Trinity Lively

GIS 5013 Final Project

Child Abuse and Neglect in Oklahoma

Introduction

I decided to focus my final project on the child abuse and neglect statistics for the State of Oklahoma. I have worked with the Department of Human Services since May 2019 with a short break of service, returning in October 2020. Being on the front line working with Child Protective Services (CPS) I saw firsthand how little resources Oklahoma has for services, mental health or substance abuse, and the overall lack of parental knowledge that the smaller communities of Oklahoma struggle with. With the lack of parental knowledge, mental health and substance abuse providers being scares in the smaller communities, we see child abuse and neglect. My goal for this project was to shed light on how many child abuse and neglect investigations were assigned and how many were substantiated. I also wanted to visually depict the difference in types of substantiations, either abuse, neglect, or both. In the beginning of the project, I started with just showing how many substantiations, investigations, and how they were classified per county, but I later wanted to show the percentage of those classifications by county. I believe that this new information will help to show a bigger picture rather than just how many substantiations per population of each topic that there were.

Definitions

Oklahoma Department of Human Services says that a child abuse and neglect investigation is the response to an allegation of abuse or neglect that involves a serious and immediate threat to the safety of the child making it necessary to determine the current safety of that child and the risk of subsequent abuse or neglect, if that child abuse or neglect occurred, and if the family needs prevention and

intervention-related services. They define abuse as harm or threat of harm by a person responsible for a child's health, safety, or welfare including non-accidental physical or mental injury or sexual abuse or sexual exploitation. They also define neglect as the failure of or omission by the person responsible for a child to provide the child with adequate nurturance and affection, food, clothing, shelter, medical, dental, or behavioral health care and other special care needs, and exposure to the use, abuse, possession, sale, or manufacture of illegal drugs, activities, or sexual acts or materials that are not age appropriate, and abandonment. Substantiation means that the department has concluded its investigation and has found that there is some credible evidence that abuse, or neglect has occurred.

Data Source

The information that I have gathered for this project includes a state map of Oklahoma obtained from the ArcGIS, a County Boundary map – originally from lab 3 in class but from the OU GIS warehouse, and Oklahoma population from the Oklahoma Demographics website. Child abuse and neglect statistics taken from the Oklahoma Department of Human Services (OKDHS) statistics library for fiscal year 2019 and definitions from the policy library. I combined the data from OKDHS in an excel spreadsheet and added a column for each of the additional data topics I needed. I used ArcGIS as the platform for this project.

Project Strategy

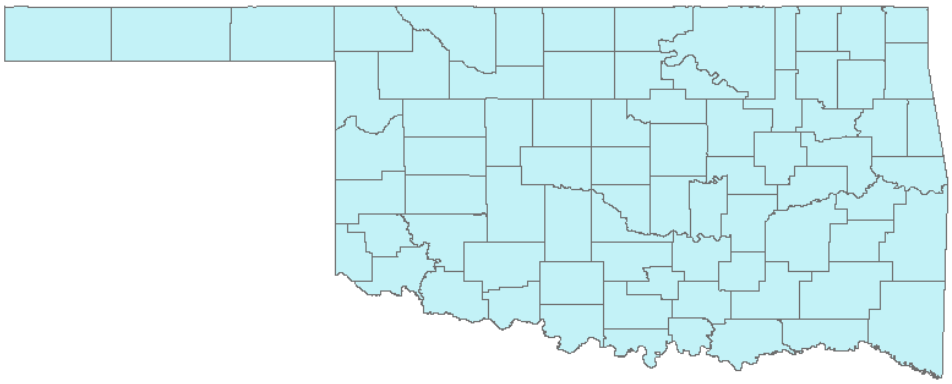
I began by creating a new map in ArcGIS. I added in the shapefile – County Boundaries to the table of contents. I then added the table 'Final Dataset' that included 5 different data tables to my table of contents. I needed to combine the attribute tables between the shapefile and my data table, for this I opened the attribute tables and compared them to see what common column they had. I found that between the two attribute tables, I was able to use Join and Relates to join 'Name10' and 'County'. By

joining these two attribute tables, I was then able to have a value assigned to each county. This value is where the remainder of my data came from.

After joining my attribute tables, I was able to go ahead with my visual representations of what I wanted to show. Once I had my shapefile with the combined attribute table, I was able to go into symbology and select quantities. I chose to use graduated colors since the data was for the entire county, not particular locations within the county. I used a mixture of natural breaks (Jenks) and manual breaks to adjust the ranges for each of the maps. The color ramp I decided to go with were light green to dark green. I felt that this was enough to visually separate each range but still be pleasing to the eye. While in the layers properties I was able to add in labels for each of the counties, adjusting them to try horizontal first, then straight.

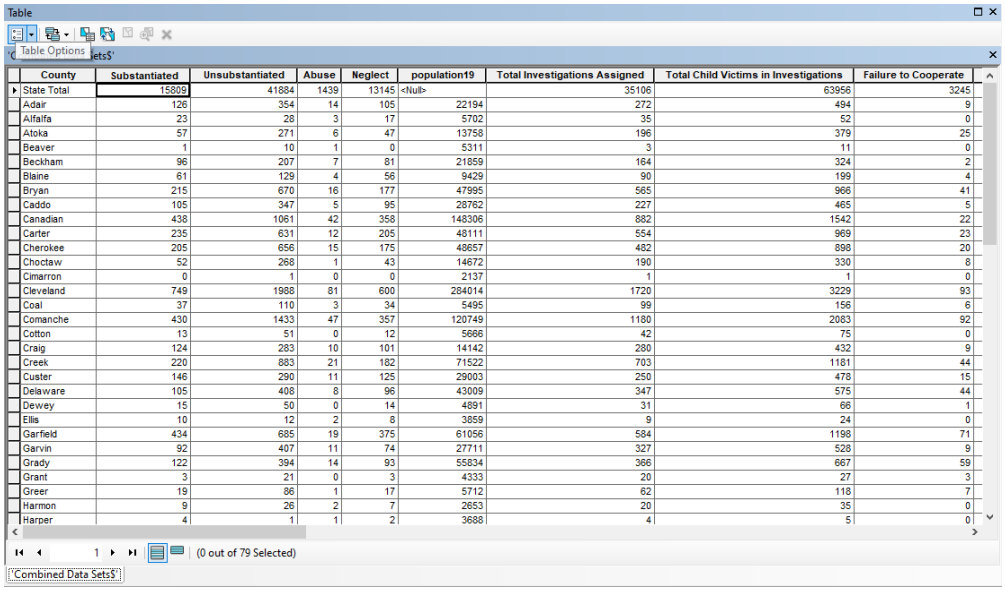
Once all data was selected, I added in a title, scale bar, north arrow, legend, and source and author information. I added in a new data frame and placed a map of the United States inside. I used the same layout for each of the 10 maps created. I found this was the easiest method, while saving each project before changing the data and information.

1. Create a new map – ArcGIS
2. Add data
    a. SHP file from file – Oklahoma by County



    i.
    b. Add table “Combined Data Set” from file “Final Dataset”

i.



Table

Table Options

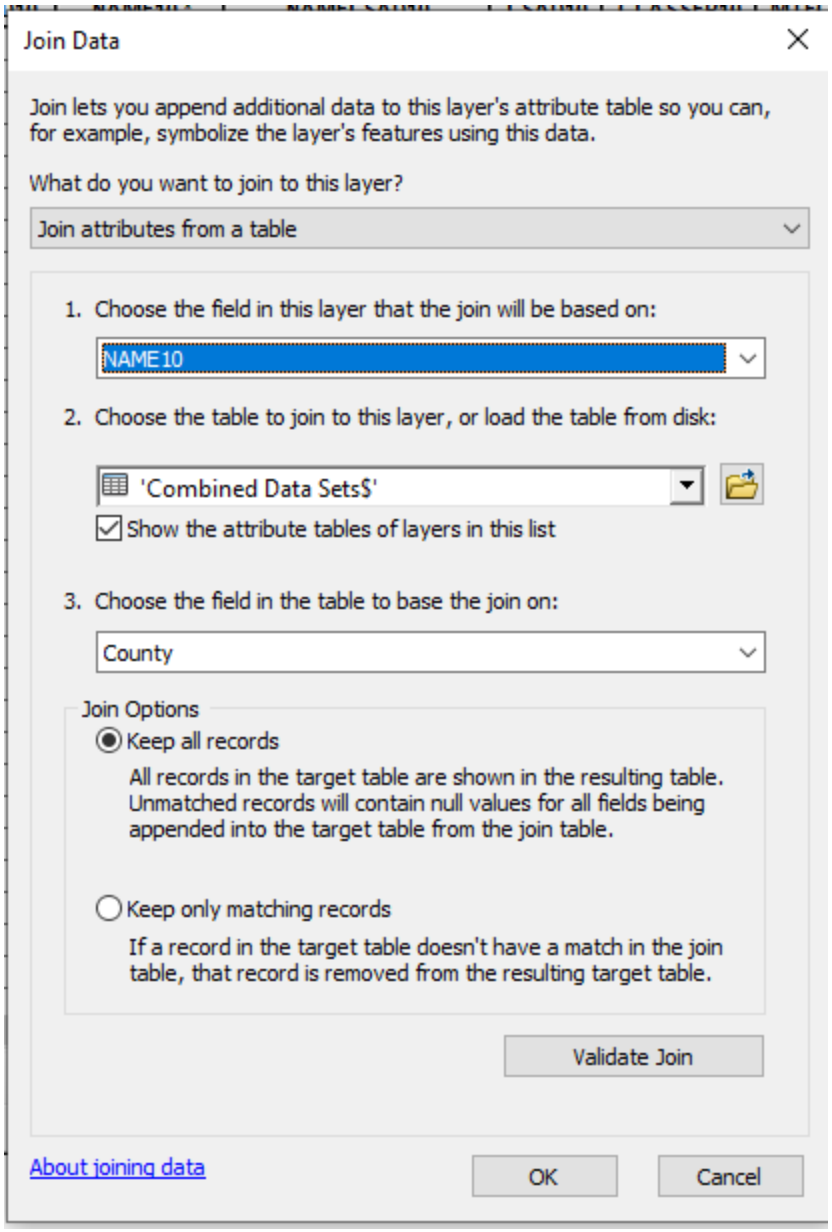
ets$'

County	Substantiated	Unsubstantiated	Abuse	Neglect	population19	Total Investigations Assigned	Total Child Victims in Investigations	Failure to Cooperate
State Total	15809	41884	1439	13145	<Null>	35106	63956	3245
Adair	126	354	14	105	22194	272	494	9
Alfalfa	23	28	3	17	5702	35	52	0
Atoka	57	271	6	47	13758	196	379	25
Beaver	1	10	1	0	5311	3	11	0
Beckham	96	207	7	81	21859	164	324	2
Blaine	61	129	4	56	9429	90	199	4
Bryan	215	670	16	177	47995	565	966	41
Caddo	105	347	5	95	28762	227	485	5
Canadian	438	1061	42	358	148306	882	1542	22
Carter	235	631	12	205	48111	554	969	23
Cherokee	205	656	15	175	48657	482	898	20
Choctaw	52	268	1	43	14672	190	330	8
Cimarron	0	1	0	0	2137	1	1	0
Cleveland	749	1988	81	600	284014	1720	3229	93
Coal	37	110	3	34	5495	99	156	6
Comanche	430	1433	47	357	120749	1180	2083	92
Cotton	13	51	0	12	5666	42	75	0
Craig	124	283	10	101	14142	280	432	9
Creek	220	883	21	182	71522	703	1181	44
Custer	146	290	11	125	29003	250	478	15
Delaware	105	408	8	96	43009	347	575	44
Dewey	15	50	0	14	4891	31	66	1
Ellis	10	12	2	8	3859	9	24	0
Garfield	434	685	19	375	61056	584	1198	71
Garvin	92	407	11	74	27711	327	528	9
Grady	122	394	14	93	55834	366	667	59
Grant	3	21	0	3	4333	20	27	3
Greer	19	86	1	17	5712	62	118	7
Harmon	9	26	2	7	2653	20	35	0
Harper	4	1	1	2	3688	4	5	0

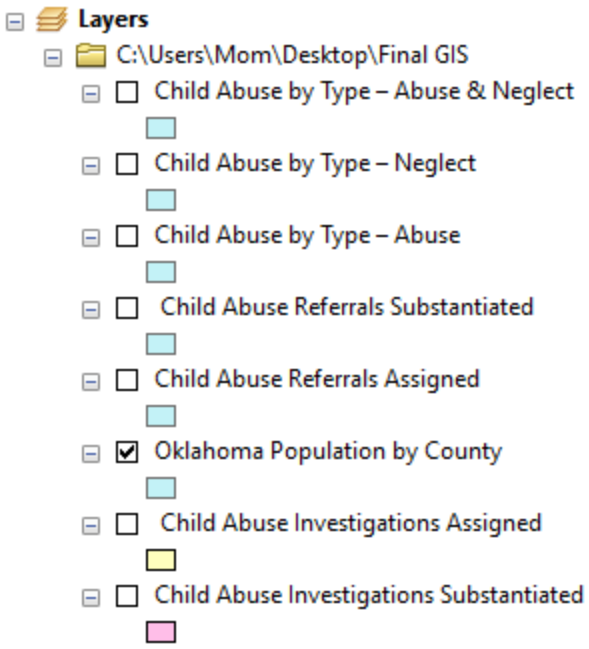
1 (0 out of 79 Selected)

Combined Data Sets$

3. Open attribute table for Oklahoma by County
    a. Joines and Relates
        i. Join

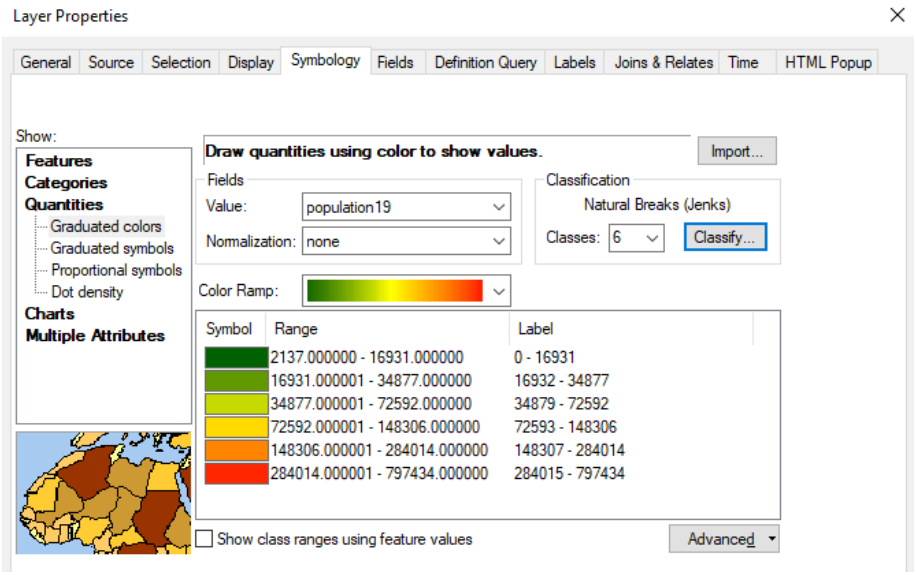
1. 

4. Now that tables are joined, you can use this data to make several maps based on what information within the tables you want.
    a. Copy original layer, rename each layer... Population by County, Child Abuse Investigations Assigned, Child Abuse Investigations Substantiated, Child Abuse by Type – Abuse, Child Abuse by Type – Neglect, Child Abuse by Type – Abuse & Neglect

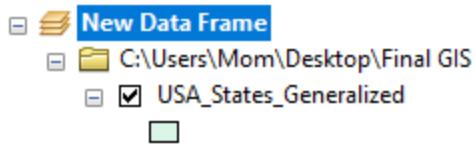


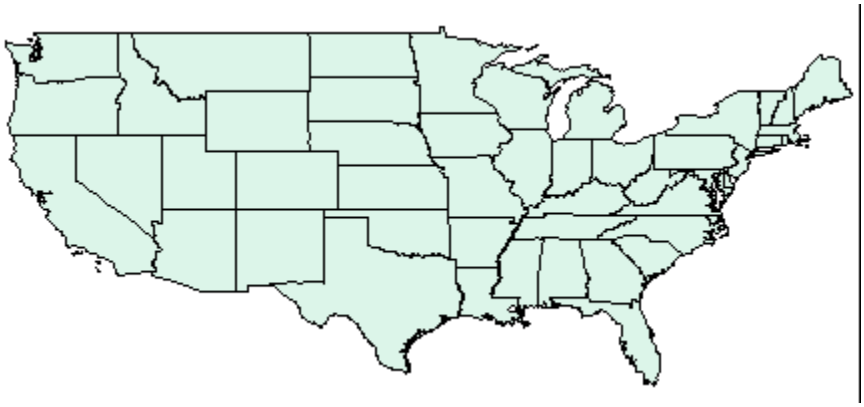
i.

5. Change map to Layout view, add in rules, snap map to grid
6. 1st map will be a population map. Oklahoma Population by County
    a. Symbology
        i. Re-label each labeled amount to remove .000000 Natural Breaks (Jenks) 6 classes, color ramp – green to red – *later changed to green scale

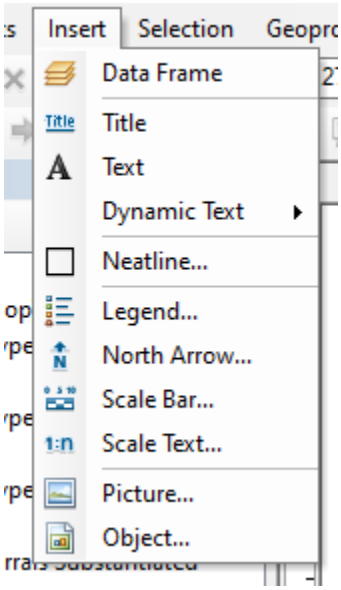
1. 

    b. Inserted New Data Frame
        i. United States of America by state – ArcGIS shp file

1. 

2. 

c. Added Legend, Scale Bar, North Arrow, Dynamic Text

i. 

Results

My results were not surprising. While counties such as Oklahoma, Tulsa, Cleveland, Canadian, and Comanche have the highest populations in the state, the percentage of investigations assigned and substantiated were not within these counties. Ellis County, with a population of 3850, is showing with the highest percentage of substantiations per population in the state. Ellis, Harper, Woods, Major,

Kingfisher and Roger Mills counties had the highest percentage of substantiations by population in the State. Ellis, Woods, Major, and Roger Mills also had the highest percentage of neglect substantiations, while Ellis was one of the top three in highest percentage in abuse substantiations. This visual information can help those counties to identify what needs, behavioral health, substance abuse, and/or overall parenting knowledge are needed in the communities.

Things that went wrong

The very first thing that went wrong was that once I joined my attribute tables, Le Flore County would not populate. I found that on the shapefile 'County Boundaries' it was spelt "Le Flore" while on my data table it was spelt "LeFlore". I had to go in and change the data table to match the shapefile and then I was able to rejoin the two and it showed up correctly. Another issue I ran into was color schemes. While the color ramp green to red allows you to see the difference in data, going from dark green to light green to orange, yellow, and then red was confusing. I played around with several other ramps until I decided upon the green light to dark ramp.

Things to change next time

Procrastination. I wanted to wait until I was comfortable with the information before I began my project. I noticed that my overall project was very basic. This may be because I waited so long to come up with the idea for my project or that I just picked a very basic idea. Either way, I'd like to dig deeper into the Child Abuse and Neglect data by focusing in on one county and looking at demographics, generational cases, and types of abuse and neglect that is really happening. Another category to investigate is who is the offending party and what is the relationship to the child or children. All this information is not open to the public, but as an employee and student, I believe I can obtain this information legally.

Sources

Oklahoma Department of Human Services Library

http://www.okdhs.org/library/rpts/Pages/s19_dhsannualreport_tables.aspx

OU Data Warehouse - County Boundaries

http://data.csa.ou.edu

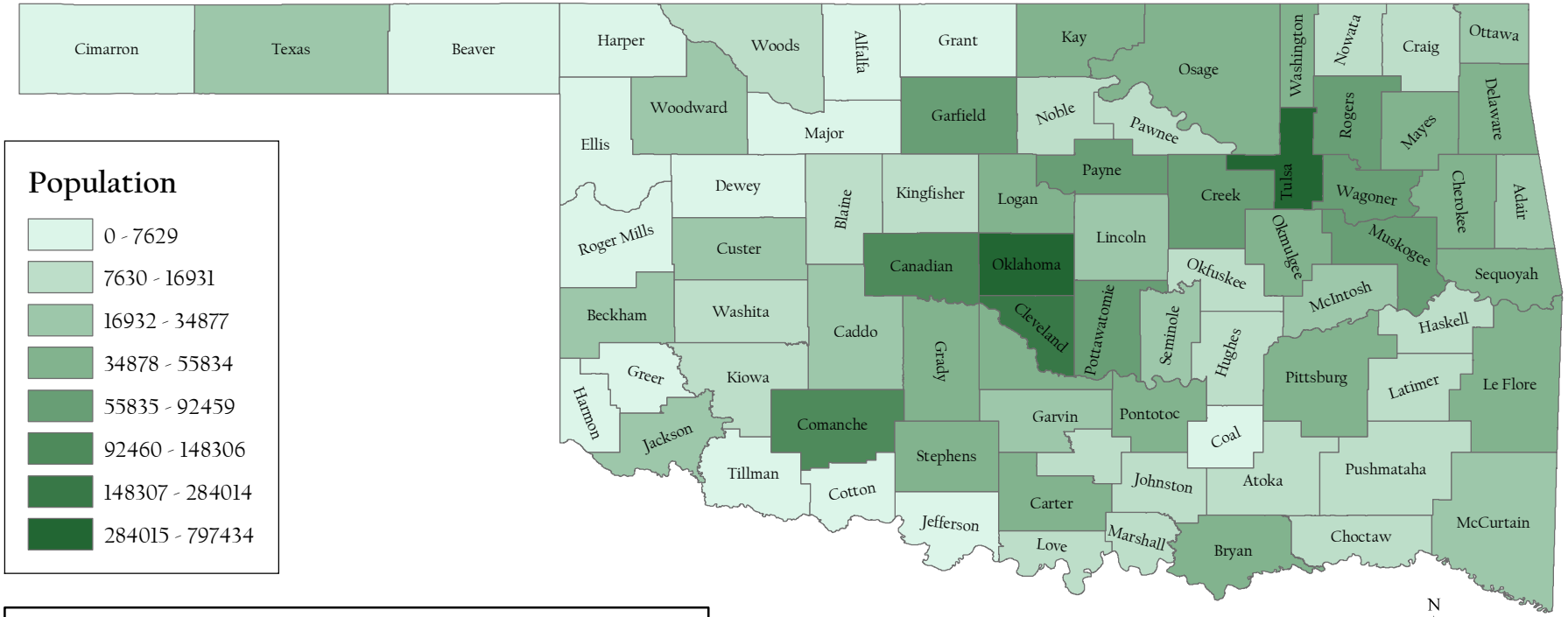
ArcGIS - United States Map - Generalized

https://hub.arcgis.com/datasets/esri::usa-states-generalized

Oklahoma Demographics – Population

https://www.oklahoma-demographics.com/counties_by_population

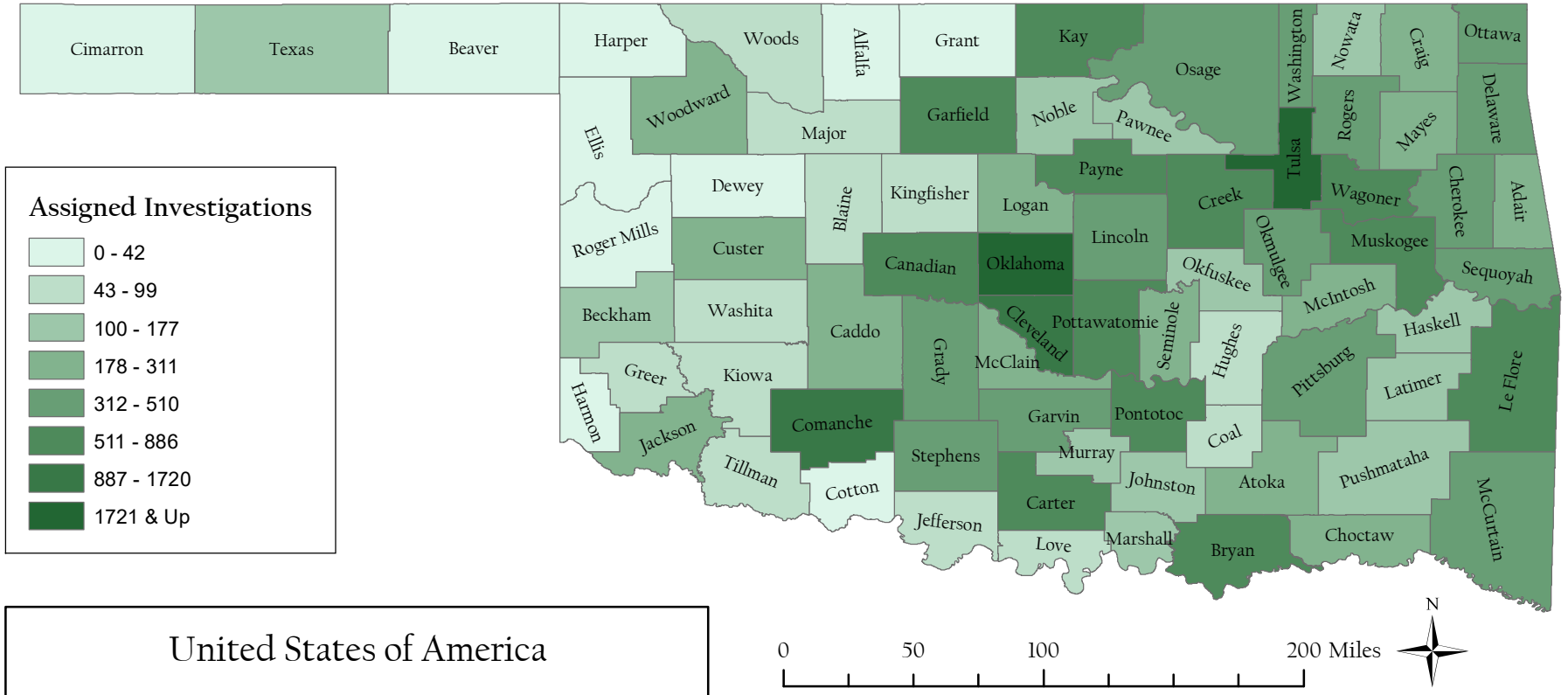
Oklahoma Counties by Population

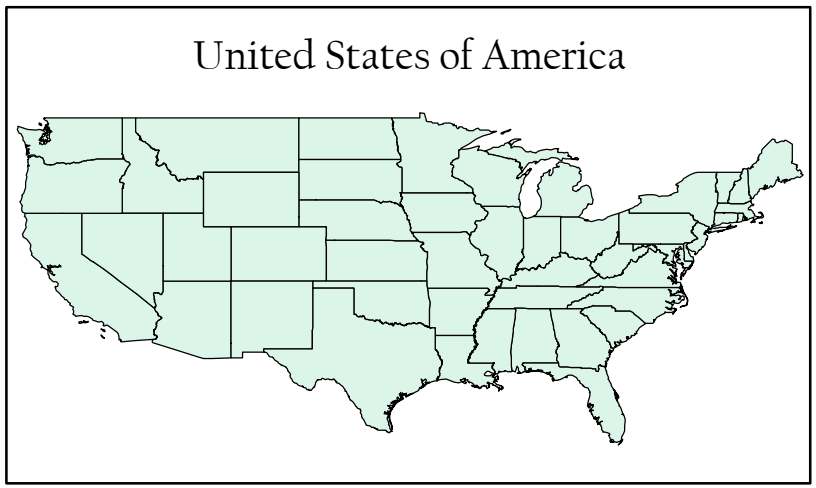


Sources: OKDHS Library - Annual Reports FY '19
Oklahoma Demographics - Population by County
GIS Data Warehouse – http://data.csa.ou.edu - County Boundaries
ArcGIS Data Library - United States Map

Author: Trinity Lively

Oklahoma Child Abuse & Neglect Investigations Assigned by County





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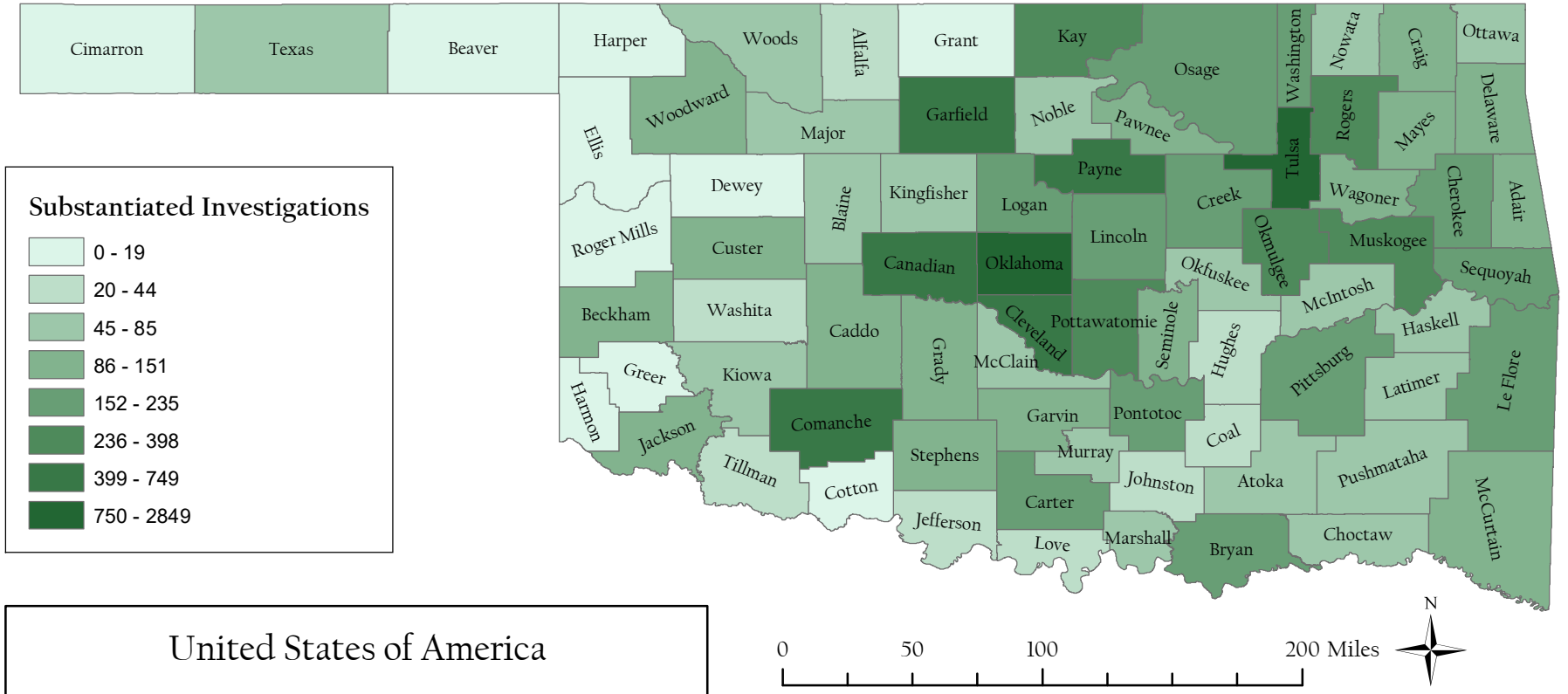
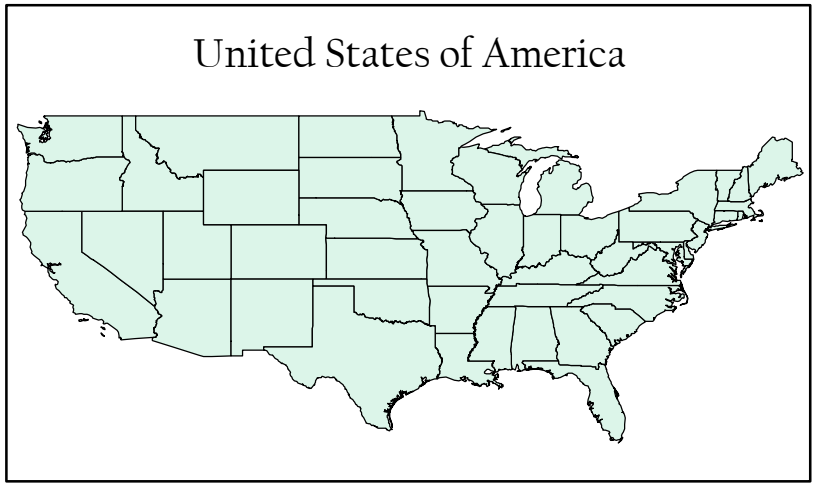
Oklahoma Child Abuse & Neglect Investigations Substantiated by County





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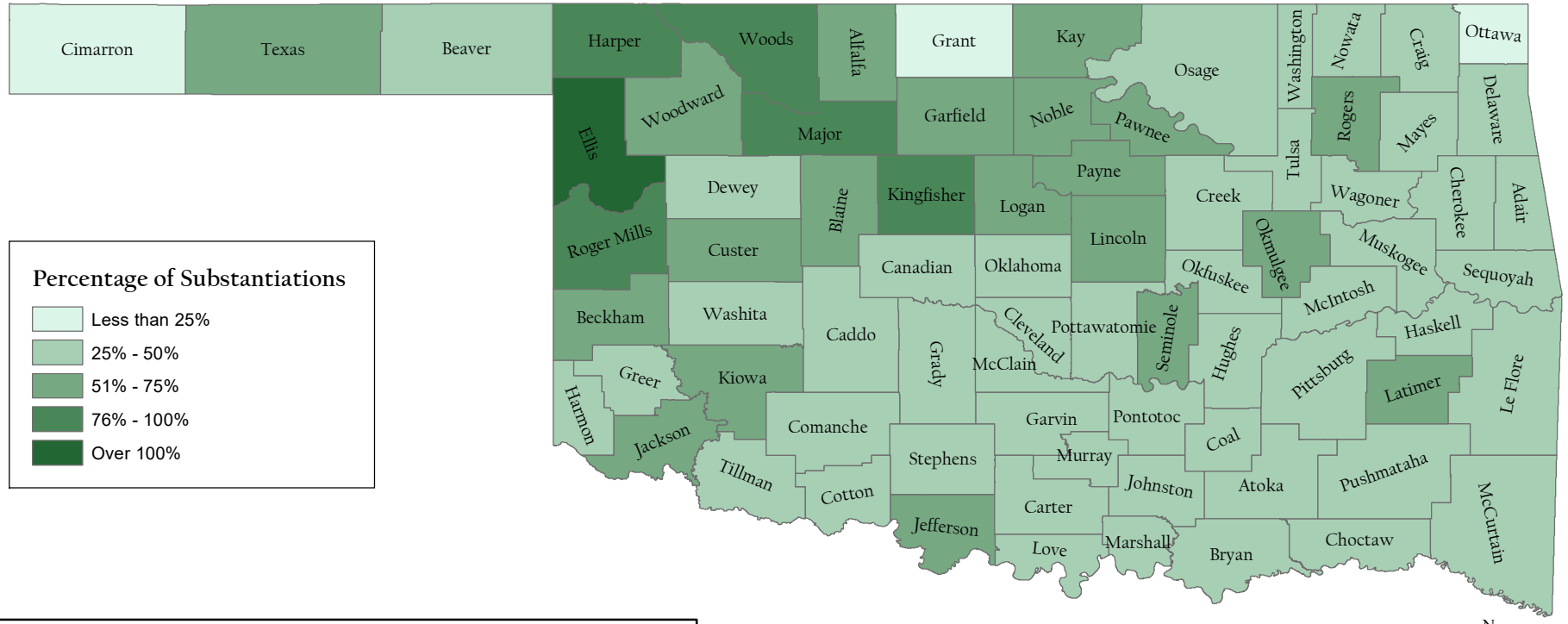
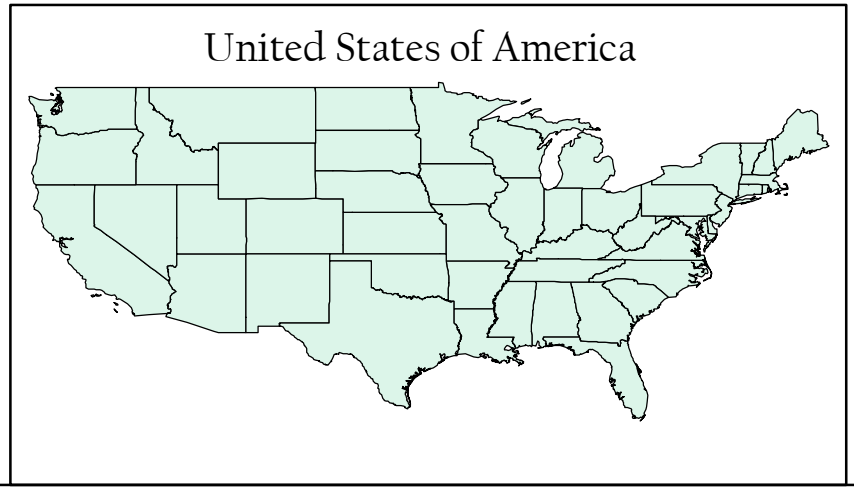
Percent of Child Abuse and Neglect Substantiations by County





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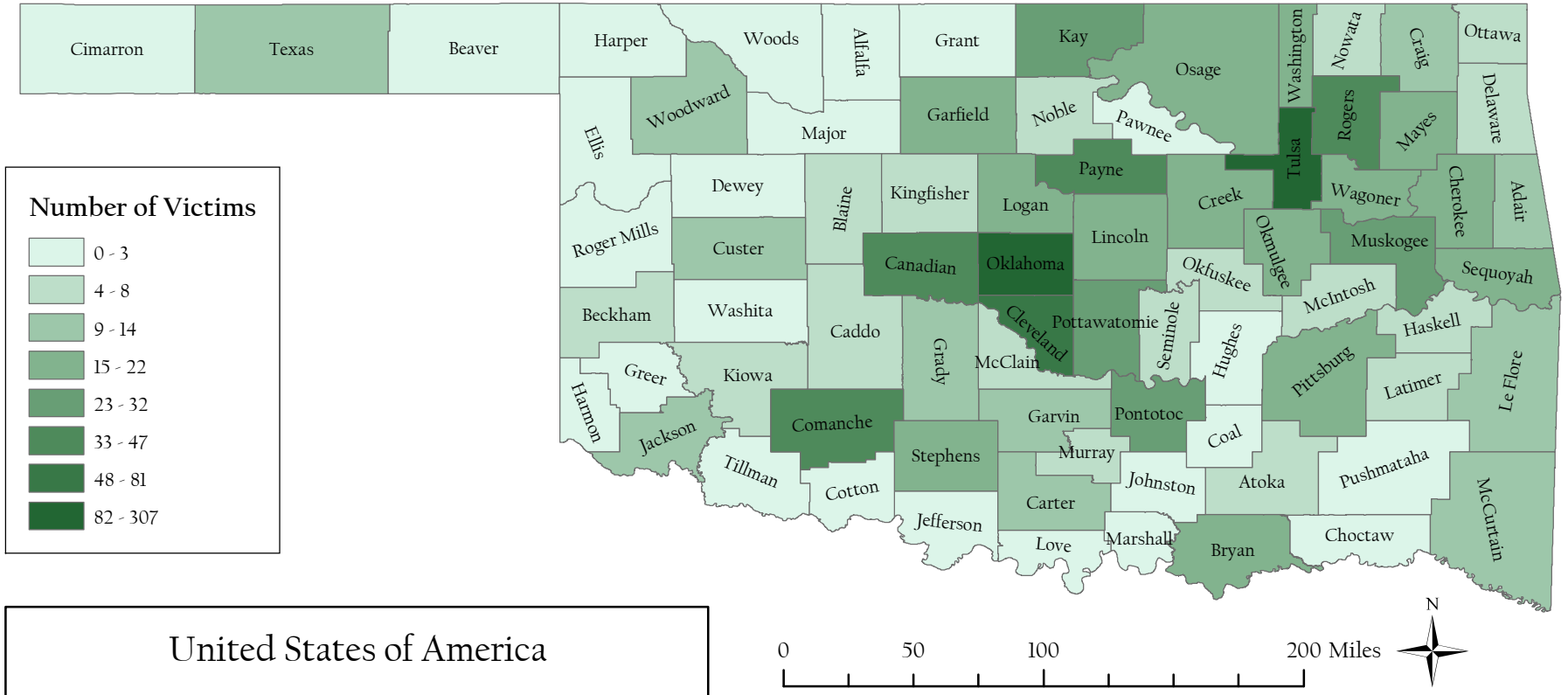
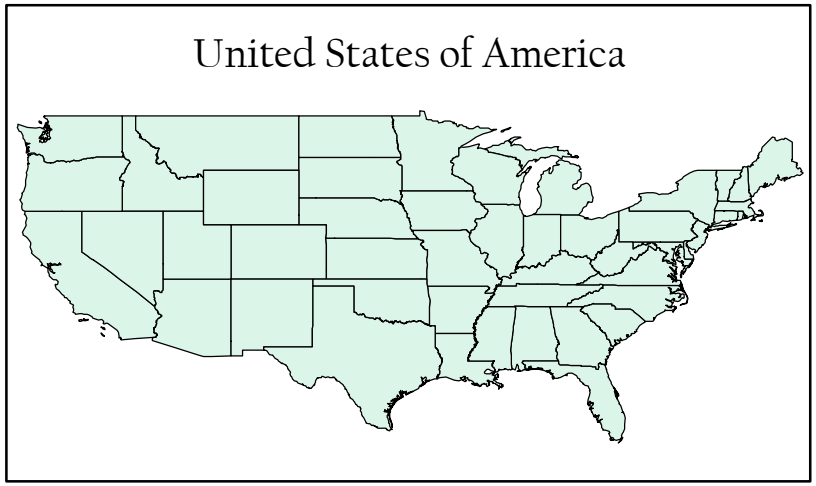
Author: Trinity Lively

Oklahoma Substantiated Child Abuse by County





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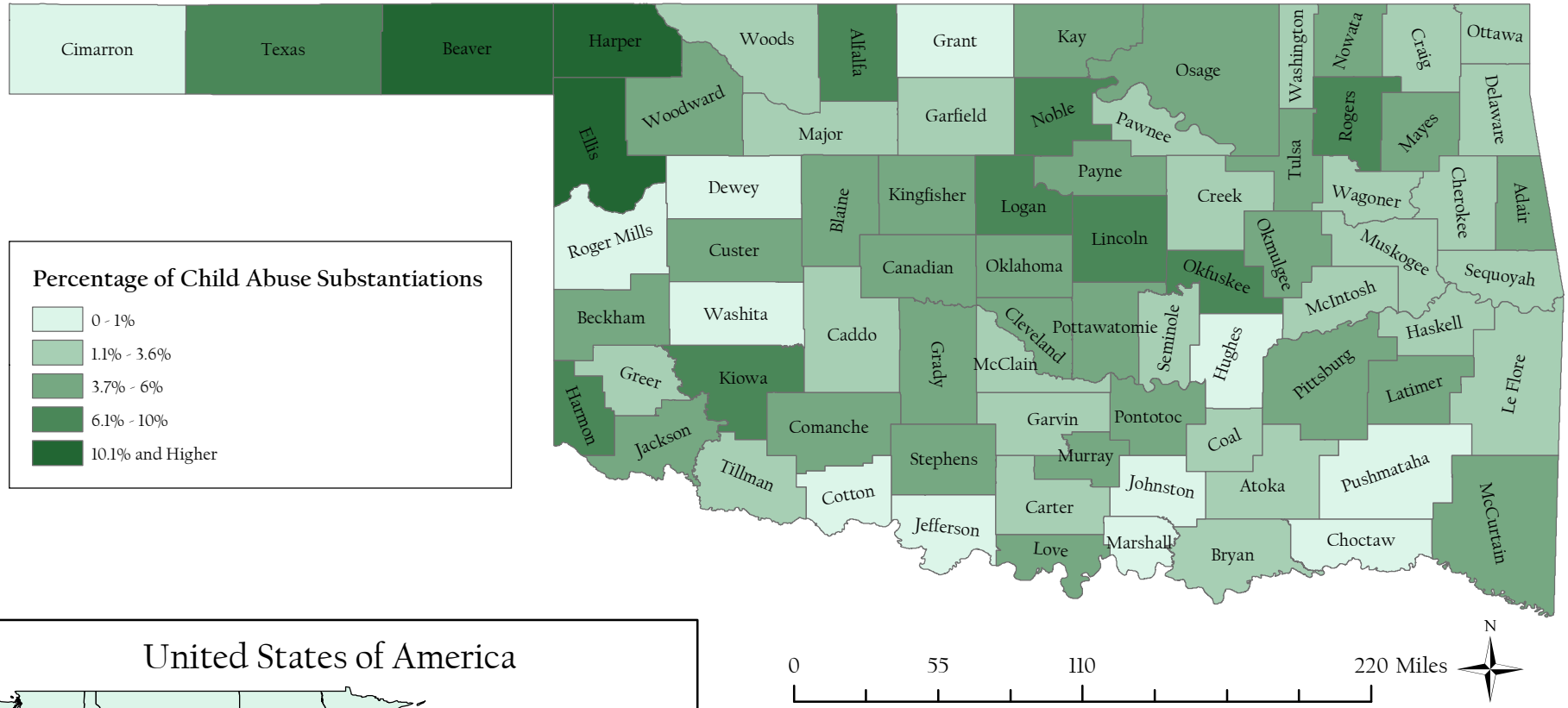
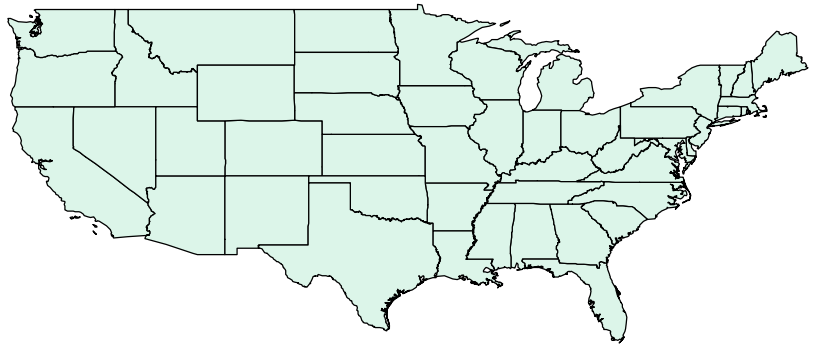
Substantiations to Child Abuse by County



United States of America



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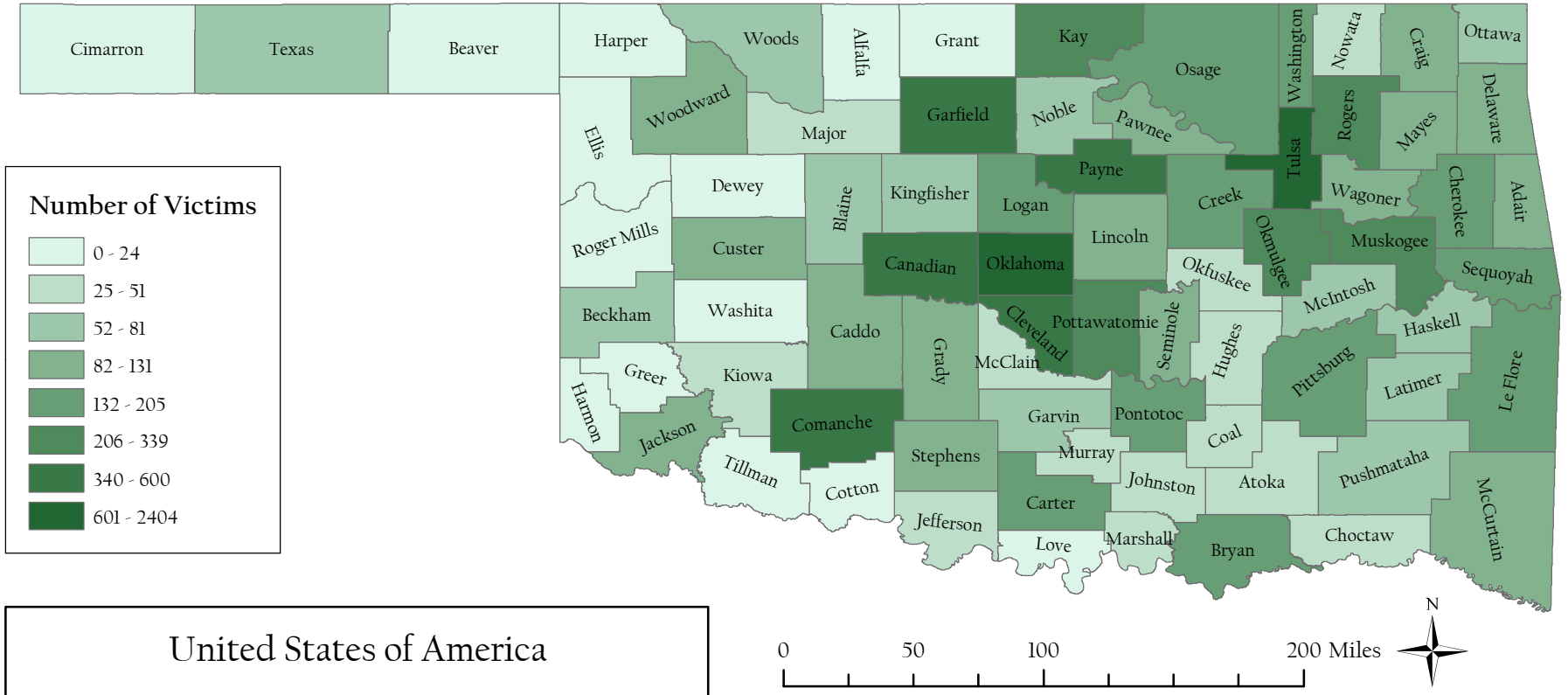
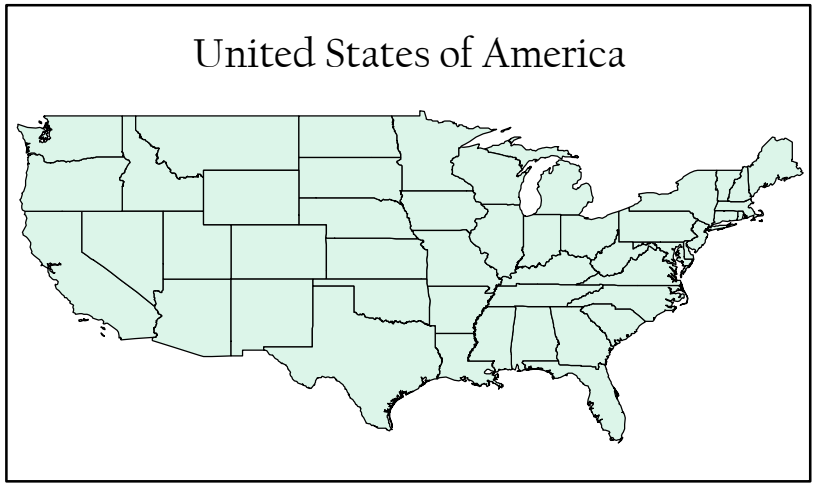
Oklahoma Substantiated Child Neglect by County





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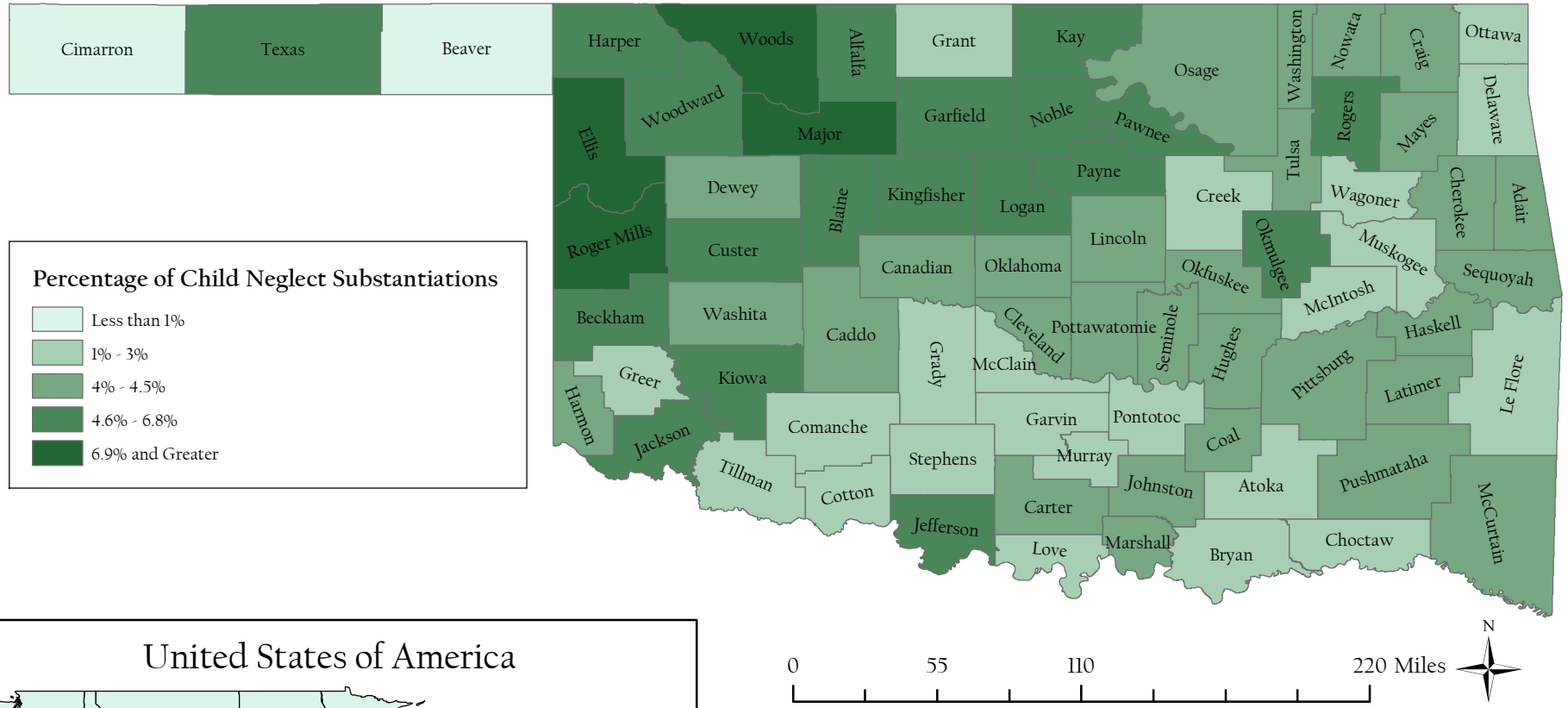
Substantiations to Child Neglect by County



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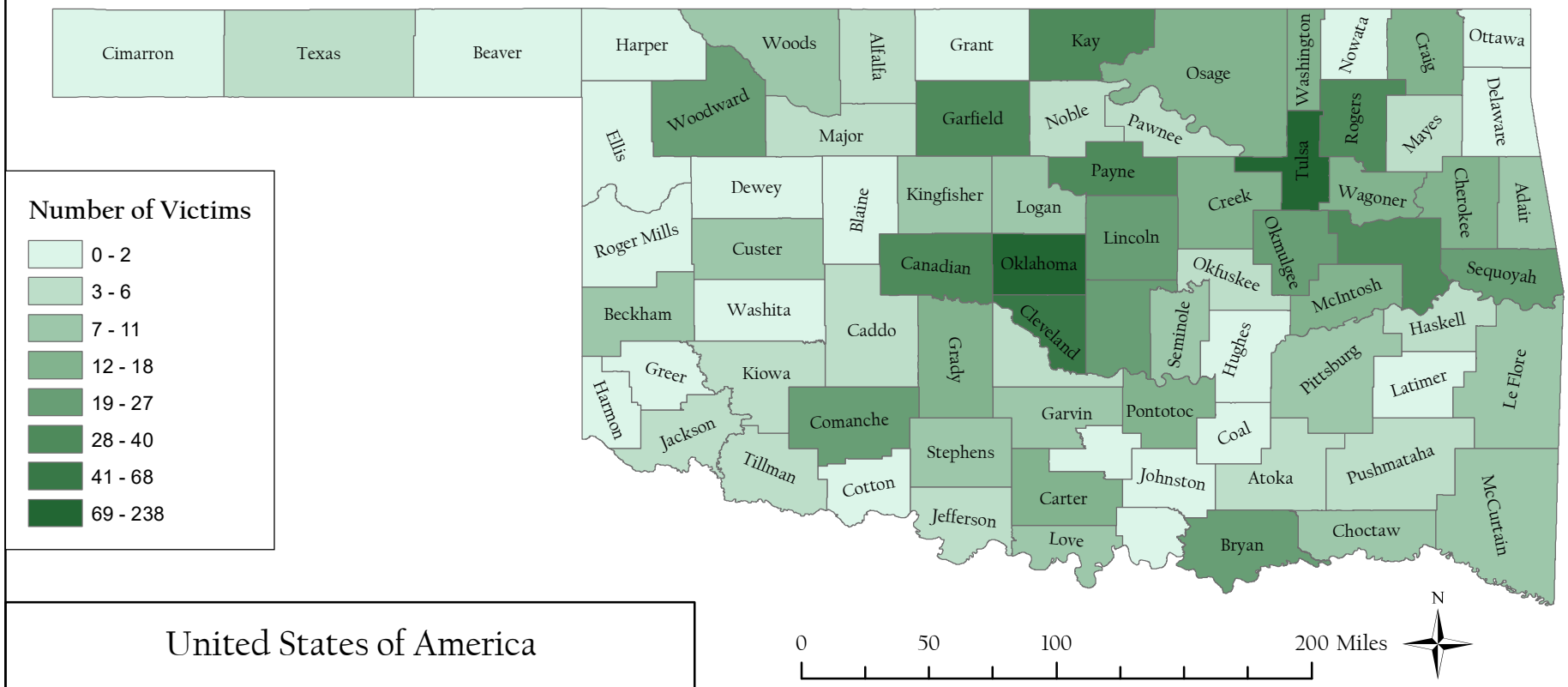
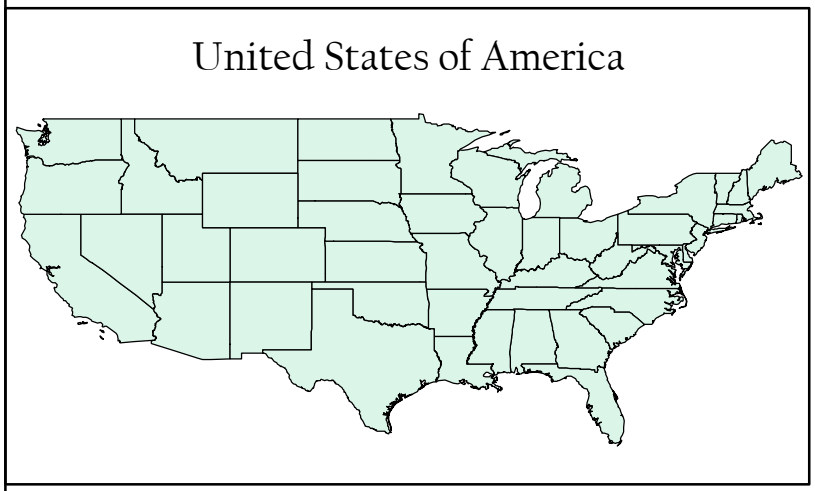
Oklahoma Substantiated Child Abuse & Neglect by County





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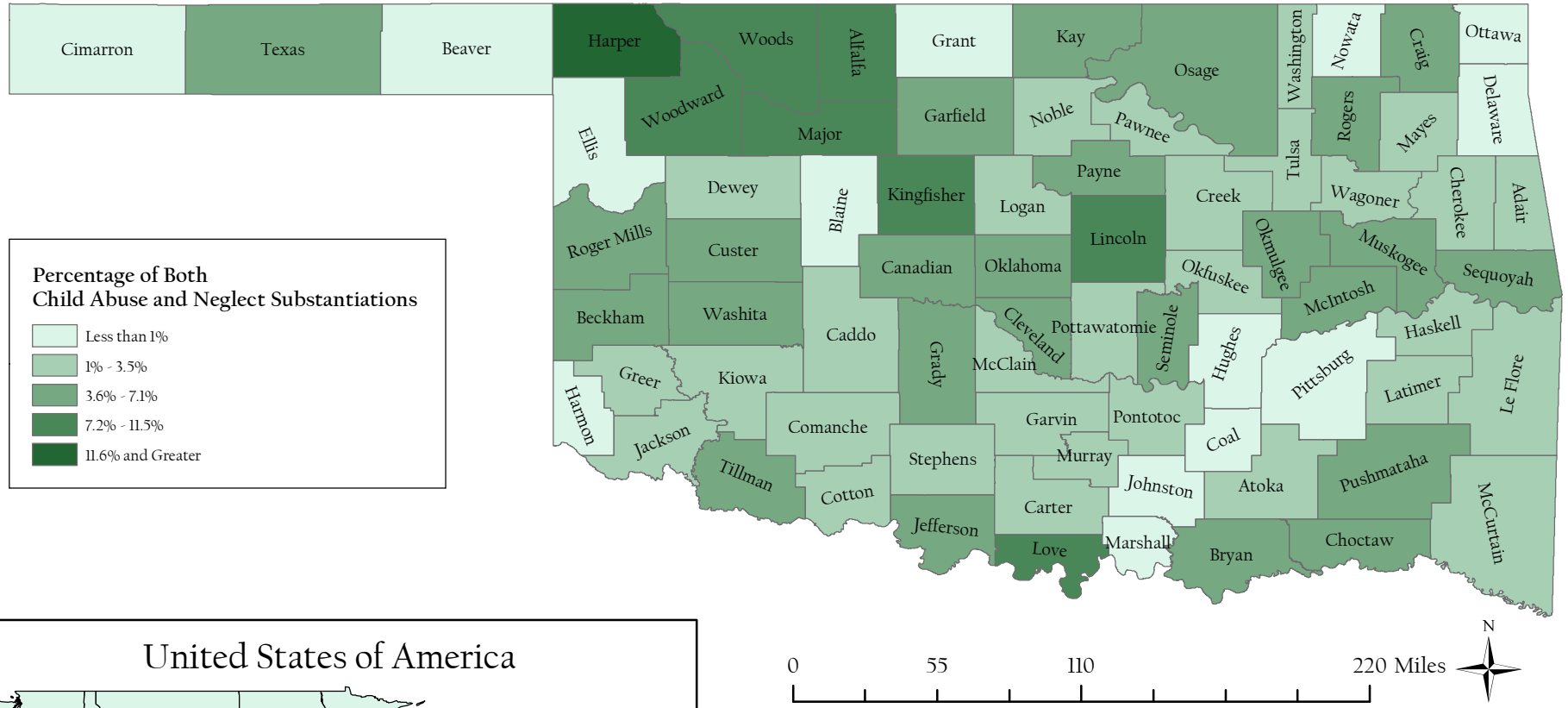
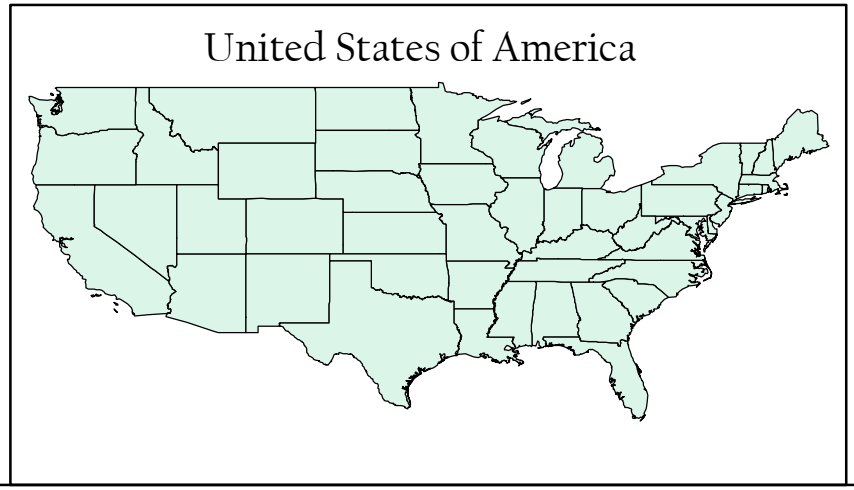
Substantiations to Both Child Abuse and Neglect by County





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