr <= F	0.6616
Right-sided Pr >= F	0.3829
Table Probability (P)	0.0446
Two-sided Pr <= P	0.7659

Sample Size = 1866

Appendix A1

Female Employment, 6 Years Prior, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG3	Total
	Employed	176	178	354
		0.0056	0.0056	
		9.43	9.54	18.97
		18.86	19.08	
	Not Employed	757	755	1512
		0.0013	0.0013	
		40.57	40.46	81.03
		81.14	80.92	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.0139	0.906
Likelihood Ratio Chi-Square	1	0.0139	0.906
Continuity Adj. Chi-Square	1	0.0035	0.9529
Mantel-Haenszel Chi-Square	1	0.0139	0.906
Phi Coefficient		-0.0027	
Contingency Coefficient		0.0027	
Cramer's V		-0.0027	

Pearson Chi-Square Test	
Chi-Square	0.0139
DF	1
Asymptotic Pr > ChiSq	0.906

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.9529
99% Lower Conf Limit	0.9474
99% Upper Conf Limit	0.9584
Number of Samples	10000
Initial Seed	915044000

Likelihood Ratio Chi-Square Test	
Chi-Square	0.0139
DF	1

Appendix A1

Female Employment, 6 Years Prior, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.906

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.9536
99% Lower Conf Limit	0.9482
99% Upper Conf Limit	0.959
Number of Samples	10000
Initial Seed	1786408877

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.0139
DF	1
Asymptotic Pr > ChiSq	0.906

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.9537
99% Lower Conf Limit	0.9483
99% Upper Conf Limit	0.9591
Number of Samples	10000
Initial Seed	94367125

Fisher's Exact Test	
Cell (1,1) Frequency (F)	176
Left-sided Pr <= F	0.4765
Right-sided Pr >= F	0.5703
Table Probability (P)	0.0467
Two-sided Pr <= P	0.9529

Sample Size = 1866

Appendix A1

Female Employment, 3 Years Prior, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG1	Total
	Employed	577	529	1106
		1.0416	1.0416	
		30.92	28.35	59.27
		61.84	56.7	
	Not Employed	356	404	760
		1.5158	1.5158	
		19.08	21.65	40.73
		38.16	43.3	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	5.1148	0.0237
Likelihood Ratio Chi-Square	1	5.1174	0.0237
Continuity Adj. Chi-Square	1	4.9039	0.0268
Mantel-Haenszel Chi-Square	1	5.112	0.0238
Phi Coefficient		0.0524	
Contingency Coefficient		0.0523	
Cramer's V		0.0524	

Pearson Chi-Square Test	
Chi-Square	5.1148
DF	1
Asymptotic Pr > ChiSq	0.0237

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.023
99% Lower Conf Limit	0.0191
99% Upper Conf Limit	0.0269
Number of Samples	10000
Initial Seed	920845001

Likelihood Ratio Chi-Square Test	
Chi-Square	5.1174
DF	1

Appendix A1

Female Employment, 3 Years Prior, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.0237

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0255
99% Lower Conf Limit	0.0214
99% Upper Conf Limit	0.0296
Number of Samples	10000
Initial Seed	1812326557

Mantel-Haenszel Chi-Square Test	
Chi-Square	5.112
DF	1
Asymptotic Pr > ChiSq	0.0238

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0289
99% Lower Conf Limit	0.0246
99% Upper Conf Limit	0.0332
Number of Samples	10000
Initial Seed	813509653

Fisher's Exact Test	
Cell (1,1) Frequency (F)	577
Left-sided Pr <= F	0.9895
Right-sided Pr >= F	0.0134
Table Probability (P)	0.0029
Two-sided Pr <= P	0.0268

Sample Size = 1866

Appendix A1

Female Employment, 3 Years Prior, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	

Table of Employed by Grp			
Employed(Employed)	Grp(Grp)		
	CNA	CG2	Total
Employed	577	502	1079
	2.6066	2.6066	
	30.92	26.9	57.82
	61.84	53.8	
Not Employed	356	431	787
	3.5737	3.5737	
	19.08	23.1	42.18
	38.16	46.2	
Total	933	933	1866
	50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	12.3606	0.0004
Likelihood Ratio Chi-Square	1	12.3756	0.0004
Continuity Adj. Chi-Square	1	12.0331	0.0005
Mantel-Haenszel Chi-Square	1	12.3539	0.0004
Phi Coefficient		0.0814	
Contingency Coefficient		0.0811	
Cramer's V		0.0814	

Pearson Chi-Square Test	
Chi-Square	12.3606
DF	1
Asymptotic Pr > ChiSq	0.0004

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	6.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	0.0012
Number of Samples	10000
Initial Seed	927523000

Likelihood Ratio Chi-Square Test	
Chi-Square	12.3756
DF	1

Appendix A1

Female Employment, 3 Years Prior, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.0004

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	4.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	9.15E-04
Number of Samples	10000
Initial Seed	1946746141

Mantel-Haenszel Chi-Square Test	
Chi-Square	12.3539
DF	1
Asymptotic Pr > ChiSq	0.0004

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	3.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	7.46E-04
Number of Samples	10000
Initial Seed	937265243

Fisher's Exact Test	
Cell (1,1) Frequency (F)	577
Left-sided Pr <= F	0.9998
Right-sided Pr >= F	2.60E-04
Table Probability (P)	7.73E-05
Two-sided Pr <= P	5.19E-04

Sample Size = 1866

Appendix A1

Female Employment, 3 Years Prior, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG3	Total
	Employed	577	498	1075
		2.9028	2.9028	
		30.92	26.69	57.61
		61.84	53.38	
	Not Employed	356	435	791
		3.945	3.945	
		19.08	23.31	42.39
		38.16	46.62	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	13.6956	0.0002
Likelihood Ratio Chi-Square	1	13.714	0.0002
Continuity Adj. Chi-Square	1	13.3511	0.0003
Mantel-Haenszel Chi-Square	1	13.6883	0.0002
Phi Coefficient		0.0857	
Contingency Coefficient		0.0854	
Cramer's V		0.0857	

Pearson Chi-Square Test	
Chi-Square	13.6956
DF	1
Asymptotic Pr > ChiSq	0.0002

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	2.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	5.64E-04
Number of Samples	10000
Initial Seed	934824000

Likelihood Ratio Chi-Square Test	
Chi-Square	13.714
DF	1

Appendix A1

Female Employment, 3 Years Prior, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.0002

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	5.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	0.0011
Number of Samples	10000
Initial Seed	818558064

Mantel-Haenszel Chi-Square Test	
Chi-Square	13.6883
DF	1
Asymptotic Pr > ChiSq	0.0002

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	3.58E-04
Number of Samples	10000
Initial Seed	1456226835

Fisher's Exact Test	
Cell (1,1) Frequency (F)	577
Left-sided Pr <= F	0.9999
Right-sided Pr >= F	1.28E-04
Table Probability (P)	3.96E-05
Two-sided Pr <= P	2.56E-04

Sample Size = 1866

Appendix A1

Female Employment, Year 1, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG1	Total
	Employed	886	707	1593
		10.057	10.057	
		47.48	37.89	85.37
		94.96	75.78	
	Not Employed	47	226	273
		58.683	58.683	
		2.52	12.11	14.63
		5.04	24.22	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	137.4799	<.0001
Likelihood Ratio Chi-Square	1	147.8386	<.0001
Continuity Adj. Chi-Square	1	135.9481	<.0001
Mantel-Haenszel Chi-Square	1	137.4062	<.0001
Phi Coefficient		0.2714	
Contingency Coefficient		0.262	
Cramer's V		0.2714	

Pearson Chi-Square Test	
Chi-Square	137.4799
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	940877001

Likelihood Ratio Chi-Square Test	
Chi-Square	147.8386
DF	1

Appendix A1

Female Employment, Year 1, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	103433851

Mantel-Haenszel Chi-Square Test	
Chi-Square	137.4062
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	56092845

Fisher's Exact Test	
Cell (1,1) Frequency (F)	886
Left-sided Pr <= F	1
Right-sided Pr >= F	6.57E-34
Table Probability (P)	3.23E-33
Two-sided Pr <= P	1.31E-33

Sample Size = 1866

Appendix A1

Female Employment Year 1,CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG2	Total
	Employed	886	688	1574
		12.454	12.454	
		47.48	36.87	84.35
		94.96	73.74	
	Not Employed	47	245	292
		67.13	67.13	
		2.52	13.13	15.65
		5.04	26.26	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	159.1675	<.0001
Likelihood Ratio Chi-Square	1	172.0775	<.0001
Continuity Adj. Chi-Square	1	157.5638	<.0001
Mantel-Haenszel Chi-Square	1	159.0822	<.0001
Phi Coefficient		0.2921	
Contingency Coefficient		0.2803	
Cramer's V		0.2921	

Pearson Chi-Square Test	
Chi-Square	159.1675
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	947281000

Likelihood Ratio Chi-Square Test	
Chi-Square	172.0775
DF	1

Appendix A1

Female Employment Year 1,CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	2083244243

Mantel-Haenszel Chi-Square Test	
Chi-Square	159.0822
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	438918636

Fisher's Exact Test	
Cell (1,1) Frequency (F)	886
Left-sided Pr <= F	1
Right-sided Pr >= F	3.51E-39
Table Probability (P)	1.97E-38
Two-sided Pr <= P	7.03E-39

Sample Size = 1866

Appendix A1

Female Employment, Year 1, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	

Table of Employed by Grp			
Employed(Employed)	Grp(Grp)		
	CNA	CG3	Total
Employed	886	704	1590
	10.416	10.416	
	47.48	37.73	85.21
	94.96	75.46	
Not Employed	47	229	276
	60.007	60.007	
	2.52	12.27	14.79
	5.04	24.54	
Total	933	933	1866
	50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	140.8472	<.0001
Likelihood Ratio Chi-Square	1	151.593	<.0001
Continuity Adj. Chi-Square	1	139.3037	<.0001
Mantel-Haenszel Chi-Square	1	140.7717	<.0001
Phi Coefficient		0.2747	
Contingency Coefficient		0.2649	
Cramer's V		0.2747	

Pearson Chi-Square Test	
Chi-Square	140.8472
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	953284001

Likelihood Ratio Chi-Square Test	
Chi-Square	151.593
DF	1

Appendix A1

Female Employment, Year 1, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	168713992

Mantel-Haenszel Chi-Square Test	
Chi-Square	140.7717
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	277365027

Fisher's Exact Test	
Cell (1,1) Frequency (F)	886
Left-sided Pr <= F	1
Right-sided Pr >= F	1.00E-34
Table Probability (P)	5.04E-34
Two-sided Pr <= P	2.00E-34

Sample Size = 1866

Appendix A1

Female Employment, Year 2, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG1	Total
	Employed	842	674	1516
		9.3087	9.3087	
		45.12	36.12	81.24
		90.25	72.24	
	Not Employed	91	259	350
		40.32	40.32	
		4.88	13.88	18.76
		9.75	27.76	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	99.2574	<.0001
Likelihood Ratio Chi-Square	1	102.7189	<.0001
Continuity Adj. Chi-Square	1	98.0793	<.0001
Mantel-Haenszel Chi-Square	1	99.2042	<.0001
Phi Coefficient		0.2306	
Contingency Coefficient		0.2247	
Cramer's V		0.2306	

Pearson Chi-Square Test	
Chi-Square	99.2574
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	959205000

Likelihood Ratio Chi-Square Test	
Chi-Square	102.7189
DF	1

Appendix A1

Female Employment, Year 2, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	526586179

Mantel-Haenszel Chi-Square Test	
Chi-Square	99.2042
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	1500912007

Fisher's Exact Test	
Cell (1,1) Frequency (F)	842
Left-sided Pr <= F	1
Right-sided Pr >= F	3.72E-24
Table Probability (P)	9.43E-24
Two-sided Pr <= P	7.44E-24

Sample Size = 1866

Appendix A1

Female Employment, Year 2, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG2	Total
	Employed	842	678	1520
		8.8474	8.8474	
		45.12	36.33	81.46
		90.25	72.67	
	Not Employed	91	255	346
		38.867	38.867	
		4.88	13.67	18.54
		9.75	27.33	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	95.4288	<.0001
Likelihood Ratio Chi-Square	1	98.6723	<.0001
Continuity Adj. Chi-Square	1	94.2686	<.0001
Mantel-Haenszel Chi-Square	1	95.3777	<.0001
Phi Coefficient		0.2261	
Contingency Coefficient		0.2206	
Cramer's V		0.2261	

Pearson Chi-Square Test	
Chi-Square	95.4288
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	965187001

Likelihood Ratio Chi-Square Test	
Chi-Square	98.6723
DF	1

Appendix A1

Female Employment, Year 2, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	1716077919

Mantel-Haenszel Chi-Square Test	
Chi-Square	95.3777
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	442222951

Fisher's Exact Test	
Cell (1,1) Frequency (F)	842
Left-sided Pr <= F	1
Right-sided Pr >= F	2.84E-23
Table Probability (P)	6.98E-23
Two-sided Pr <= P	5.68E-23

Sample Size = 1866

Appendix A1

Female Employment, Year 2, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG3	Total
	Employed	842	663	1505
		10.645	10.645	
		45.12	35.53	80.65
		90.25	71.06	
	Not Employed	91	270	361
		44.378	44.378	
		4.88	14.47	19.35
		9.75	28.94	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	110.0459	<.0001
Likelihood Ratio Chi-Square	1	114.1468	<.0001
Continuity Adj. Chi-Square	1	108.8198	<.0001
Mantel-Haenszel Chi-Square	1	109.987	<.0001
Phi Coefficient		0.2428	
Contingency Coefficient		0.236	
Cramer's V		0.2428	

Pearson Chi-Square Test	
Chi-Square	110.0459
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	971047001

Likelihood Ratio Chi-Square Test	
Chi-Square	114.1468
DF	1

Appendix A1

Female Employment, Year 2, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	982041600

Mantel-Haenszel Chi-Square Test	
Chi-Square	109.987
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	450496835

Fisher's Exact Test	
Cell (1,1) Frequency (F)	842
Left-sided Pr <= F	1
Right-sided Pr >= F	1.20E-26
Table Probability (P)	3.30E-26
Two-sided Pr <= P	2.40E-26

Sample Size = 1866

Appendix A1

Female Employment, Year 3, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG1	Total
	Employed	718	575	1293
		7.9076	7.9076	
		38.48	30.81	69.29
		76.96	61.63	
	Not Employed	215	358	573
		17.844	17.844	
		11.52	19.19	30.71
		23.04	38.37	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	51.5028	<.0001
Likelihood Ratio Chi-Square	1	51.9152	<.0001
Continuity Adj. Chi-Square	1	50.785	<.0001
Mantel-Haenszel Chi-Square	1	51.4752	<.0001
Phi Coefficient		0.1661	
Contingency Coefficient		0.1639	
Cramer's V		0.1661	

Pearson Chi-Square Test	
Chi-Square	51.5028
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	977108001

Likelihood Ratio Chi-Square Test	
Chi-Square	51.9152
DF	1

Appendix A1

Female Employment, Year 3, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	602851568

Mantel-Haenszel Chi-Square Test	
Chi-Square	51.4752
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	762487359

Fisher's Exact Test	
Cell (1,1) Frequency (F)	718
Left-sided Pr <= F	1
Right-sided Pr >= F	4.22E-13
Table Probability (P)	2.22E-13
Two-sided Pr <= P	8.44E-13

Sample Size = 1866

Appendix A1

Female Employment, Year 3, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG2	Total
	Employed	718	597	1315
		5.5669	5.5669	
		38.48	31.99	70.47
		76.96	63.99	
	Not Employed	215	336	551
		13.286	13.286	
		11.52	18.01	29.53
		23.04	36.01	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	37.7055	<.0001
Likelihood Ratio Chi-Square	1	37.9391	<.0001
Continuity Adj. Chi-Square	1	37.0849	<.0001
Mantel-Haenszel Chi-Square	1	37.6853	<.0001
Phi Coefficient		0.1421	
Contingency Coefficient		0.1407	
Cramer's V		0.1421	

Pearson Chi-Square Test	
Chi-Square	37.7055
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	983101001

Likelihood Ratio Chi-Square Test	
Chi-Square	37.9391
DF	1

Appendix A1

Female Employment, Year 3, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	1684845776

Mantel-Haenszel Chi-Square Test	
Chi-Square	37.6853
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	10168133

Fisher's Exact Test	
Cell (1,1) Frequency (F)	718
Left-sided Pr <= F	1
Right-sided Pr >= F	5.05E-10
Table Probability (P)	2.41E-10
Two-sided Pr <= P	1.01E-09

Sample Size = 1866

Appendix A1

Female Employment, Year 3, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	

Table of Employed by Grp

Employed(Employed)	Grp(Grp)		
	CNA	CG3	Total
Employed	718	589	1307
	6.3661	6.3661	
	38.48	31.56	70.04
	76.96	63.13	
Not Employed	215	344	559
	14.885	14.885	
	11.52	18.44	29.96
	23.04	36.87	
Total	933	933	1866
	50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	42.5014	<.0001
Likelihood Ratio Chi-Square	1	42.7922	<.0001
Continuity Adj. Chi-Square	1	41.8451	<.0001
Mantel-Haenszel Chi-Square	1	42.4787	<.0001
Phi Coefficient		0.1509	
Contingency Coefficient		0.1492	
Cramer's V		0.1509	

Pearson Chi-Square Test	
Chi-Square	42.5014
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	989032001

Likelihood Ratio Chi-Square Test	
Chi-Square	42.7922
DF	1

Appendix A1

Female Employment, Year 3, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	1193677151

Mantel-Haenszel Chi-Square Test	
Chi-Square	42.4787
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	1824480730

Fisher's Exact Test	
Cell (1,1) Frequency (F)	718
Left-sided Pr <= F	1
Right-sided Pr >= F	4.29E-11
Table Probability (P)	2.12E-11
Two-sided Pr <= P	8.58E-11

Sample Size = 1866

Appendix A2

Female Employment, 6 Years Prior, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG1	Total
	Employed	176	165	341
		0.1774	0.1774	
		9.43	8.84	18.27
		18.86	17.68	
	Not Employed	757	768	1525
		0.0397	0.0397	
		40.57	41.16	81.73
		81.14	82.32	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.4342	0.5099
Likelihood Ratio Chi-Square	1	0.4342	0.5099
Continuity Adj. Chi-Square	1	0.3588	0.5492
Mantel-Haenszel Chi-Square	1	0.434	0.5101
Phi Coefficient		0.0153	
Contingency Coefficient		0.0153	
Cramer's V		0.0153	

Pearson Chi-Square Test	
Chi-Square	0.4342
DF	1
Asymptotic Pr > ChiSq	0.5099

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.5431
99% Lower Conf Limit	0.5303
99% Upper Conf Limit	0.5559
Number of Samples	10000
Initial Seed	903180001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.4342
DF	1

Appendix A2

Female Employment, 6 Years Prior, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.5099

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.5545
99% Lower Conf Limit	0.5417
99% Upper Conf Limit	0.5673
Number of Samples	10000
Initial Seed	1545948520

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.434
DF	1
Asymptotic Pr > ChiSq	0.5101

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.5467
99% Lower Conf Limit	0.5339
99% Upper Conf Limit	0.5595
Number of Samples	10000
Initial Seed	532042637

Fisher's Exact Test	
Cell (1,1) Frequency (F)	176
Left-sided Pr <= F	0.7639
Right-sided Pr >= F	0.2746
Table Probability (P)	0.0385
Two-sided Pr <= P	0.5492

Sample Size = 1866

Appendix A2

Female Employment, 6 Years Prior, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG2	Total
	Employed	176	170	346
		0.052	0.052	
		9.43	9.11	18.54
		18.86	18.22	
	Not Employed	757	763	1520
		0.0118	0.0118	
		40.57	40.89	81.46
		81.14	81.78	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.1277	0.7208
Likelihood Ratio Chi-Square	1	0.1277	0.7208
Continuity Adj. Chi-Square	1	0.0887	0.7658
Mantel-Haenszel Chi-Square	1	0.1277	0.7209
Phi Coefficient		0.0083	
Contingency Coefficient		0.0083	
Cramer's V		0.0083	

Pearson Chi-Square Test	
Chi-Square	0.1277
DF	1
Asymptotic Pr > ChiSq	0.7208

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7727
99% Lower Conf Limit	0.7619
99% Upper Conf Limit	0.7835
Number of Samples	10000
Initial Seed	909109001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.1277
DF	1

Appendix A2

Female Employment, 6 Years Prior, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.7208

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7652
99% Lower Conf Limit	0.7543
99% Upper Conf Limit	0.7761
Number of Samples	10000
Initial Seed	1350401037

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.1277
DF	1
Asymptotic Pr > ChiSq	0.7209

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7715
99% Lower Conf Limit	0.7607
99% Upper Conf Limit	0.7823
Number of Samples	10000
Initial Seed	420213494

Fisher's Exact Test	
Cell (1,1) Frequency (F)	176
Left-sided Pr <= F	0.6616
Right-sided Pr >= F	0.3829
Table Probability (P)	0.0446
Two-sided Pr <= P	0.7659

Sample Size = 1866

Appendix A2

Female Employment, 6 Years Prior, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG3	Total
	Employed	176	178	354
		0.0056	0.0056	
		9.43	9.54	18.97
		18.86	19.08	
	Not Employed	757	755	1512
		0.0013	0.0013	
		40.57	40.46	81.03
		81.14	80.92	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.0139	0.906
Likelihood Ratio Chi-Square	1	0.0139	0.906
Continuity Adj. Chi-Square	1	0.0035	0.9529
Mantel-Haenszel Chi-Square	1	0.0139	0.906
Phi Coefficient		-0.0027	
Contingency Coefficient		0.0027	
Cramer's V		-0.0027	

Pearson Chi-Square Test	
Chi-Square	0.0139
DF	1
Asymptotic Pr > ChiSq	0.906

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.9529
99% Lower Conf Limit	0.9474
99% Upper Conf Limit	0.9584
Number of Samples	10000
Initial Seed	915044000

Likelihood Ratio Chi-Square Test	
Chi-Square	0.0139
DF	1

Appendix A2

Female Employment, 6 Years Prior, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.906

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.9536
99% Lower Conf Limit	0.9482
99% Upper Conf Limit	0.959
Number of Samples	10000
Initial Seed	1786408877

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.0139
DF	1
Asymptotic Pr > ChiSq	0.906

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.9537
99% Lower Conf Limit	0.9483
99% Upper Conf Limit	0.9591
Number of Samples	10000
Initial Seed	94367125

Fisher's Exact Test	
Cell (1,1) Frequency (F)	176
Left-sided Pr <= F	0.4765
Right-sided Pr >= F	0.5703
Table Probability (P)	0.0467
Two-sided Pr <= P	0.9529

Sample Size = 1866

Appendix A2

Female Employment, 3 Years Prior, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG1	Total
	Employed	577	529	1106
		1.0416	1.0416	
		30.92	28.35	59.27
		61.84	56.7	
	Not Employed	356	404	760
		1.5158	1.5158	
		19.08	21.65	40.73
		38.16	43.3	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	5.1148	0.0237
Likelihood Ratio Chi-Square	1	5.1174	0.0237
Continuity Adj. Chi-Square	1	4.9039	0.0268
Mantel-Haenszel Chi-Square	1	5.112	0.0238
Phi Coefficient		0.0524	
Contingency Coefficient		0.0523	
Cramer's V		0.0524	

Pearson Chi-Square Test	
Chi-Square	5.1148
DF	1
Asymptotic Pr > ChiSq	0.0237

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.023
99% Lower Conf Limit	0.0191
99% Upper Conf Limit	0.0269
Number of Samples	10000
Initial Seed	920845001

Likelihood Ratio Chi-Square Test	
Chi-Square	5.1174
DF	1

Appendix A2

Female Employment, 3 Years Prior, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.0237

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0255
99% Lower Conf Limit	0.0214
99% Upper Conf Limit	0.0296
Number of Samples	10000
Initial Seed	1812326557

Mantel-Haenszel Chi-Square Test	
Chi-Square	5.112
DF	1
Asymptotic Pr > ChiSq	0.0238

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0289
99% Lower Conf Limit	0.0246
99% Upper Conf Limit	0.0332
Number of Samples	10000
Initial Seed	813509653

Fisher's Exact Test	
Cell (1,1) Frequency (F)	577
Left-sided Pr <= F	0.9895
Right-sided Pr >= F	0.0134
Table Probability (P)	0.0029
Two-sided Pr <= P	0.0268

Sample Size = 1866

Appendix A2

Female Employment, 3 Years Prior, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	

Table of Employed by Grp			
Employed(Employed)	Grp(Grp)		
	CNA	CG2	Total
Employed	577	502	1079
	2.6066	2.6066	
	30.92	26.9	57.82
	61.84	53.8	
Not Employed	356	431	787
	3.5737	3.5737	
	19.08	23.1	42.18
	38.16	46.2	
Total	933	933	1866
	50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	12.3606	0.0004
Likelihood Ratio Chi-Square	1	12.3756	0.0004
Continuity Adj. Chi-Square	1	12.0331	0.0005
Mantel-Haenszel Chi-Square	1	12.3539	0.0004
Phi Coefficient		0.0814	
Contingency Coefficient		0.0811	
Cramer's V		0.0814	

Pearson Chi-Square Test	
Chi-Square	12.3606
DF	1
Asymptotic Pr > ChiSq	0.0004

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	6.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	0.0012
Number of Samples	10000
Initial Seed	927523000

Likelihood Ratio Chi-Square Test	
Chi-Square	12.3756
DF	1

Appendix A2

Female Employment, 3 Years Prior, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.0004

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	4.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	9.15E-04
Number of Samples	10000
Initial Seed	1946746141

Mantel-Haenszel Chi-Square Test	
Chi-Square	12.3539
DF	1
Asymptotic Pr > ChiSq	0.0004

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	3.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	7.46E-04
Number of Samples	10000
Initial Seed	937265243

Fisher's Exact Test	
Cell (1,1) Frequency (F)	577
Left-sided Pr <= F	0.9998
Right-sided Pr >= F	2.60E-04
Table Probability (P)	7.73E-05
Two-sided Pr <= P	5.19E-04

Sample Size = 1866

Appendix A2

Female Employment, 3 Years Prior, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG3	Total
	Employed	577	498	1075
		2.9028	2.9028	
		30.92	26.69	57.61
		61.84	53.38	
	Not Employed	356	435	791
		3.945	3.945	
		19.08	23.31	42.39
		38.16	46.62	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	13.6956	0.0002
Likelihood Ratio Chi-Square	1	13.714	0.0002
Continuity Adj. Chi-Square	1	13.3511	0.0003
Mantel-Haenszel Chi-Square	1	13.6883	0.0002
Phi Coefficient		0.0857	
Contingency Coefficient		0.0854	
Cramer's V		0.0857	

Pearson Chi-Square Test	
Chi-Square	13.6956
DF	1
Asymptotic Pr > ChiSq	0.0002

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	2.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	5.64E-04
Number of Samples	10000
Initial Seed	934824000

Likelihood Ratio Chi-Square Test	
Chi-Square	13.714
DF	1

Appendix A2

Female Employment, 3 Years Prior, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.0002

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	5.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	0.0011
Number of Samples	10000
Initial Seed	818558064

Mantel-Haenszel Chi-Square Test	
Chi-Square	13.6883
DF	1
Asymptotic Pr > ChiSq	0.0002

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	3.58E-04
Number of Samples	10000
Initial Seed	1456226835

Fisher's Exact Test	
Cell (1,1) Frequency (F)	577
Left-sided Pr <= F	0.9999
Right-sided Pr >= F	1.28E-04
Table Probability (P)	3.96E-05
Two-sided Pr <= P	2.56E-04

Sample Size = 1866

Appendix A2

Female Employment, Year 1, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG1	Total
	Employed	886	707	1593
		10.057	10.057	
		47.48	37.89	85.37
		94.96	75.78	
	Not Employed	47	226	273
		58.683	58.683	
		2.52	12.11	14.63
		5.04	24.22	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	137.4799	<.0001
Likelihood Ratio Chi-Square	1	147.8386	<.0001
Continuity Adj. Chi-Square	1	135.9481	<.0001
Mantel-Haenszel Chi-Square	1	137.4062	<.0001
Phi Coefficient		0.2714	
Contingency Coefficient		0.262	
Cramer's V		0.2714	

Pearson Chi-Square Test	
Chi-Square	137.4799
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	940877001

Likelihood Ratio Chi-Square Test	
Chi-Square	147.8386
DF	1

Appendix A2

Female Employment, Year 1, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	103433851

Mantel-Haenszel Chi-Square Test	
Chi-Square	137.4062
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	56092845

Fisher's Exact Test	
Cell (1,1) Frequency (F)	886
Left-sided Pr <= F	1
Right-sided Pr >= F	6.57E-34
Table Probability (P)	3.23E-33
Two-sided Pr <= P	1.31E-33

Sample Size = 1866

Appendix A2

Female Employment Year 1,CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG2	Total
	Employed	886	688	1574
		12.454	12.454	
		47.48	36.87	84.35
		94.96	73.74	
	Not Employed	47	245	292
		67.13	67.13	
		2.52	13.13	15.65
		5.04	26.26	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	159.1675	<.0001
Likelihood Ratio Chi-Square	1	172.0775	<.0001
Continuity Adj. Chi-Square	1	157.5638	<.0001
Mantel-Haenszel Chi-Square	1	159.0822	<.0001
Phi Coefficient		0.2921	
Contingency Coefficient		0.2803	
Cramer's V		0.2921	

Pearson Chi-Square Test	
Chi-Square	159.1675
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	947281000

Likelihood Ratio Chi-Square Test	
Chi-Square	172.0775
DF	1

Appendix A2

Female Employment Year 1,CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	2083244243

Mantel-Haenszel Chi-Square Test	
Chi-Square	159.0822
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	438918636

Fisher's Exact Test	
Cell (1,1) Frequency (F)	886
Left-sided Pr <= F	1
Right-sided Pr >= F	3.51E-39
Table Probability (P)	1.97E-38
Two-sided Pr <= P	7.03E-39

Sample Size = 1866

Appendix A2

Female Employment, Year 1, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	

Table of Employed by Grp			
Employed(Employed)	Grp(Grp)		
	CNA	CG3	Total
Employed	886	704	1590
	10.416	10.416	
	47.48	37.73	85.21
	94.96	75.46	
Not Employed	47	229	276
	60.007	60.007	
	2.52	12.27	14.79
	5.04	24.54	
Total	933	933	1866
	50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	140.8472	<.0001
Likelihood Ratio Chi-Square	1	151.593	<.0001
Continuity Adj. Chi-Square	1	139.3037	<.0001
Mantel-Haenszel Chi-Square	1	140.7717	<.0001
Phi Coefficient		0.2747	
Contingency Coefficient		0.2649	
Cramer's V		0.2747	

Pearson Chi-Square Test	
Chi-Square	140.8472
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	953284001

Likelihood Ratio Chi-Square Test	
Chi-Square	151.593
DF	1

Appendix A2

Female Employment, Year 1, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	168713992

Mantel-Haenszel Chi-Square Test	
Chi-Square	140.7717
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	277365027

Fisher's Exact Test	
Cell (1,1) Frequency (F)	886
Left-sided Pr <= F	1
Right-sided Pr >= F	1.00E-34
Table Probability (P)	5.04E-34
Two-sided Pr <= P	2.00E-34

Sample Size = 1866

Appendix A2

Female Employment, Year 2, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG1	Total
	Employed	842	674	1516
		9.3087	9.3087	
		45.12	36.12	81.24
		90.25	72.24	
	Not Employed	91	259	350
		40.32	40.32	
		4.88	13.88	18.76
		9.75	27.76	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	99.2574	<.0001
Likelihood Ratio Chi-Square	1	102.7189	<.0001
Continuity Adj. Chi-Square	1	98.0793	<.0001
Mantel-Haenszel Chi-Square	1	99.2042	<.0001
Phi Coefficient		0.2306	
Contingency Coefficient		0.2247	
Cramer's V		0.2306	

Pearson Chi-Square Test	
Chi-Square	99.2574
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	959205000

Likelihood Ratio Chi-Square Test	
Chi-Square	102.7189
DF	1

Appendix A2

Female Employment, Year 2, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	526586179

Mantel-Haenszel Chi-Square Test	
Chi-Square	99.2042
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	1500912007

Fisher's Exact Test	
Cell (1,1) Frequency (F)	842
Left-sided Pr <= F	1
Right-sided Pr >= F	3.72E-24
Table Probability (P)	9.43E-24
Two-sided Pr <= P	7.44E-24

Sample Size = 1866

Appendix A2

Female Employment, Year 2, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG2	Total
	Employed	842	678	1520
		8.8474	8.8474	
		45.12	36.33	81.46
		90.25	72.67	
	Not Employed	91	255	346
		38.867	38.867	
		4.88	13.67	18.54
		9.75	27.33	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	95.4288	<.0001
Likelihood Ratio Chi-Square	1	98.6723	<.0001
Continuity Adj. Chi-Square	1	94.2686	<.0001
Mantel-Haenszel Chi-Square	1	95.3777	<.0001
Phi Coefficient		0.2261	
Contingency Coefficient		0.2206	
Cramer's V		0.2261	

Pearson Chi-Square Test	
Chi-Square	95.4288
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	965187001

Likelihood Ratio Chi-Square Test	
Chi-Square	98.6723
DF	1

Appendix A2

Female Employment, Year 2, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	1716077919

Mantel-Haenszel Chi-Square Test	
Chi-Square	95.3777
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	442222951

Fisher's Exact Test	
Cell (1,1) Frequency (F)	842
Left-sided Pr <= F	1
Right-sided Pr >= F	2.84E-23
Table Probability (P)	6.98E-23
Two-sided Pr <= P	5.68E-23

Sample Size = 1866

Appendix A2

Female Employment, Year 2, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG3	Total
	Employed	842	663	1505
		10.645	10.645	
		45.12	35.53	80.65
		90.25	71.06	
	Not Employed	91	270	361
		44.378	44.378	
		4.88	14.47	19.35
		9.75	28.94	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	110.0459	<.0001
Likelihood Ratio Chi-Square	1	114.1468	<.0001
Continuity Adj. Chi-Square	1	108.8198	<.0001
Mantel-Haenszel Chi-Square	1	109.987	<.0001
Phi Coefficient		0.2428	
Contingency Coefficient		0.236	
Cramer's V		0.2428	

Pearson Chi-Square Test	
Chi-Square	110.0459
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	971047001

Likelihood Ratio Chi-Square Test	
Chi-Square	114.1468
DF	1

Appendix A2

Female Employment, Year 2, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	982041600

Mantel-Haenszel Chi-Square Test	
Chi-Square	109.987
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	450496835

Fisher's Exact Test	
Cell (1,1) Frequency (F)	842
Left-sided Pr <= F	1
Right-sided Pr >= F	1.20E-26
Table Probability (P)	3.30E-26
Two-sided Pr <= P	2.40E-26

Sample Size = 1866

Appendix A2

Female Employment, Year 3, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG1	Total
	Employed	718	575	1293
		7.9076	7.9076	
		38.48	30.81	69.29
		76.96	61.63	
	Not Employed	215	358	573
		17.844	17.844	
		11.52	19.19	30.71
		23.04	38.37	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	51.5028	<.0001
Likelihood Ratio Chi-Square	1	51.9152	<.0001
Continuity Adj. Chi-Square	1	50.785	<.0001
Mantel-Haenszel Chi-Square	1	51.4752	<.0001
Phi Coefficient		0.1661	
Contingency Coefficient		0.1639	
Cramer's V		0.1661	

Pearson Chi-Square Test	
Chi-Square	51.5028
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	977108001

Likelihood Ratio Chi-Square Test	
Chi-Square	51.9152
DF	1

Appendix A2

Female Employment, Year 3, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	602851568

Mantel-Haenszel Chi-Square Test	
Chi-Square	51.4752
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	762487359

Fisher's Exact Test	
Cell (1,1) Frequency (F)	718
Left-sided Pr <= F	1
Right-sided Pr >= F	4.22E-13
Table Probability (P)	2.22E-13
Two-sided Pr <= P	8.44E-13

Sample Size = 1866

Appendix A2

Female Employment, Year 3, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG2	Total
	Employed	718	597	1315
		5.5669	5.5669	
		38.48	31.99	70.47
		76.96	63.99	
	Not Employed	215	336	551
		13.286	13.286	
		11.52	18.01	29.53
		23.04	36.01	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	37.7055	<.0001
Likelihood Ratio Chi-Square	1	37.9391	<.0001
Continuity Adj. Chi-Square	1	37.0849	<.0001
Mantel-Haenszel Chi-Square	1	37.6853	<.0001
Phi Coefficient		0.1421	
Contingency Coefficient		0.1407	
Cramer's V		0.1421	

Pearson Chi-Square Test	
Chi-Square	37.7055
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	983101001

Likelihood Ratio Chi-Square Test	
Chi-Square	37.9391
DF	1

Appendix A2

Female Employment, Year 3, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	1684845776

Mantel-Haenszel Chi-Square Test	
Chi-Square	37.6853
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	10168133

Fisher's Exact Test	
Cell (1,1) Frequency (F)	718
Left-sided Pr <= F	1
Right-sided Pr >= F	5.05E-10
Table Probability (P)	2.41E-10
Two-sided Pr <= P	1.01E-09

Sample Size = 1866

Appendix A2

Female Employment, Year 3, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	

Table of Employed by Grp			
Employed(Employed)	Grp(Grp)		
	CNA	CG3	Total
Employed	718	589	1307
	6.3661	6.3661	
	38.48	31.56	70.04
	76.96	63.13	
Not Employed	215	344	559
	14.885	14.885	
	11.52	18.44	29.96
	23.04	36.87	
Total	933	933	1866
	50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	42.5014	<.0001
Likelihood Ratio Chi-Square	1	42.7922	<.0001
Continuity Adj. Chi-Square	1	41.8451	<.0001
Mantel-Haenszel Chi-Square	1	42.4787	<.0001
Phi Coefficient		0.1509	
Contingency Coefficient		0.1492	
Cramer's V		0.1509	

Pearson Chi-Square Test	
Chi-Square	42.5014
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	989032001

Likelihood Ratio Chi-Square Test	
Chi-Square	42.7922
DF	1

Appendix A2

Female Employment, Year 3, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	1193677151

Mantel-Haenszel Chi-Square Test	
Chi-Square	42.4787
DF	1
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0
99% Lower Conf Limit	0
99% Upper Conf Limit	4.60E-04
Number of Samples	10000
Initial Seed	1824480730

Fisher's Exact Test	
Cell (1,1) Frequency (F)	718
Left-sided Pr <= F	1
Right-sided Pr >= F	4.29E-11
Table Probability (P)	2.12E-11
Two-sided Pr <= P	8.58E-11

Sample Size = 1866

Appendix B1

Female Continuous Employment, 6 Years Prior, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG1	Total
	Non-Continuous Interactions	176	165	341
		0.1774	0.1774	
		9.43	8.84	18.27
		18.86	17.68	
	Continuous Interactions	757	768	1525
		0.0397	0.0397	
		40.57	41.16	81.73
		81.14	82.32	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.4342	0.5099
Likelihood Ratio Chi-Square	1	0.4342	0.5099
Continuity Adj. Chi-Square	1	0.3588	0.5492
Mantel-Haenszel Chi-Square	1	0.434	0.5101
Phi Coefficient		0.0153	
Contingency Coefficient		0.0153	
Cramer's V		0.0153	

Pearson Chi-Square Test	
Chi-Square	0.4342
DF	1
Asymptotic Pr > ChiSq	0.5099

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.5431
99% Lower Conf Limit	0.5303
99% Upper Conf Limit	0.5559
Number of Samples	10000
Initial Seed	903180001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.4342
DF	1

Appendix B1

Female Continuous Employment, 6 Years Prior, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.5099

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.5545
99% Lower Conf Limit	0.5417
99% Upper Conf Limit	0.5673
Number of Samples	10000
Initial Seed	1545948520

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.434
DF	1
Asymptotic Pr > ChiSq	0.5101

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.5467
99% Lower Conf Limit	0.5339
99% Upper Conf Limit	0.5595
Number of Samples	10000
Initial Seed	532042637

Fisher's Exact Test	
Cell (1,1) Frequency (F)	176
Left-sided Pr <= F	0.7639
Right-sided Pr >= F	0.2746
Table Probability (P)	0.0385
Two-sided Pr <= P	0.5492

Sample Size = 1866

Appendix B1

Female Continuous Employment, 6 Years Prior, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG2	Total
	Non-Continuous Interactions	176	170	346
		0.052	0.052	
		9.43	9.11	18.54
		18.86	18.22	
	Continuous Interactions	757	763	1520
		0.0118	0.0118	
		40.57	40.89	81.46
		81.14	81.78	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.1277	0.7208
Likelihood Ratio Chi-Square	1	0.1277	0.7208
Continuity Adj. Chi-Square	1	0.0887	0.7658
Mantel-Haenszel Chi-Square	1	0.1277	0.7209
Phi Coefficient		0.0083	
Contingency Coefficient		0.0083	
Cramer's V		0.0083	

Pearson Chi-Square Test	
Chi-Square	0.1277
DF	1
Asymptotic Pr > ChiSq	0.7208

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7727
99% Lower Conf Limit	0.7619
99% Upper Conf Limit	0.7835
Number of Samples	10000
Initial Seed	909109001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.1277
DF	1

Appendix B1

Female Continuous Employment, 6 Years Prior, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.7208

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7652
99% Lower Conf Limit	0.7543
99% Upper Conf Limit	0.7761
Number of Samples	10000
Initial Seed	1350401037

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.1277
DF	1
Asymptotic Pr > ChiSq	0.7209

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7715
99% Lower Conf Limit	0.7607
99% Upper Conf Limit	0.7823
Number of Samples	10000
Initial Seed	420213494

Fisher's Exact Test	
Cell (1,1) Frequency (F)	176
Left-sided Pr <= F	0.6616
Right-sided Pr >= F	0.3829
Table Probability (P)	0.0446
Two-sided Pr <= P	0.7659

Sample Size = 1866

Appendix B1

Female Continuous Employment, 6 Years Prior, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG3	Total
	Non-Continuous Interactions	176	178	354
		0.0056	0.0056	
		9.43	9.54	18.97
		18.86	19.08	
	Continuous Interactions	757	755	1512
		0.0013	0.0013	
		40.57	40.46	81.03
		81.14	80.92	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.0139	0.906
Likelihood Ratio Chi-Square	1	0.0139	0.906
Continuity Adj. Chi-Square	1	0.0035	0.9529
Mantel-Haenszel Chi-Square	1	0.0139	0.906
Phi Coefficient		-0.0027	
Contingency Coefficient		0.0027	
Cramer's V		-0.0027	

Pearson Chi-Square Test	
Chi-Square	0.0139
DF	1
Asymptotic Pr > ChiSq	0.906

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.9529
99% Lower Conf Limit	0.9474
99% Upper Conf Limit	0.9584
Number of Samples	10000
Initial Seed	915044000

Likelihood Ratio Chi-Square Test	
Chi-Square	0.0139
DF	1

Appendix B1

Female Continuous Employment, 6 Years Prior, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.906

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.9536
99% Lower Conf Limit	0.9482
99% Upper Conf Limit	0.959
Number of Samples	10000
Initial Seed	1786408877

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.0139
DF	1
Asymptotic Pr > ChiSq	0.906

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.9537
99% Lower Conf Limit	0.9483
99% Upper Conf Limit	0.9591
Number of Samples	10000
Initial Seed	94367125

Fisher's Exact Test	
Cell (1,1) Frequency (F)	176
Left-sided Pr <= F	0.4765
Right-sided Pr >= F	0.5703
Table Probability (P)	0.0467
Two-sided Pr <= P	0.9529

Sample Size = 1866

Appendix B1

Female Continuous Employment, 3 Years Prior, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp		
Continuous(Continuous)	Grp(Grp)		
	CNA	CG1	Total
Non-Continuous Interactions	526	465	991
	0.0478	0.053	
	31.86	28.16	60.02
	60.6	59.39	
Continuous Interactions	342	318	660
	0.0718	0.0795	
	20.71	19.26	39.98
	39.4	40.61	
Total	868	783	1651
	52.57	47.43	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.2521	0.6156
Likelihood Ratio Chi-Square	1	0.252	0.6157
Continuity Adj. Chi-Square	1	0.2041	0.6515
Mantel-Haenszel Chi-Square	1	0.2519	0.6157
Phi Coefficient		0.0124	
Contingency Coefficient		0.0124	
Cramer's V		0.0124	

Pearson Chi-Square Test	
Chi-Square	0.2521
DF	1
Asymptotic Pr > ChiSq	0.6156

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.6529
99% Lower Conf Limit	0.6406
99% Upper Conf Limit	0.6652
Number of Samples	10000
Initial Seed	720993001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.252
DF	1

Appendix B1

Female Continuous Employment, 3 Years Prior, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.6157

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.6538
99% Lower Conf Limit	0.6415
99% Upper Conf Limit	0.6661
Number of Samples	10000
Initial Seed	1346151078

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.2519
DF	1
Asymptotic Pr > ChiSq	0.6157

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.6532
99% Lower Conf Limit	0.6409
99% Upper Conf Limit	0.6655
Number of Samples	10000
Initial Seed	1350357632

Fisher's Exact Test	
Cell (1,1) Frequency (F)	526
Left-sided Pr <= F	0.7097
Right-sided Pr >= F	0.3257
Table Probability (P)	0.0354
Two-sided Pr <= P	0.6507

Sample Size = 1651

Appendix B1

Female Continuous Employment, 3 Years Prior, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG2	Total
	Non-Continuous Interactions	577	502	1079
		2.6066	2.6066	
		30.92	26.9	57.82
		61.84	53.8	
	Continuous Interactions	356	431	787
		3.5737	3.5737	
		19.08	23.1	42.18
		38.16	46.2	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	12.3606	0.0004
Likelihood Ratio Chi-Square	1	12.3756	0.0004
Continuity Adj. Chi-Square	1	12.0331	0.0005
Mantel-Haenszel Chi-Square	1	12.3539	0.0004
Phi Coefficient		0.0814	
Contingency Coefficient		0.0811	
Cramer's V		0.0814	

Pearson Chi-Square Test	
Chi-Square	12.3606
DF	1
Asymptotic Pr > ChiSq	0.0004

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	6.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	0.0012
Number of Samples	10000
Initial Seed	927523000

Likelihood Ratio Chi-Square Test	
Chi-Square	12.3756
DF	1

Appendix B1

Female Continuous Employment, 3 Years Prior, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.0004

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	4.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	9.15E-04
Number of Samples	10000
Initial Seed	1946746141

Mantel-Haenszel Chi-Square Test	
Chi-Square	12.3539
DF	1
Asymptotic Pr > ChiSq	0.0004

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	3.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	7.46E-04
Number of Samples	10000
Initial Seed	937265243

Fisher's Exact Test	
Cell (1,1) Frequency (F)	577
Left-sided Pr <= F	0.9998
Right-sided Pr >= F	2.60E-04
Table Probability (P)	7.73E-05
Two-sided Pr <= P	5.19E-04

Sample Size = 1866

Appendix B1

Female Continuous Employment, 3 Years Prior, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Employed by Grp			
	Employed(Employed)	Grp(Grp)		
		CNA	CG3	Total
	Non-Continuous Interactions	577	498	1075
		2.9028	2.9028	
		30.92	26.69	57.61
		61.84	53.38	
	Continuous Interactions	356	435	791
		3.945	3.945	
		19.08	23.31	42.39
		38.16	46.62	
	Total	933	933	1866
		50	50	100

Statistics for Table of Employed by Grp

Statistic	DF	Value	Prob
Chi-Square	1	13.6956	0.0002
Likelihood Ratio Chi-Square	1	13.714	0.0002
Continuity Adj. Chi-Square	1	13.3511	0.0003
Mantel-Haenszel Chi-Square	1	13.6883	0.0002
Phi Coefficient		0.0857	
Contingency Coefficient		0.0854	
Cramer's V		0.0857	

Pearson Chi-Square Test	
Chi-Square	13.6956
DF	1
Asymptotic Pr > ChiSq	0.0002

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	2.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	5.64E-04
Number of Samples	10000
Initial Seed	934824000

Likelihood Ratio Chi-Square Test	
Chi-Square	13.714
DF	1

Appendix B1

Female Continuous Employment, 3 Years Prior, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.0002

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	5.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	0.0011
Number of Samples	10000
Initial Seed	818558064

Mantel-Haenszel Chi-Square Test	
Chi-Square	13.6883
DF	1
Asymptotic Pr > ChiSq	0.0002

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1.00E-04
99% Lower Conf Limit	0
99% Upper Conf Limit	3.58E-04
Number of Samples	10000
Initial Seed	1456226835

Fisher's Exact Test	
Cell (1,1) Frequency (F)	577
Left-sided Pr <= F	0.9999
Right-sided Pr >= F	1.28E-04
Table Probability (P)	3.96E-05
Two-sided Pr <= P	2.56E-04

Sample Size = 1866

Appendix B1

Female Continuous Employment, Year 1, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous (Continuous)	Grp(Grp)		
		CNA	CG1	Total
	Non-Continuous Interactions	769	594	1363
		0.6679	0.9264	
		29.83	23.04	52.87
		51.34	55	
	Continuous Interactions	729	486	1215
		0.7492	1.0392	
		28.28	18.85	47.13
		48.66	45	
	Total	1498	1080	2578
		58.11	41.89	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	3.3827	0.0659
Likelihood Ratio Chi-Square	1	3.3851	0.0658
Continuity Adj. Chi-Square	1	3.2372	0.072
Mantel-Haenszel Chi-Square	1	3.3814	0.0659
Phi Coefficient		-0.0362	
Contingency Coefficient		0.0362	
Cramer's V		-0.0362	

Pearson Chi-Square Test	
Chi-Square	3.3827
DF	1
Asymptotic Pr > ChiSq	0.0659

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.07
99% Lower Conf Limit	0.0634
99% Upper Conf Limit	0.0766
Number of Samples	10000
Initial Seed	737542001

Likelihood Ratio Chi-Square Test	
Chi-Square	3.3851
DF	1

Appendix B1

Female Continuous Employment, Year 1, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.0658

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0656
99% Lower Conf Limit	0.0592
99% Upper Conf Limit	0.072
Number of Samples	10000
Initial Seed	1951463852

Mantel-Haenszel Chi-Square Test	
Chi-Square	3.3814
DF	1
Asymptotic Pr > ChiSq	0.0659

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0712
99% Lower Conf Limit	0.0646
99% Upper Conf Limit	0.0778
Number of Samples	10000
Initial Seed	113389751

Fisher's Exact Test	
Cell (1,1) Frequency (F)	769
Left-sided Pr <= F	0.036
Right-sided Pr >= F	0.9699
Table Probability (P)	0.0059
Two-sided Pr <= P	0.0719

Sample Size = 2578

Appendix B1

Female Continuous Employment, Year 1, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp		
	Continuous (Continuous)	Grp(Grp)	
		CNA	CG2	Total
	Non-Continuous Interactions	769 0.2954 30.13 51.34	567 0.4198 22.22 53.8	1336 52.35
	Continuous Interactions	729 0.3245 28.57 48.66	487 0.4612 19.08 46.2	1216 47.65
	Total	1498 58.7	1054 41.3	2552 100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	1.5009	0.2205
Likelihood Ratio Chi-Square	1	1.5015	0.2204
Continuity Adj. Chi-Square	1	1.4039	0.2361
Mantel-Haenszel Chi-Square	1	1.5003	0.2206
Phi Coefficient		-0.0243	
Contingency Coefficient		0.0242	
Cramer's V		-0.0243	

Pearson Chi-Square Test	
Chi-Square	1.5009
DF	1
Asymptotic Pr > ChiSq	0.2205

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.2294
99% Lower Conf Limit	0.2186
99% Upper Conf Limit	0.2402
Number of Samples	10000
Initial Seed	744114001

Likelihood Ratio Chi-Square Test	
Chi-Square	1.5015
DF	1

Appendix B1

Female Continuous Employment, Year 1, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.2204

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.2258
99% Lower Conf Limit	0.215
99% Upper Conf Limit	0.2366
Number of Samples	10000
Initial Seed	1673938119

Mantel-Haenszel Chi-Square Test	
Chi-Square	1.5003
DF	1
Asymptotic Pr > ChiSq	0.2206

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.2271
99% Lower Conf Limit	0.2163
99% Upper Conf Limit	0.2379
Number of Samples	10000
Initial Seed	1733787963

Fisher's Exact Test	
Cell (1,1) Frequency (F)	769
Left-sided Pr <= F	0.118
Right-sided Pr >= F	0.8971
Table Probability (P)	0.0152
Two-sided Pr <= P	0.2274

Sample Size = 2552

Appendix B1

Female Continuous Employment, Year 1, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous(Continuous)	Grp(Grp)		
		CNA	CG3	Total
	Non-Continuous	769	612	1381
	Interactions	1.2953	1.79	
		29.78	23.7	53.49
		51.34	56.46	
	Continuous Interactions	729	472	1201
		1.4895	2.0583	
		28.23	18.28	46.51
		48.66	43.54	
	Total	1498	1084	2582
		58.02	41.98	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	6.6331	0.01
Likelihood Ratio Chi-Square	1	6.6414	0.01
Continuity Adj. Chi-Square	1	6.4288	0.0112
Mantel-Haenszel Chi-Square	1	6.6305	0.01
Phi Coefficient		-0.0507	
Contingency Coefficient		0.0506	
Cramer's V		-0.0507	

Pearson Chi-Square Test	
Chi-Square	6.6331
DF	1
Asymptotic Pr > ChiSq	0.01

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0116
99% Lower Conf Limit	0.0088
99% Upper Conf Limit	0.0144
Number of Samples	10000
Initial Seed	750777001

Likelihood Ratio Chi-Square Test	
Chi-Square	6.6414
DF	1

Appendix B1

Female Continuous Employment, Year 1, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.01

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0102
99% Lower Conf Limit	0.0076
99% Upper Conf Limit	0.0128
Number of Samples	10000
Initial Seed	402548545

Mantel-Haenszel Chi-Square Test	
Chi-Square	6.6305
DF	1
Asymptotic Pr > ChiSq	0.01

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0111
99% Lower Conf Limit	0.0084
99% Upper Conf Limit	0.0138
Number of Samples	10000
Initial Seed	604710423

Fisher's Exact Test	
Cell (1,1) Frequency (F)	769
Left-sided Pr <= F	0.0056
Right-sided Pr >= F	0.9956
Table Probability (P)	0.0012
Two-sided Pr <= P	0.0105

Sample Size = 2582

Appendix B1

Female Continuous Employment, Year 2, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous(Continuous)	Grp(Grp)		
		CNA	CG1	Total
	Non-Continuous	627	548	1175
	Interactions	1.7237	2.2147	
		26.96	23.56	50.52
		47.94	53.83	
	Continuous Interactions	681	470	1151
		1.7596	2.2609	
		29.28	20.21	49.48
		52.06	46.17	
	Total	1308	1018	2326
		56.23	43.77	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	7.959	0.0048
Likelihood Ratio Chi-Square	1	7.9646	0.0048
Continuity Adj. Chi-Square	1	7.7249	0.0054
Mantel-Haenszel Chi-Square	1	7.9556	0.0048
Phi Coefficient		-0.0585	
Contingency Coefficient		0.0584	
Cramer's V		-0.0585	

Pearson Chi-Square Test	
Chi-Square	7.959
DF	1
Asymptotic Pr > ChiSq	0.0048

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0065
99% Lower Conf Limit	0.0044
99% Upper Conf Limit	0.0086
Number of Samples	10000
Initial Seed	757305001

Likelihood Ratio Chi-Square Test	
Chi-Square	7.9646
DF	1

Appendix B1

Female Continuous Employment, Year 2, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.0048

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0055
99% Lower Conf Limit	0.0036
99% Upper Conf Limit	0.0074
Number of Samples	10000
Initial Seed	361138384

Mantel-Haenszel Chi-Square Test	
Chi-Square	7.9556
DF	1
Asymptotic Pr > ChiSq	0.0048

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0048
99% Lower Conf Limit	0.003
99% Upper Conf Limit	0.0066
Number of Samples	10000
Initial Seed	1037284115

Fisher's Exact Test	
Cell (1,1) Frequency (F)	627
Left-sided Pr <= F	0.0027
Right-sided Pr >= F	0.9979
Table Probability (P)	6.24E-04
Two-sided Pr <= P	0.0051

Sample Size = 2326

Appendix B1

Female Continuous Employment, Year 2, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous (Continuous)	Grp(Grp)		
		CNA	CG2	Total
	Non-Continuous Interactions	627	550	1177
		1.4784	1.8756	
		26.81	23.51	50.32
		47.94	53.35	
	Continuous Interactions	681	481	1162
		1.4975	1.8998	
		29.12	20.56	49.68
		52.06	46.65	
	Total	1308	1031	2339
		55.92	44.08	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	6.7513	0.0094
Likelihood Ratio Chi-Square	1	6.7551	0.0093
Continuity Adj. Chi-Square	1	6.5366	0.0106
Mantel-Haenszel Chi-Square	1	6.7484	0.0094
Phi Coefficient		-0.0537	
Contingency Coefficient		0.0536	
Cramer's V		-0.0537	

Pearson Chi-Square Test	
Chi-Square	6.7513
DF	1
Asymptotic Pr > ChiSq	0.0094

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.009
99% Lower Conf Limit	0.0066
99% Upper Conf Limit	0.0114
Number of Samples	10000
Initial Seed	763641001

Likelihood Ratio Chi-Square Test	
Chi-Square	6.7551
DF	1

Appendix B1

Female Continuous Employment, Year 2, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.0093

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0098
99% Lower Conf Limit	0.0073
99% Upper Conf Limit	0.0123
Number of Samples	10000
Initial Seed	1153153192

Mantel-Haenszel Chi-Square Test	
Chi-Square	6.7484
DF	1
Asymptotic Pr > ChiSq	0.0094

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0105
99% Lower Conf Limit	0.0079
99% Upper Conf Limit	0.0131
Number of Samples	10000
Initial Seed	1052538982

Fisher's Exact Test	
Cell (1,1) Frequency (F)	627
Left-sided Pr <= F	0.0053
Right-sided Pr >= F	0.9959
Table Probability (P)	0.0011
Two-sided Pr <= P	0.0098

Sample Size = 2339

Appendix B1

Female Continuous Employment, Year 2, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous(Continuous)	Grp(Grp)		
		CNA	CG3	Total
	Non-Continuous	627	536	1163
	Interactions	1.3043	1.6892	
		27.05	23.12	50.17
		47.94	53.07	
	Continuous Interactions	681	474	1155
		1.3134	1.7009	
		29.38	20.45	49.83
		52.06	46.93	
	Total	1308	1010	2318
		56.43	43.57	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	6.0078	0.0142
Likelihood Ratio Chi-Square	1	6.0107	0.0142
Continuity Adj. Chi-Square	1	5.8042	0.016
Mantel-Haenszel Chi-Square	1	6.0052	0.0143
Phi Coefficient		-0.0509	
Contingency Coefficient		0.0508	
Cramer's V		-0.0509	

Pearson Chi-Square Test	
Chi-Square	6.0078
DF	1
Asymptotic Pr > ChiSq	0.0142

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0152
99% Lower Conf Limit	0.012
99% Upper Conf Limit	0.0184
Number of Samples	10000
Initial Seed	769931000

Likelihood Ratio Chi-Square Test	
Chi-Square	6.0107
DF	1

Appendix B1

Female Continuous Employment, Year 2, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.0142

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.016
99% Lower Conf Limit	0.0128
99% Upper Conf Limit	0.0192
Number of Samples	10000
Initial Seed	2010784845

Mantel-Haenszel Chi-Square Test	
Chi-Square	6.0052
DF	1
Asymptotic Pr > ChiSq	0.0143

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.014
99% Lower Conf Limit	0.011
99% Upper Conf Limit	0.017
Number of Samples	10000
Initial Seed	257277865

Fisher's Exact Test	
Cell (1,1) Frequency (F)	627
Left-sided Pr <= F	0.008
Right-sided Pr >= F	0.9937
Table Probability (P)	0.0017
Two-sided Pr <= P	0.0151

Sample Size = 2318

Appendix B1

Female Continuous Employment, Year 3, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous (Continuous)	Grp(Grp)		
		CNA	CG1	Total
	Non-Continuous Interactions	480	407	887
		0.5577	0.7096	
		26.14	22.17	48.31
		46.69	50.37	
	Continuous Interactions	548	401	949
		0.5213	0.6632	
		29.85	21.84	51.69
		53.31	49.63	
	Total	1028	808	1836
		55.99	44.01	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	2.4517	0.1174
Likelihood Ratio Chi-Square	1	2.4518	0.1174
Continuity Adj. Chi-Square	1	2.3066	0.1288
Mantel-Haenszel Chi-Square	1	2.4504	0.1175
Phi Coefficient		-0.0365	
Contingency Coefficient		0.0365	
Cramer's V		-0.0365	

Pearson Chi-Square Test	
Chi-Square	2.4517
DF	1
Asymptotic Pr > ChiSq	0.1174

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.1221
99% Lower Conf Limit	0.1137
99% Upper Conf Limit	0.1305
Number of Samples	10000
Initial Seed	776385000

Likelihood Ratio Chi-Square Test	
Chi-Square	2.4518
DF	1

Appendix B1

Female Continuous Employment, Year 3, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.1174

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.1226
99% Lower Conf Limit	0.1142
99% Upper Conf Limit	0.131
Number of Samples	10000
Initial Seed	809403801

Mantel-Haenszel Chi-Square Test	
Chi-Square	2.4504
DF	1
Asymptotic Pr > ChiSq	0.1175

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.1196
99% Lower Conf Limit	0.1112
99% Upper Conf Limit	0.128
Number of Samples	10000
Initial Seed	571135466

Fisher's Exact Test	
Cell (1,1) Frequency (F)	480
Left-sided Pr <= F	0.0644
Right-sided Pr >= F	0.9466
Table Probability (P)	0.011
Two-sided Pr <= P	0.1208

Sample Size = 1836

Appendix B1

Female Continuous Employment, Year 3, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous (Continuous)	Grp(Grp)		
		CNA	CG2	Total
	Non-Continuous Interactions	480	438	918
		0.9164	1.1032	
		25.5	23.27	48.78
		46.69	51.29	
	Continuous Interactions	548	416	964
		0.8727	1.0505	
		29.12	22.1	51.22
		53.31	48.71	
	Total	1028	854	1882
		54.62	45.38	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	3.9428	0.0471
Likelihood Ratio Chi-Square	1	3.9437	0.047
Continuity Adj. Chi-Square	1	3.761	0.0525
Mantel-Haenszel Chi-Square	1	3.9407	0.0471
Phi Coefficient		-0.0458	
Contingency Coefficient		0.0457	
Cramer's V		-0.0458	

Pearson Chi-Square Test	
Chi-Square	3.9428
DF	1
Asymptotic Pr > ChiSq	0.0471

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0542
99% Lower Conf Limit	0.0484
99% Upper Conf Limit	0.06
Number of Samples	10000
Initial Seed	782120000

Likelihood Ratio Chi-Square Test	
Chi-Square	3.9437
DF	1

Appendix B1

Female Continuous Employment, Year 3, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.047

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0487
99% Lower Conf Limit	0.0432
99% Upper Conf Limit	0.0542
Number of Samples	10000
Initial Seed	206017744

Mantel-Haenszel Chi-Square Test	
Chi-Square	3.9407
DF	1
Asymptotic Pr > ChiSq	0.0471

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0523
99% Lower Conf Limit	0.0466
99% Upper Conf Limit	0.058
Number of Samples	10000
Initial Seed	1647955422

Fisher's Exact Test	
Cell (1,1) Frequency (F)	480
Left-sided Pr <= F	0.0262
Right-sided Pr >= F	0.9789
Table Probability (P)	0.0052
Two-sided Pr <= P	0.0517

Sample Size = 1882

Appendix B1

Female Continuous Employment, Year 3, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous(Continuous)	Grp(Grp)		
		CNA	CG3	Total
	Non-Continuous Interactions	480	429	909
		0.6774	0.8222	
		25.6	22.88	48.48
		46.69	50.65	
	Continuous Interactions	548	418	966
		0.6375	0.7737	
		29.23	22.29	51.52
		53.31	49.35	
	Total	1028	847	1875
		54.83	45.17	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	2.9108	0.088
Likelihood Ratio Chi-Square	1	2.9111	0.088
Continuity Adj. Chi-Square	1	2.7545	0.097
Mantel-Haenszel Chi-Square	1	2.9092	0.0881
Phi Coefficient		-0.0394	
Contingency Coefficient		0.0394	
Cramer's V		-0.0394	

Pearson Chi-Square Test	
Chi-Square	2.9108
DF	1
Asymptotic Pr > ChiSq	0.088

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0952
99% Lower Conf Limit	0.0876
99% Upper Conf Limit	0.1028
Number of Samples	10000
Initial Seed	788227001

Likelihood Ratio Chi-Square Test	
Chi-Square	2.9111
DF	1

Appendix B1

Female Continuous Employment, Year 3, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.088

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0917
99% Lower Conf Limit	0.0843
99% Upper Conf Limit	0.0991
Number of Samples	10000
Initial Seed	228095488

Mantel-Haenszel Chi-Square Test	
Chi-Square	2.9092
DF	1
Asymptotic Pr > ChiSq	0.0881

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.093
99% Lower Conf Limit	0.0855
99% Upper Conf Limit	0.1005
Number of Samples	10000
Initial Seed	1836634117

Fisher's Exact Test	
Cell (1,1) Frequency (F)	480
Left-sided Pr <= F	0.0485
Right-sided Pr >= F	0.9602
Table Probability (P)	0.0086
Two-sided Pr <= P	0.0946

Sample Size = 1875

Appendix B2

Male Continuous Employment, 6 Years Prior, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous (Continuous)	Grp(Grp)		
		CNA	CG1	Total
	Non-Continuous Interactions	15 0.001 30.61 55.56	12 0.0012 24.49 54.55	27 55.1
	Continuous Interactions	12 0.0012 24.49 44.44	10 0.0015 20.41 45.45	22 44.9
	Total	27 55.1	22 44.9	49 100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.005	0.9436
Likelihood Ratio Chi-Square	1	0.005	0.9436
Continuity Adj. Chi-Square	1	0	1
Mantel-Haenszel Chi-Square	1	0.0049	0.9442
Phi Coefficient		0.0101	
Contingency Coefficient		0.0101	
Cramer's V		0.0101	

Pearson Chi-Square Test	
Chi-Square	0.005
DF	1
Asymptotic Pr > ChiSq	0.9436

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	711064000

Likelihood Ratio Chi-Square Test	
Chi-Square	0.005
DF	1

Appendix B2

Male Continuous Employment, 6 Years Prior, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.9436

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	376905895

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.0049
DF	1
Asymptotic Pr > ChiSq	0.9442

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	909666978

Fisher's Exact Test	
Cell (1,1) Frequency (F)	15
Left-sided Pr <= F	0.6404
Right-sided Pr >= F	0.5857
Table Probability (P)	0.2262
Two-sided Pr <= P	1

Sample Size = 49

Appendix B2

Male Continuous Employment, 6 Years Prior, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp		
Continuous(Continuous)	Grp(Grp)		
	CNA	CG2	Total
Non-Continuous	15	14	29
Interactions	0.0278	0.0327	
	30	28	58
	55.56	60.87	
Continuous Interactions	12	9	21
	0.0384	0.0451	
	24	18	42
	44.44	39.13	
Total	27	23	50
	54	46	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.144	0.7044
Likelihood Ratio Chi-Square	1	0.1442	0.7042
Continuity Adj. Chi-Square	1	0.0085	0.9267
Mantel-Haenszel Chi-Square	1	0.1411	0.7072
Phi Coefficient		-0.0537	
Contingency Coefficient		0.0536	
Cramer's V		-0.0537	

Pearson Chi-Square Test	
Chi-Square	0.144
DF	1
Asymptotic Pr > ChiSq	0.7044

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7743
99% Lower Conf Limit	0.7635
99% Upper Conf Limit	0.7851
Number of Samples	10000
Initial Seed	715134001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.1442
DF	1

Appendix B2

Male Continuous Employment, 6 Years Prior, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.7042

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7804
99% Lower Conf Limit	0.7697
99% Upper Conf Limit	0.7911
Number of Samples	10000
Initial Seed	290012110

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.1411
DF	1
Asymptotic Pr > ChiSq	0.7072

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7796
99% Lower Conf Limit	0.7689
99% Upper Conf Limit	0.7903
Number of Samples	10000
Initial Seed	673159188

Fisher's Exact Test	
Cell (1,1) Frequency (F)	15
Left-sided Pr <= F	0.4639
Right-sided Pr >= F	0.7471
Table Probability (P)	0.211
Two-sided Pr <= P	0.7785

Sample Size = 50

Appendix B2

Male Continuous Employment, 6 Years Prior, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous(Continuous)	Grp(Grp)		
		CNA	CG3	Total
	Non-Continuous	15	18	33
	Interactions	0.1364	0.1364	
		27.78	33.33	61.11
		55.56	66.67	
	Continuous Interactions	12	9	21
		0.2143	0.2143	
		22.22	16.67	38.89
		44.44	33.33	
	Total	27	27	54
		50	50	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.7013	0.4023
Likelihood Ratio Chi-Square	1	0.7031	0.4017
Continuity Adj. Chi-Square	1	0.3117	0.5766
Mantel-Haenszel Chi-Square	1	0.6883	0.4067
Phi Coefficient		-0.114	
Contingency Coefficient		0.1132	
Cramer's V		-0.114	

Pearson Chi-Square Test	
Chi-Square	0.7013
DF	1
Asymptotic Pr > ChiSq	0.4023

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.5781
99% Lower Conf Limit	0.5654
99% Upper Conf Limit	0.5908
Number of Samples	10000
Initial Seed	719275001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.7031
DF	1

Appendix B2

Male Continuous Employment, 6 Years Prior, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.4017

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.5824
99% Lower Conf Limit	0.5697
99% Upper Conf Limit	0.5951
Number of Samples	10000
Initial Seed	2011049676

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.6883
DF	1
Asymptotic Pr > ChiSq	0.4067

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.5769
99% Lower Conf Limit	0.5642
99% Upper Conf Limit	0.5896
Number of Samples	10000
Initial Seed	1750041062

Fisher's Exact Test	
Cell (1,1) Frequency (F)	15
Left-sided Pr <= F	0.2886
Right-sided Pr >= F	0.868
Table Probability (P)	0.1566
Two-sided Pr <= P	0.5772

Sample Size = 54

Appendix B2

Male Continuous Employment, 3 Years Prior, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous(Continuous)	Grp(Grp)		
		CNA	CG1	Total
	Non-Continuous	39	32	71
	Interactions	0.0476	0.0538	
		33.91	27.83	61.74
		63.93	59.26	
	Continuous Interactions	22	22	44
		0.0768	0.0868	
		19.13	19.13	38.26
		36.07	40.74	
	Total	61	54	115
		53.04	46.96	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.265	0.6067
Likelihood Ratio Chi-Square	1	0.2649	0.6068
Continuity Adj. Chi-Square	1	0.1041	0.747
Mantel-Haenszel Chi-Square	1	0.2627	0.6082
Phi Coefficient		0.048	
Contingency Coefficient		0.048	
Cramer's V		0.048	

Pearson Chi-Square Test	
Chi-Square	0.265
DF	1
Asymptotic Pr > ChiSq	0.6067

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.6987
99% Lower Conf Limit	0.6869
99% Upper Conf Limit	0.7105
Number of Samples	10000
Initial Seed	724640001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.2649
DF	1

Appendix B2

Male Continuous Employment, 3 Years Prior, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.6068

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.6931
99% Lower Conf Limit	0.6812
99% Upper Conf Limit	0.705
Number of Samples	10000
Initial Seed	1596514294

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.2627
DF	1
Asymptotic Pr > ChiSq	0.6082

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.6995
99% Lower Conf Limit	0.6877
99% Upper Conf Limit	0.7113
Number of Samples	10000
Initial Seed	66339556

Fisher's Exact Test	
Cell (1,1) Frequency (F)	39
Left-sided Pr <= F	0.7603
Right-sided Pr >= F	0.3733
Table Probability (P)	0.1336
Two-sided Pr <= P	0.7014

Sample Size = 115

Appendix B2

Male Continuous Employment, 3 Years Prior, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp		
Continuous (Continuous)	Grp(Grp)		
	CNA	CG2	Total
Non-Continuous Interactions	39	38	77
	0.0065	0.0065	
	31.97	31.15	63.11
	63.93	62.3	
Continuous Interactions	22	23	45
	0.0111	0.0111	
	18.03	18.85	36.89
	36.07	37.7	
Total	61	61	122
	50	50	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.0352	0.8512
Likelihood Ratio Chi-Square	1	0.0352	0.8512
Continuity Adj. Chi-Square	1	0	1
Mantel-Haenszel Chi-Square	1	0.0349	0.8518
Phi Coefficient		0.017	
Contingency Coefficient		0.017	
Cramer's V		0.017	

Pearson Chi-Square Test	
Chi-Square	0.0352
DF	1
Asymptotic Pr > ChiSq	0.8512

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	730106001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.0352
DF	1

Appendix B2

Male Continuous Employment, 3 Years Prior, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.8512

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	1761037884

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.0349
DF	1
Asymptotic Pr > ChiSq	0.8518

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	1457806054

Fisher's Exact Test	
Cell (1,1) Frequency (F)	39
Left-sided Pr <= F	0.6462
Right-sided Pr >= F	0.5
Table Probability (P)	0.1462
Two-sided Pr <= P	1

Sample Size = 122

Appendix B2

Male Continuous Employment, 3 Years Prior, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp		
Continuous (Continuous)	Grp(Grp)		
	CNA	CG3	Total
Non-Continuous Interactions	39	45	84
	0.0044	0.0039	
	30	34.62	64.62
	63.93	65.22	
Continuous Interactions	22	24	46
	0.008	0.0071	
	16.92	18.46	35.38
	36.07	34.78	
Total	61	69	130
	46.92	53.08	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.0233	0.8787
Likelihood Ratio Chi-Square	1	0.0233	0.8787
Continuity Adj. Chi-Square	1	0	1
Mantel-Haenszel Chi-Square	1	0.0231	0.8791
Phi Coefficient		-0.0134	
Contingency Coefficient		0.0134	
Cramer's V		-0.0134	

Pearson Chi-Square Test	
Chi-Square	0.0233
DF	1
Asymptotic Pr > ChiSq	0.8787

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	735749001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.0233
DF	1

Appendix B2

Male Continuous Employment, 3 Years Prior, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.8787

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	539397618

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.0231
DF	1
Asymptotic Pr > ChiSq	0.8791

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	942142672

Fisher's Exact Test	
Cell (1,1) Frequency (F)	39
Left-sided Pr <= F	0.5119
Right-sided Pr >= F	0.632
Table Probability (P)	0.1439
Two-sided Pr <= P	1

Sample Size = 130

Appendix B2

Male Continuous Employment, Year 1, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous(	Grp(Grp)		
	Continuous)	CNA	CG1	Total
	Non-Continuous Interactions	59	43	102
		0.0442	0.0569	
		29.65	21.61	51.26
		52.68	49.43	
	Continuous Interactions	53	44	97
		0.0465	0.0598	
		26.63	22.11	48.74
		47.32	50.57	
	Total	112	87	199
		56.28	43.72	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.2074	0.6488
Likelihood Ratio Chi-Square	1	0.2074	0.6488
Continuity Adj. Chi-Square	1	0.0976	0.7547
Mantel-Haenszel Chi-Square	1	0.2064	0.6496
Phi Coefficient		0.0323	
Contingency Coefficient		0.0323	
Cramer's V		0.0323	

Pearson Chi-Square Test	
Chi-Square	0.2074
DF	1
Asymptotic Pr > ChiSq	0.6488

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.6726
99% Lower Conf Limit	0.6605
99% Upper Conf Limit	0.6847
Number of Samples	10000
Initial Seed	742120000

Likelihood Ratio Chi-Square Test	
Chi-Square	0.2074
DF	1

Appendix B2

Male Continuous Employment, Year 1, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.6488

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.665
99% Lower Conf Limit	0.6528
99% Upper Conf Limit	0.6772
Number of Samples	10000
Initial Seed	1326253984

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.2064
DF	1
Asymptotic Pr > ChiSq	0.6496

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.6727
99% Lower Conf Limit	0.6606
99% Upper Conf Limit	0.6848
Number of Samples	10000
Initial Seed	92040681

Fisher's Exact Test	
Cell (1,1) Frequency (F)	59
Left-sided Pr <= F	0.7252
Right-sided Pr >= F	0.3773
Table Probability (P)	0.1025
Two-sided Pr <= P	0.6702

Sample Size = 199

Appendix B2

Male Continuous Employment, Year 1, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous(Continuous)	Grp(Grp)		
		CNA	CG2	Total
	Non-Continuous	59	52	111
	Interactions	0.0186	0.022	
		28.5	25.12	53.62
		52.68	54.74	
	Continuous Interactions	53	43	96
		0.0215	0.0254	
		25.6	20.77	46.38
		47.32	45.26	
	Total	112	95	207
		54.11	45.89	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.0876	0.7673
Likelihood Ratio Chi-Square	1	0.0876	0.7673
Continuity Adj. Chi-Square	1	0.0244	0.876
Mantel-Haenszel Chi-Square	1	0.0871	0.7678
Phi Coefficient		-0.0206	
Contingency Coefficient		0.0206	
Cramer's V		-0.0206	

Pearson Chi-Square Test	
Chi-Square	0.0876
DF	1
Asymptotic Pr > ChiSq	0.7673

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7831
99% Lower Conf Limit	0.7725
99% Upper Conf Limit	0.7937
Number of Samples	10000
Initial Seed	748805001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.0876
DF	1

Appendix B2

Male Continuous Employment, Year 1, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.7673

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7757
99% Lower Conf Limit	0.765
99% Upper Conf Limit	0.7864
Number of Samples	10000
Initial Seed	764934116

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.0871
DF	1
Asymptotic Pr > ChiSq	0.7678

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7829
99% Lower Conf Limit	0.7723
99% Upper Conf Limit	0.7935
Number of Samples	10000
Initial Seed	456145834

Fisher's Exact Test	
Cell (1,1) Frequency (F)	59
Left-sided Pr <= F	0.4381
Right-sided Pr >= F	0.6684
Table Probability (P)	0.1065
Two-sided Pr <= P	0.7814

Sample Size = 207

Appendix B2

Male Continuous Employment, Year 1, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp		
Continuous(Continuous)	Grp(Grp)		
	CNA	CG3	Total
Non-Continuous	59	55	114
Interactions	0.0025	0.0027	
	27.44	25.58	53.02
	52.68	53.4	
Continuous Interactions	53	48	101
	0.0028	0.0031	
	24.65	22.33	46.98
	47.32	46.6	
Total	112	103	215
	52.09	47.91	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.0112	0.9159
Likelihood Ratio Chi-Square	1	0.0112	0.9159
Continuity Adj. Chi-Square	1	0	1
Mantel-Haenszel Chi-Square	1	0.0111	0.9161
Phi Coefficient		-0.0072	
Contingency Coefficient		0.0072	
Cramer's V		-0.0072	

Pearson Chi-Square Test	
Chi-Square	0.0112
DF	1
Asymptotic Pr > ChiSq	0.9159

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	755384001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.0112
DF	1

Appendix B2

Male Continuous Employment, Year 1, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.9159

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	495930138

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.0111
DF	1
Asymptotic Pr > ChiSq	0.9161

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	254391564

Fisher's Exact Test	
Cell (1,1) Frequency (F)	59
Left-sided Pr <= F	0.5125
Right-sided Pr >= F	0.5957
Table Probability (P)	0.1081
Two-sided Pr <= P	1

Sample Size = 215

Appendix B2

Male Continuous Employment, Year 2, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp		
Continuous(Continuous)	Grp(Grp)		
	CNA	CG1	Total
Non-Continuous	53	50	103
Interactions	0.0034	0.0037	
	28.34	26.74	55.08
	54.64	55.56	
Continuous Interactions	44	40	84
	0.0042	0.0045	
	23.53	21.39	44.92
	45.36	44.44	
Total	97	90	187
	51.87	48.13	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.0158	0.8998
Likelihood Ratio Chi-Square	1	0.0158	0.8998
Continuity Adj. Chi-Square	1	0	1
Mantel-Haenszel Chi-Square	1	0.0158	0.9001
Phi Coefficient		-0.0092	
Contingency Coefficient		0.0092	
Cramer's V		-0.0092	

Pearson Chi-Square Test	
Chi-Square	0.0158
DF	1
Asymptotic Pr > ChiSq	0.8998

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	761724001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.0158
DF	1

Appendix B2

Male Continuous Employment, Year 2, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.8998

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	1205949071

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.0158
DF	1
Asymptotic Pr > ChiSq	0.9001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	1
99% Lower Conf Limit	0.9995
99% Upper Conf Limit	1
Number of Samples	10000
Initial Seed	1919874196

Fisher's Exact Test	
Cell (1,1) Frequency (F)	53
Left-sided Pr <= F	0.5085
Right-sided Pr >= F	0.6075
Table Probability (P)	0.116
Two-sided Pr <= P	1

Sample Size = 187

Appendix B2

Male Continuous Employment, Year 2, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous(Continuous)	Grp(Grp)		
		CNA	CG2	Total
	Non-Continuous Interactions	53 0.04 27.89 54.64	48 0.0418 25.26 51.61	101 53.16
	Continuous Interactions	44 0.0454 23.16 45.36	45 0.0474 23.68 48.39	89 46.84
	Total	97 51.05	93 48.95	190 100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.1746	0.676
Likelihood Ratio Chi-Square	1	0.1746	0.676
Continuity Adj. Chi-Square	1	0.0742	0.7853
Mantel-Haenszel Chi-Square	1	0.1737	0.6768
Phi Coefficient		0.0303	
Contingency Coefficient		0.0303	
Cramer's V		0.0303	

Pearson Chi-Square Test	
Chi-Square	0.1746
DF	1
Asymptotic Pr > ChiSq	0.676

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7718
99% Lower Conf Limit	0.761
99% Upper Conf Limit	0.7826
Number of Samples	10000
Initial Seed	767992001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.1746
DF	1

Appendix B2

Male Continuous Employment, Year 2, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.676

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7747
99% Lower Conf Limit	0.7639
99% Upper Conf Limit	0.7855
Number of Samples	10000
Initial Seed	1738955235

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.1737
DF	1
Asymptotic Pr > ChiSq	0.6768

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.7696
99% Lower Conf Limit	0.7588
99% Upper Conf Limit	0.7804
Number of Samples	10000
Initial Seed	836007410

Fisher's Exact Test	
Cell (1,1) Frequency (F)	53
Left-sided Pr <= F	0.7133
Right-sided Pr >= F	0.3927
Table Probability (P)	0.106
Two-sided Pr <= P	0.7713

Sample Size = 190

Appendix B2

Male Continuous Employment, Year 2, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous (Continuous)	Grp(Grp)		
		CNA	CG3	Total
	Non-Continuous Interactions	53	62	115
		0.1381	0.13	
		26.5	31	57.5
		54.64	60.19	
	Continuous Interactions	44	41	85
		0.1868	0.1759	
		22	20.5	42.5
		45.36	39.81	
	Total	97	103	200
		48.5	51.5	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.6308	0.4271
Likelihood Ratio Chi-Square	1	0.6309	0.427
Continuity Adj. Chi-Square	1	0.424	0.515
Mantel-Haenszel Chi-Square	1	0.6276	0.4282
Phi Coefficient		-0.0562	
Contingency Coefficient		0.0561	
Cramer's V		-0.0562	

Pearson Chi-Square Test	
Chi-Square	0.6308
DF	1
Asymptotic Pr > ChiSq	0.4271

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.4768
99% Lower Conf Limit	0.4639
99% Upper Conf Limit	0.4897
Number of Samples	10000
Initial Seed	774421001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.6309
DF	1

Appendix B2

Male Continuous Employment, Year 2, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.427

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.4754
99% Lower Conf Limit	0.4625
99% Upper Conf Limit	0.4883
Number of Samples	10000
Initial Seed	843437304

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.6276
DF	1
Asymptotic Pr > ChiSq	0.4282

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.4721
99% Lower Conf Limit	0.4592
99% Upper Conf Limit	0.485
Number of Samples	10000
Initial Seed	1888631640

Fisher's Exact Test	
Cell (1,1) Frequency (F)	53
Left-sided Pr <= F	0.2575
Right-sided Pr >= F	0.8257
Table Probability (P)	0.0832
Two-sided Pr <= P	0.4753

Sample Size = 200

Appendix B2

Male Continuous Employment, Year 3, CNA v Control Group 1 (CG1)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous (Continuous)	Grp(Grp)		
		CNA	CG1	Total
	Non-Continuous Interactions	33 0.177 22.6 45.83	39 0.1722 26.71 52.7	72 49.32
	Continuous Interactions	39 0.1722 26.71 54.17	35 0.1676 23.97 47.3	74 50.68
	Total	72 49.32	74 50.68	146 100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.6889	0.4065
Likelihood Ratio Chi-Square	1	0.6895	0.4063
Continuity Adj. Chi-Square	1	0.4415	0.5064
Mantel-Haenszel Chi-Square	1	0.6842	0.4081
Phi Coefficient		-0.0687	
Contingency Coefficient		0.0685	
Cramer's V		-0.0687	

Pearson Chi-Square Test	
Chi-Square	0.6889
DF	1
Asymptotic Pr > ChiSq	0.4065

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.4085
99% Lower Conf Limit	0.3958
99% Upper Conf Limit	0.4212
Number of Samples	10000
Initial Seed	780224001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.6895
DF	1

Appendix B2

Male Continuous Employment, Year 3, CNA v Control Group 1 (CG1)

Asymptotic Pr > ChiSq	0.4063

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.4137
99% Lower Conf Limit	0.401
99% Upper Conf Limit	0.4264
Number of Samples	10000
Initial Seed	543967835

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.6842
DF	1
Asymptotic Pr > ChiSq	0.4081

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.4198
99% Lower Conf Limit	0.4071
99% Upper Conf Limit	0.4325
Number of Samples	10000
Initial Seed	1293796827

Fisher's Exact Test	
Cell (1,1) Frequency (F)	33
Left-sided Pr <= F	0.2533
Right-sided Pr >= F	0.8403
Table Probability (P)	0.0935
Two-sided Pr <= P	0.4141

Sample Size = 146

Appendix B2

Male Continuous Employment, Year 3, CNA v Control Group 2 (CG2)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp			
	Continuous(Continuous)	Grp(Grp)		
		CNA	CG2	Total
	Non-Continuous	33	46	79
	Interactions	0.1829	0.1497	
		20.63	28.75	49.38
		45.83	52.27	
	Continuous Interactions	39	42	81
		0.1784	0.146	
		24.38	26.25	50.63
		54.17	47.73	
	Total	72	88	160
		45	55	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	0.6569	0.4176
Likelihood Ratio Chi-Square	1	0.6575	0.4175
Continuity Adj. Chi-Square	1	0.4246	0.5147
Mantel-Haenszel Chi-Square	1	0.6528	0.4191
Phi Coefficient		-0.0641	
Contingency Coefficient		0.0639	
Cramer's V		-0.0641	

Pearson Chi-Square Test	
Chi-Square	0.6569
DF	1
Asymptotic Pr > ChiSq	0.4176

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.4246
99% Lower Conf Limit	0.4119
99% Upper Conf Limit	0.4373
Number of Samples	10000
Initial Seed	786144001

Likelihood Ratio Chi-Square Test	
Chi-Square	0.6575
DF	1

Appendix B2

Male Continuous Employment, Year 3, CNA v Control Group 2 (CG2)

Asymptotic Pr > ChiSq	0.4175

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.4346
99% Lower Conf Limit	0.4218
99% Upper Conf Limit	0.4474
Number of Samples	10000
Initial Seed	1483371188

Mantel-Haenszel Chi-Square Test	
Chi-Square	0.6528
DF	1
Asymptotic Pr > ChiSq	0.4191

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.4354
99% Lower Conf Limit	0.4226
99% Upper Conf Limit	0.4482
Number of Samples	10000
Initial Seed	29563115

Fisher's Exact Test	
Cell (1,1) Frequency (F)	33
Left-sided Pr <= F	0.2574
Right-sided Pr >= F	0.8338
Table Probability (P)	0.0912
Two-sided Pr <= P	0.4317

Sample Size = 160

Appendix B2

Male Continuous Employment, Year 3, CNA v Control Group 3 (CG3)

The FREQ Procedure

Frequency Cell Chi-Square Percent Col Pct	Table of Continuous by Grp		
Continuous(Continuous)	Grp(Grp)		
	CNA	CG3	Total
Non-Continuous Interactions	33	47	80
	0.466	0.4042	
	21.29	30.32	51.61
	45.83	56.63	
Continuous Interactions	39	36	75
	0.497	0.4312	
	25.16	23.23	48.39
	54.17	43.37	
Total	72	83	155
	46.45	53.55	100

Statistics for Table of Continuous by Grp

Statistic	DF	Value	Prob
Chi-Square	1	1.7984	0.1799
Likelihood Ratio Chi-Square	1	1.8014	0.1795
Continuity Adj. Chi-Square	1	1.3922	0.238
Mantel-Haenszel Chi-Square	1	1.7868	0.1813
Phi Coefficient		-0.1077	
Contingency Coefficient		0.1071	
Cramer's V		-0.1077	

Pearson Chi-Square Test	
Chi-Square	1.7984
DF	1
Asymptotic Pr > ChiSq	0.1799

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.2016
99% Lower Conf Limit	0.1913
99% Upper Conf Limit	0.2119
Number of Samples	10000
Initial Seed	792178001

Likelihood Ratio Chi-Square Test	
Chi-Square	1.8014
DF	1

Appendix B2

Male Continuous Employment, Year 3, CNA v Control Group 3 (CG3)

Asymptotic Pr > ChiSq	0.1795

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.1997
99% Lower Conf Limit	0.1894
99% Upper Conf Limit	0.21
Number of Samples	10000
Initial Seed	438614515

Mantel-Haenszel Chi-Square Test	
Chi-Square	1.7868
DF	1
Asymptotic Pr > ChiSq	0.1813

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.1954
99% Lower Conf Limit	0.1852
99% Upper Conf Limit	0.2056
Number of Samples	10000
Initial Seed	1950060745

Fisher's Exact Test	
Cell (1,1) Frequency (F)	33
Left-sided Pr <= F	0.119
Right-sided Pr >= F	0.9336
Table Probability (P)	0.0526
Two-sided Pr <= P	0.1999

Sample Size = 155

Appendix C1

Female Wages, 6 Years Prior, CNA v Control Group 1 (CG1)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesYn6 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG1	165	26748	28215	909.74708	162.109091
CNA	176	31563	30096	909.74708	179.335227
Average scores were used for ties.					

Wilcoxon Two-Sample Test	
Statistic	26748
Normal Approximation	
Z	-1.6125
One-Sided Pr < Z	0.0534
Two-Sided Pr > |Z|	0.1068
t Approximation	
One-Sided Pr < Z	0.0539
Two-Sided Pr > |Z|	0.1078

Kruskal-Wallis Test	
Chi-Square	2.6003
DF	1
Pr > Chi-Square	0.1068

Appendix C1

Female Wages, 6 Years Prior, CNA v Control Group 2 (CG2)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesYn6 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG2	170	28292	29495	930.154109	166.423529
CNA	176	31739	30536	930.154109	180.335227

Wilcoxon Two-Sample Test	
Statistic	28292
Normal Approximation	
Z	-1.2933
One-Sided Pr < Z	0.0979
Two-Sided Pr > |Z|	0.1959
t Approximation	
One-Sided Pr < Z	0.0984
Two-Sided Pr > |Z|	0.1968

Kruskal-Wallis Test	
Chi-Square	1.6727
DF	1
Pr > Chi-Square	0.1959

Appendix C1

Female Wages, 6 Years Prior, CNA v Control Group 3 (CG3)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesYn6 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG3	178	29890	31595	962.697599	167.921348
CNA	176	32945	31240	962.697599	187.1875

Wilcoxon Two-Sample Test	
Statistic	32945
Normal Approximation	
Z	1.7711
One-Sided Pr > Z	0.0383
Two-Sided Pr > |Z|	0.0765
t Approximation	
One-Sided Pr > Z	0.0387
Two-Sided Pr > |Z|	0.0774

Kruskal-Wallis Test	
Chi-Square	3.1367
DF	1
Pr > Chi-Square	0.0765

Appendix C1

Female Wages, 3 Years Prior, CNA v Control Group 1 (CG1)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesYn3 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG1	529	284455	292801.5	5306.38709	537.722117
CNA	577	327716	319369.5	5306.38709	567.965338
Average scores were used for ties.					

Wilcoxon Two-Sample Test	
Statistic	284455
Normal Approximation	
Z	-1.5729
One-Sided Pr < Z	0.0579
Two-Sided Pr > |Z|	0.1157
t Approximation	
One-Sided Pr < Z	0.058
Two-Sided Pr > |Z|	0.116

Kruskal-Wallis Test	
Chi-Square	2.4741
DF	1
Pr > Chi-Square	0.1157

Appendix C1

Female Wages, 3 Years Prior, CNA v Control Group 2 (CG2)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesYn3 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG2	502	259690	271080	5105.76729	517.310757
CNA	577	322970	311580	5105.76729	559.740035
Average scores were used for ties.					

Wilcoxon Two-Sample Test	
Statistic	259690
Normal Approximation	
Z	-2.2308
One-Sided Pr < Z	0.0128
Two-Sided Pr > |Z|	0.0257
t Approximation	
One-Sided Pr < Z	0.0129
Two-Sided Pr > |Z|	0.0259

Kruskal-Wallis Test	
Chi-Square	4.9765
DF	1
Pr > Chi-Square	0.0257

Appendix C1

Female Wages, 3 Years Prior, CNA v Control Group 3 (CG3)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesYn3 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG3	498	264109.5	267924	5075.9588	530.340361
CNA	577	314240.5	310426	5075.9588	544.610919
Average scores were used for ties.					

Wilcoxon Two-Sample Test	
Statistic	264109.5
Normal Approximation	
Z	-0.7515
One-Sided Pr < Z	0.2262
Two-Sided Pr > |Z|	0.4524
t Approximation	
One-Sided Pr < Z	0.2263
Two-Sided Pr > |Z|	0.4525

Kruskal-Wallis Test	
Chi-Square	0.5647
DF	1
Pr > Chi-Square	0.4524

Appendix C1

Female Wages, Year 1, CNA v Control Group 1 (CG1)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY1 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG1	707	471347	563479	9121.7907	666.685997
CNA	886	798274	706142	9121.7907	900.986456
Average scores were used for ties.					

Wilcoxon Two-Sample Test	
Statistic	471347
Normal Approximation	
Z	-10.1002
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001
t Approximation	
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001

Kruskal-Wallis Test	
Chi-Square	102.0142
DF	1
Pr > Chi-Square	<.0001

Appendix C1

Female Wages, Year 1, CNA v Control Group 2 (CG2)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY1 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG2	688	452243	541800	8944.59611	657.329942
CNA	886	787282	697725	8944.59611	888.580135
Average scores were used for ties.					

Wilcoxon Two-Sample Test	
Statistic	452243
Normal Approximation	
Z	-10.0124
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001
t Approximation	
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001

Kruskal-Wallis Test	
Chi-Square	100.2484
DF	1
Pr > Chi-Square	<.0001

Appendix C1

Female Wages, Year 1, CNA v Control Group 3 (CG3)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY1 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG3	704	463646.5	560032	9093.84726	658.588778
CNA	886	801198.5	704813	9093.84726	904.287246
Average scores were used for ties.					

Wilcoxon Two-Sample Test	
Statistic	463646.5
Normal Approximation	
Z	-10.599
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001
t Approximation	
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001

Kruskal-Wallis Test	
Chi-Square	112.3384
DF	1
Pr > Chi-Square	<.0001

Appendix C1

Female Wages, Year 2, CNA v Control Group 1 (CG1)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY2 Classified by Variable GroupType					
GroupType	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
CG1	674	441264	511229	8470.09266	654.694362
CNA	842	708622	638657	8470.09266	841.593824

Wilcoxon Two-Sample Test	
Statistic	441264
Normal Approximation	
Z	-8.2602
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001
t Approximation	
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001

Kruskal-Wallis Test	
Chi-Square	68.2316
DF	1
Pr > Chi-Square	<.0001

Appendix C1

Female Wages, Year 2, CNA v Control Group 2 (CG2)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY2 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG2	678	454339	515619	8506.38189	670.116519
CNA	842	701621	640341	8506.38189	833.279097
Average scores were used for ties.					

Wilcoxon Two-Sample Test	
Statistic	454339
Normal Approximation	
Z	-7.204
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001
t Approximation	
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001

Kruskal-Wallis Test	
Chi-Square	51.8977
DF	1
Pr > Chi-Square	<.0001

Appendix C1

Female Wages, Year 2, CNA v Control Group 3 (CG3)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY2 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG3	663	431072	499239	8370.17755	650.184012
CNA	842	702193	634026	8370.17755	833.958432
Average scores were used for ties.					

Wilcoxon Two-Sample Test	
Statistic	431072
Normal Approximation	
Z	-8.144
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001
t Approximation	
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001

Kruskal-Wallis Test	
Chi-Square	66.3253
DF	1
Pr > Chi-Square	<.0001

Appendix C1

Female Wages, Year 3, CNA v Control Group 1 (CG1)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY3 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG1	575	330591.5	372025	6672.25536	574.941739
CNA	718	505979.5	464546	6672.25536	704.706825
Average scores were used for ties.					

Wilcoxon Two-Sample Test	
Statistic	330591.5
Normal Approximation	
Z	-6.2098
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001
t Approximation	
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001

Kruskal-Wallis Test	
Chi-Square	38.5619
DF	1
Pr > Chi-Square	<.0001

Appendix C1

Female Wages, Year 3, CNA v Control Group 2 (CG2)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY3 Classified by Variable GroupType					
GroupType	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
CG2	597	353580	392826	6856.25102	592.261307
CNA	718	511690	472444	6856.25102	712.660167

Wilcoxon Two-Sample Test	
Statistic	353580
Normal Approximation	
Z	-5.7241
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001
t Approximation	
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001

Kruskal-Wallis Test	
Chi-Square	32.7655
DF	1
Pr > Chi-Square	<.0001

Appendix C1

Female Wages, Year 3, CNA v Control Group 3 (CG3)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY3 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG3	589	344559.5	385206	6789.42692	584.990662
CNA	718	510218.5	469572	6789.42692	710.610724
Average scores were used for ties.					

Wilcoxon Two-Sample Test	
Statistic	344559.5
Normal Approximation	
Z	-5.9867
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001
t Approximation	
One-Sided Pr < Z	<.0001
Two-Sided Pr > |Z|	<.0001

Kruskal-Wallis Test	
Chi-Square	35.841
DF	1
Pr > Chi-Square	<.0001

Appendix C2

Male Wages, 6 Years Prior, CNA v Control Group 1 (CG1)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesYn6 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG1	17	270	289	27.760884	15.882353
CNA	16	291	272	27.760884	18.1875

Wilcoxon Two-Sample Test	
Statistic	291
Normal Approximation	
Z	0.6844
One-Sided Pr > Z	0.2469
Two-Sided Pr > |Z|	0.4937
t Approximation	
One-Sided Pr > Z	0.2493
Two-Sided Pr > |Z|	0.4986

Kruskal-Wallis Test	
Chi-Square	0.4684
DF	1
Pr > Chi-Square	0.4937

Appendix C2

Male Wages, 6 Years Prior, CNA v Control Group 2 (CG2)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesYn6 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG2	16	237	264	26.532998	14.8125
CNA	16	291	264	26.532998	18.1875

Wilcoxon Two-Sample Test	
Statistic	237
Normal Approximation	
Z	-1.0176
One-Sided Pr < Z	0.1544
Two-Sided Pr > |Z|	0.3089
t Approximation	
One-Sided Pr < Z	0.1584
Two-Sided Pr > |Z|	0.3167

Kruskal-Wallis Test	
Chi-Square	1.0355
DF	1
Pr > Chi-Square	0.3089

Appendix C2

Male Wages, 6 Years Prior, CNA v Control Group 3 (CG3)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesYn6 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG3	19	290	342	30.199338	15.263158
CNA	16	340	288	30.199338	21.25

Wilcoxon Two-Sample Test	
Statistic	340
Normal Approximation	
Z	1.7219
One-Sided Pr > Z	0.0425
Two-Sided Pr > |Z|	0.0851
t Approximation	
One-Sided Pr > Z	0.0471
Two-Sided Pr > |Z|	0.0942

Kruskal-Wallis Test	
Chi-Square	2.9649
DF	1
Pr > Chi-Square	0.0851

Appendix C2

Male Wages, 3 Years Prior, CNA v Control Group 1 (CG1)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesYn3 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG1	41	1744	1701.5	107.828181	42.536585
CNA	41	1659	1701.5	107.828181	40.463415

Wilcoxon Two-Sample Test	
Statistic	1744
Normal Approximation	
Z	0.3941
One-Sided Pr > Z	0.3467
Two-Sided Pr > |Z|	0.6935
t Approximation	
One-Sided Pr > Z	0.3473
Two-Sided Pr > |Z|	0.6945

Kruskal-Wallis Test	
Chi-Square	0.1554
DF	1
Pr > Chi-Square	0.6935

Appendix C2

Male Wages, 3 Years Prior, CNA v Control Group 2 (CG2)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesYn3 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG2	45	1930	1957.5	115.655739	42.888889
CNA	41	1811	1783.5	115.655739	44.170732

Wilcoxon Two-Sample Test	
Statistic	1811
Normal Approximation	
Z	0.2378
One-Sided Pr > Z	0.406
Two-Sided Pr > |Z|	0.8121
t Approximation	
One-Sided Pr > Z	0.4063
Two-Sided Pr > |Z|	0.8126

Kruskal-Wallis Test	
Chi-Square	0.0565
DF	1
Pr > Chi-Square	0.8121

Appendix C2

Male Wages, 3 Years Prior, CNA v Control Group 3 (CG3)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesYn3 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG3	49	2200	2229.5	123.429805	44.897959
CNA	41	1895	1865.5	123.429805	46.219512

Wilcoxon Two-Sample Test	
Statistic	1895
Normal Approximation	
Z	0.239
One-Sided Pr > Z	0.4056
Two-Sided Pr > |Z|	0.8111
t Approximation	
One-Sided Pr > Z	0.4058
Two-Sided Pr > |Z|	0.8117

Kruskal-Wallis Test	
Chi-Square	0.0571
DF	1
Pr > Chi-Square	0.8111

Appendix C2

Male Wages, Year 1, CNA v Control Group 1 (CG1)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY1 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG1	61	3980	4087	221.4588	65.245902
CNA	72	4931	4824	221.4588	68.486111

Wilcoxon Two-Sample Test	
Statistic	3980
Normal Approximation	
Z	-0.4832
One-Sided Pr < Z	0.3145
Two-Sided Pr > |Z|	0.629
t Approximation	
One-Sided Pr < Z	0.3149
Two-Sided Pr > |Z|	0.6298

Kruskal-Wallis Test	
Chi-Square	0.2334
DF	1
Pr > Chi-Square	0.629

Appendix C2

Male Wages, Year 1, CNA v Control Group 2 (CG2)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY1 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG2	64	4323	4384	229.364339	67.546875
CNA	72	4993	4932	229.364339	69.347222

Wilcoxon Two-Sample Test	
Statistic	4323
Normal Approximation	
Z	-0.266
One-Sided Pr < Z	0.3951
Two-Sided Pr > |Z|	0.7903
t Approximation	
One-Sided Pr < Z	0.3953
Two-Sided Pr > |Z|	0.7907

Kruskal-Wallis Test	
Chi-Square	0.0707
DF	1
Pr > Chi-Square	0.7903

Appendix C2

Male Wages, Year 1, CNA v Control Group 3 (CG3)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY1 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG3	66	4721	4587	234.614578	71.530303
CNA	72	4870	5004	234.614578	67.638889

Wilcoxon Two-Sample Test	
Statistic	4721
Normal Approximation	
Z	0.5711
One-Sided Pr > Z	0.2839
Two-Sided Pr > |Z|	0.5679
t Approximation	
One-Sided Pr > Z	0.2844
Two-Sided Pr > |Z|	0.5688

Kruskal-Wallis Test	
Chi-Square	0.3262
DF	1
Pr > Chi-Square	0.5679

Appendix C2

Male Wages, Year 2, CNA v Control Group 1 (CG1)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY2 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG1	61	3857	3873.5	204.848521	63.229508
CNA	65	4144	4127.5	204.848521	63.753846

Wilcoxon Two-Sample Test	
Statistic	3857
Normal Approximation	
Z	-0.0805
One-Sided Pr < Z	0.4679
Two-Sided Pr > |Z|	0.9358
t Approximation	
One-Sided Pr < Z	0.468
Two-Sided Pr > |Z|	0.9359

Kruskal-Wallis Test	
Chi-Square	0.0065
DF	1
Pr > Chi-Square	0.9358

Appendix C2

Male Wages, Year 2, CNA v Control Group 2 (CG2)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY2 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG2	65	4365	4257.5	214.762466	67.153846
CNA	65	4150	4257.5	214.762466	63.846154

Wilcoxon Two-Sample Test	
Statistic	4365
Normal Approximation	
Z	0.5006
One-Sided Pr > Z	0.3083
Two-Sided Pr > |Z|	0.6167
t Approximation	
One-Sided Pr > Z	0.3088
Two-Sided Pr > |Z|	0.6175

Kruskal-Wallis Test	
Chi-Square	0.2506
DF	1
Pr > Chi-Square	0.6167

Appendix C2

Male Wages, Year 2, CNA v Control Group 3 (CG3)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY2 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG3	70	4571	4760	227.082951	65.3
CNA	65	4609	4420	227.082951	70.907692

Wilcoxon Two-Sample Test	
Statistic	4609
Normal Approximation	
Z	0.8323
One-Sided Pr > Z	0.2026
Two-Sided Pr > |Z|	0.4052
t Approximation	
One-Sided Pr > Z	0.2034
Two-Sided Pr > |Z|	0.4067

Kruskal-Wallis Test	
Chi-Square	0.6927
DF	1
Pr > Chi-Square	0.4052

Appendix C2

Male Wages, Year 3, CNA v Control Group 1 (CG1)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY3 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG1	54	2942	2889	158.234004	54.481481
CNA	52	2729	2782	158.234004	52.480769

Wilcoxon Two-Sample Test	
Statistic	2729
Normal Approximation	
Z	-0.3349
One-Sided Pr < Z	0.3688
Two-Sided Pr > |Z|	0.7377
t Approximation	
One-Sided Pr < Z	0.3692
Two-Sided Pr > |Z|	0.7383

Kruskal-Wallis Test	
Chi-Square	0.1122
DF	1
Pr > Chi-Square	0.7377

Appendix C2

Male Wages, Year 3, CNA v Control Group 2 (CG2)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY3 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG2	65	3826	3835	182.309261	58.861538
CNA	52	3077	3068	182.309261	59.173077

Wilcoxon Two-Sample Test	
Statistic	3077
Normal Approximation	
Z	0.0494
One-Sided Pr > Z	0.4803
Two-Sided Pr > |Z|	0.9606
t Approximation	
One-Sided Pr > Z	0.4804
Two-Sided Pr > |Z|	0.9607

Kruskal-Wallis Test	
Chi-Square	0.0024
DF	1
Pr > Chi-Square	0.9606

Appendix C2

Male Wages, Year 3, CNA v Control Group 3 (CG3)

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable WagesY3 Classified by Variable GroupType					
GroupType	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
CG3	63	3624	3654	177.955051	57.52381
CNA	52	3046	3016	177.955051	58.576923

Wilcoxon Two-Sample Test	
Statistic	3046
Normal Approximation	
Z	0.1686
One-Sided Pr > Z	0.4331
Two-Sided Pr > |Z|	0.8661
t Approximation	
One-Sided Pr > Z	0.4332
Two-Sided Pr > |Z|	0.8664

Kruskal-Wallis Test	
Chi-Square	0.0284
DF	1
Pr > Chi-Square	0.8661