Understanding Traffic Safety Culture and Attitudes on Indian Reservations:

Evidence from the Colville Confederate Tribes in Washington State

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A RESEARCH REPORT

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SUMMARY

The disparity between American Indian communities and the rest of the nation in car crash fatalities is alarming. While states nationwide have successfully reduced traffic deaths, fatality rates for Indian tribes remain significantly higher than the state average. This is largely because residents on Indian reservations share some unique driving behavioral patterns. Thus, a comprehensive understanding of the traffic safety culture and attitudes on Indian reservations is essential for policy makers to effectively address the tribal traffic safety issues.

This study analyzes traffic behavioral pattern on Indian reservations based on evidence from the Colville Confederate Tribes (CCT) located in northeastern Washington using a convergent parallel mixed methods approach. Seven focus groups interviews were carried out, including community members from all four districts within CCT. Each interview addressed questions specific to four traffic safety categories: life experiences, law enforcement, seatbelt use, and messaging. Quantitative data were collected through surveys at three locations on the reservation, with a convenience sample of people involved in tribal activities. The questionnaire

consisted of questions related to sociodemographic status, seatbelt awareness, and driver behavior both on and off the reservations.

The main findings of qualitative and quantitative analysis were compared and integrated for a comprehensive picture. Analysis of the focus group interviews revealed several themes and factors contributing to traffic safety concerns. These included drinking and driving, speeding, issues with traffic law enforcement, education, seatbelt use, misconception about seatbelt use, driving habits of young males, emergency services, and messaging. The quantitative analysis primarily focused on seatbelt use related issues and employed several inferential statistical models, including paired t-test, chi-square analysis, and logistic regression. To a large extent, the results from the quantitative analysis aligned with the observation and assertions derived from the focus group interviews. In general, sociodemographic factors such as age and educational background (but not gender) and the perceived effectiveness of law enforcement were found to be predictors of seatbelt use rates. Additionally, residents displayed different seatbelt use behaviors between driving on and off the reservation, with awareness of seatbelt benefits and misconceptions of seatbelts significantly impacting usage when driving off the reservation, but not on the reservation.

Results of this analysis can be utilized in the development of state, local, and tribal programs aimed at promoting tribal traffic safety and increasing seatbelt usage. It is recommended that traffic law enforcement should be stricter to reduce DUI and speeding cases and improve seatbelt use rates. Actions should be taken to educate reservation residents, especially young people, about the importance of wearing seatbelts and dispelling misconceptions hindering their usage. In addition, with limited tribal resources and tribal programs, collaboration between tribes and state and local governments across various programs and disciplines, including engineering, enforcement, Emergency Medical Services (EMS) and education, should be encouraged to enhance overall traffic safety on Indian reservations.

INTRODUCTION

Traffic safety is of top priorities in transportation and the nation faces serious challenges in reducing vehicle accidents on the roadways. In the United States, roadway fatalities and the fatality rate declined significantly between 1975 and 2010 but the progress has stalled ever since. In 2020, there were 5,250,837 total reported accidents, among which 35,768 deaths occurred (Bieber, 2023). According to the DOT *2023 Progress Report on the National Roadway Safety Strategy* (US DOT, 2023), in 2021, the total number of deaths went up to 42,195, the highest total number recorded since 2007.

The Indian tribes in the United States face even greater challenges in traffic safety. There is a great disparity between American Indian communities and the rest of the nation in car crash fatalities. While states across the nation are making great efforts in reducing their traffic deaths and serious injuries, traffic fatality rates for Indian tribes remains significantly higher than the state average. For example, the Fatality Analysis Reporting System (FARS) for Washington State shows that during a ten-year period from 2008 to 2017, traffic fatality rate was 28.5 per 100,000 population for American Indian/Alaska Native (AIAN), while the figure was 7.3 for Black and White, 4.9 for Hispanic, and 3.2 for Asian/Pacific Islander (Grondel and Hoff, 2019). Similar patterns were revealed in studies of other states, such as Arizona (Corbett and Mickelson, 2007), and of all reservations nationwide (Quick and Narvaez, 2018).

A comprehensive understanding of what the major causes of car accidents are and why Indian tribes suffer from a much higher car crash fatality rate than other races in the nation is vital for governments (tribal, federal, state, and local) to develop and implement effective strategies to promote traffic safety on the Indian reservations. Therefore, it is important to link the driving behavioral patterns to unique social, political, economic, and cultural factors in the Indian tribes. There are 574 federally recognized American Indian tribes and Alaska Native entities in the United States and tribal communities have their own history, culture, social structure, and political and economic status.

Extensive studies have been carried out by government agencies and by academic organizations to explore traffic safety issues on the Indian reservations. Research projects using questionnaire-based surveys and on-site observations have been conducted to get firsthand evidence of behavioral patterns of driving on the reservations. A variety of factors that contribute to these patterns have been identified and discussed. Among these factors, drinking and driving, lower rate of seatbelt use, speeding, and passengers riding in truck beds are on top of the list (Grossman, D.C. et al., 1997; Pollack et al., 2012; Poindexter, 2004;). In addition to the individual behaviors, factors pertaining to road conditions such as poor rood maintenance and lack of timely snow and ice removal are also discussed (Grossman et al., 1997; LaValley et al., 2003; Raynault et al., 2010). Existing literature also point out that certain demographic and socio-economic issues may be associated with driving behavioral patterns on the reservations, including poverty, isolation, access to health service and grocery, law enforcement, etc. (Andrew & Krouse, 1995; Grossman et al., 1997; Haper et al, 2014; Johnson, Kao, & Korenbrot, 2006; Raynault et al., 2010). While existing studies have provided great insights about the tribal traffic safety issues, they generally draw their conclusions based on observations and descriptive analysis, and there is a lack of empirical studies that use inferential statistical techniques to verify the impact of the identified social and economic factors on driving behavioral patterns. Further, existing studies often suffer from low quality of data, which may lead to unreliable or biased conclusions (Nazneen, Rezapour Mashhadi, & Ksaibati, 2020; Quick, Larsen, & Narváez, 2019). It is recommended that, in order to accurately identify and address the major transportation safety concerns, data should be collected at the community level (Iragavarapu, Carlson, & Schertz. 2015).

To fill the abovementioned gap in research, this study contributes to the literature by providing an in-depth understanding about traffic safety issues and driving culture on the Indian reservations using evidence of from the Colville Confederate Tribes (CCT) in the State of Washington. Both qualitative and quantitative data about residents' attitudes and opinions towards driving safety issues were collected using a mixed research design. A series of focus group interviews were conducted on the reservation to gather information about how people on the reservation perceive driving safety issues. Quantitative data were collected through a pre-designed questionnaire containing questions related to seatbelt use and driving behavior. Transcripts of the interviews are analyzed to identify important themes and the quantitative data are used to verify the significance of the impact of some socio-economic factors on the driving behavior though inferential statistical techniques. Our focus group interview questions and the survey questionnaire were reviewed and approved by the Colville Reservation government. Findings of the qualitative and quantitative analyses are compared and intergraded. We then made recommendations accordingly for driving safety strategies.

THE COLVILLE CONFEDERATE TRIBES

The Confederated Tribes of the Colville Reservation is a Sovereign Nation. It is federally recognized and was established by President Executive Order in 1872. CCT is located in the North central Washington (Figure 1), approximately 100 miles from east to west and 60 miles from north to south. It is bordered on the East, South, and West sides by the Columbia and Okanogan rivers. The Colville Reservation is rural and isolated. The land is covered with mountains, range land, timberlands, lakes, and streams. The Colville Reservation contains members of 12 tribal groups: Colville, Ivenatchee, Entiate, Chelan, Methow, Okanogan, Nespelem, San Poil, Lakes, Moses-Columbia, Palus, and Nez Perce. These 12 tribal groups are located in four districts: Omak, Nespelem, Keller, and Inchelium, each with a small urban center (Figure 2). The Colville Business Council is the governing body of CCT.

Figure 1. Location of the Coville Reservation in Washington State

A report by the Washington State Legislative Behavior Health Task Force (2014) characterizes CCT as a tribal reservation of large land base with low population density and high rate of poverty. There are nearly 10,000 enrolled Colville Tribal members with about half of those members living on the 1.4 million acres reservation. CCT residents also include non-tribal members and members of other tribes. In 2010, 7,687 residents occupied the Colville Reservation and Trust lands. The number has declined to 7,165 according to the 2017-2021 American Community Survey 5-year Estimates (https://www.census.gov/tribal/?st=53&aianihh=0760)/ . Of the 7165 residents on the reservation, 4063 are American Indians, 2074 are white, and the rest are of other race or of two or more races. CCT has an unemployment rate of 10.5%, a median household income of $45,844, and a mean household income of $58754. 25% of the families on the Colville Reservation live below the poverty level. 83.6% of the population 25 years and over have an education level of high school or higher, and 16.9% have a bachelor's degree or higher.

Figure 2. Colville Confederated Tribes District Map

The sample space of our study includes all individuals that live, work or drive on the Colville Indian reservation. It is not limited to enrolled tribal members and it overwhelmingly overlaps with the over 7 thousand residents of the Colville Reservation.

CCT has the 7th largest tribal transportation system in the nation. The road network on the Colville Indian Reservation consists of 1,800 miles of tribal roads, 800 miles of county roads, and 220 miles of state highways (Grondel and Hoff, 2019). Figure 3 depicts state, county, BIA, and tribal roads within the reservation as well as which party is responsible for the maintaining of these roads. The afWashington State Legislative Behavior Health Task Force (2014) report precisely summarized the major challenges CCT faces in transportation. First, the tribe has 4 distinct seasons. Snow and ice during winter months and extreme dry heat and wildfires in summer months may severely affect transportation. Second, current state of transportation is poor to fair, with only 3.68% are in excellent condition, 8.63% good, 43.43% fair, and 44.26% poor. Third, more than 1/3 of the CCT residents commute more than 30 minutes for work or to access public services. According to the 2017-2021 American Community Survey 5-Year Estimates, there are 2643 worders 16 years and over who live on the reservation. 74.5% of the workers drive alone to work, 11.2 are carpooled, and the rest work from home, walk to work, or use public transportation.

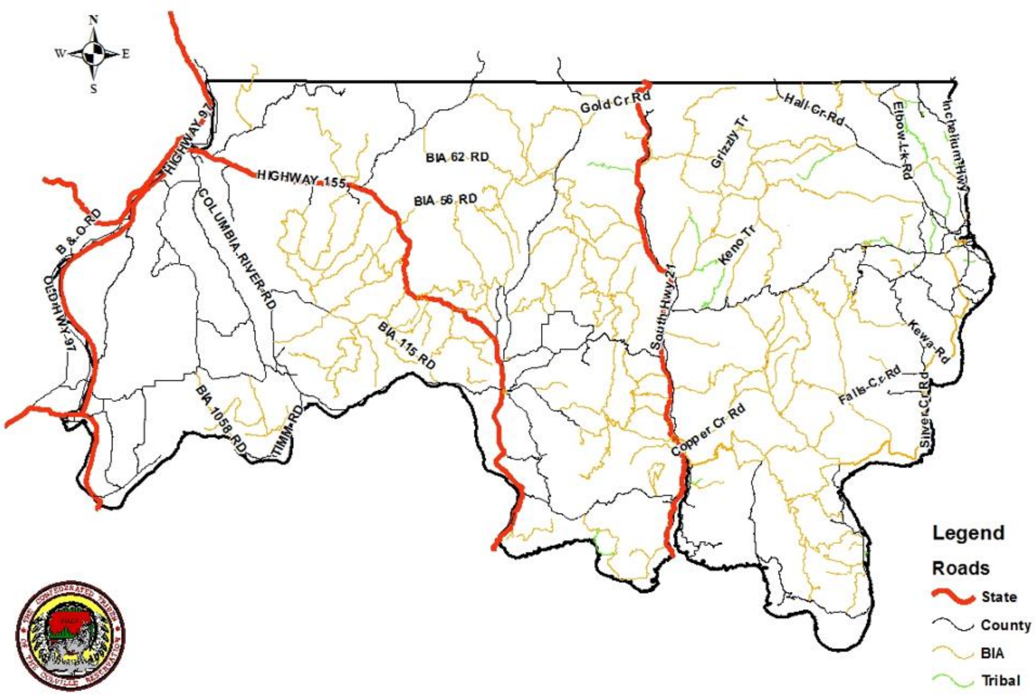


Figure 3. Colville Confederated Tribes Transportation Map

Native Americans have the highest traffic fatality rate at 28.5 per 100,000 people in the state of Washington. Between 2010 and 2014, there were 1,946 collisions within the boundaries or within five miles of the Coville Indian Reservation. Of those crashes, 34 were fatal and 70 caused serious injury. With registered tribal members below 10,000 and less than 8,000 residents, such numbers make the traffic fatality rate of the Colville Reservation about three times higher than the state average.

RESEARCH METHODS AND DATA COLLECTION

The study adopts a convergent parallel mixed methods approach. Qualitative and quantitative data are collected concurrently and data analyses are conducted separately. The goal is to compare and intergrade major findings of qualitative and quantitative analyses to determine consistency and to draw overall conclusions. Data collection activities for both qualitative and quantitative research were completed from April to June of 2018.

Combining qualitative and quantitative approaches in one research design allows us to take advantage of the strength and overcome the limitations of the two approaches. To be more specific, our study of tribal traffic culture and attitudes benefits from using the mixed methods for the following reasons (Creswell, 2014):

- The mixed research design provides good opportunities to compare different tribal perspectives drawn from quantitative and qualitative data.
- Collecting and analyzing qualitative data help develop better measurement instruments for quantitative study.
- Qualitative (focus group) findings that incorporates tribal perspectives help explain and understand quantitative (survey) results.
- Quantitative results derived from statistical analysis can be used to verify that the qualitative findings are real, reliable, and not due to chance.

- The combination of qualitative and quantitative data allows us to develop a more complete understanding of changes needed for marginalized group (unsafe roads, fewer law enforcement available, longer response times for EMS).
- The mixed methods help in gaining a better understanding for the need for and impact of a tribal specific intervention program through quantitative and qualitative analysis using data collected in in all four reservation districts of CCT.

FOCUS GROUP INTERVIEWS

For the qualitative analysis, we adopted the focus group approach. Although this method collects data from a purposely selected group of individuals rather than from a statistically representative sample of a broader population, it provides the opportunity to conduct interviews using structured or semi-structured open-ended questions (O. Nyumba et al, 2018). It allows to gain in-depth understanding of the traffic issues.

Seven focus groups interviews were conducted to include community members from all four districts within the Colville Reservation where the participants drive and experience traffic issues. The Focus groups included both tribal employees and regular community members. Each interview addressed questions specific to four categories on traffic safety: life experiences, law enforcement, seatbelt use, and messaging. The focus group responses were collected by talking directly with reservation residents and seeing them behave and act within their context. The interviews greatly benefited from the richness of the dialogue.

Participants of the focus group interviews were invited with the assistance of the CCT Public Safety staffs. Participants include female and male, young (18) and old (75) and they came from a variety of occupations such as Behavioral Health, Law Enforcement, Gaming

Regulatory and retired tribal elders. There tended to be more females participating in focus groups.

As to interview protocol, participants were not required to sign in and to reveal their names. At some focus group interviews, some people identified their employment position but most just shared as tribal community members. At each focus group interview, the research team and CCT Public Safety team members started with self-introductions and a brief overview of the projects. Participants were informed that there would be 4 categories of questions. The questions were posed to the group and follow up questions may be asked for the participants to explain their ideas in more detail, or to elaborate on what they said if statement was not clear. Responses were recorded.

The seven focus group interviews were conducted from early May through mid-July of 2018: May 3 in Omak, May 8 in Nespelem, May 15 in Keller, May 17 in Inchelium, May 31 in Omak, June 26 in Nespelem, and July 12 in Nespelem. The interview on May 31 in Omak was intended to have more participants from non-tribal partners. Each focus group consisted between four and ten participants and each focus group session lasted between 60 and 90 minutes.

Notes from focus groups were transcribed. A matrix that compared the participant responses for each question by each focus group interview was created. The interview transcripts were carefully reviewed to make sense of the following questions: What were the general ideas are participants saying? What was the tone of the ideas? What responses are unique to tribal communities? What are the attitudes towards law enforcement, appropriate penalties and drinking and driving?

Responses were coded and categorized into major themes. Computer-based text mining techniques were utilized to help create proper themes. Each of the major themes was specifically analyzed and elaborated.

QUESTIONNAIRE SURVEYS

The quantitative data were collected from surveys conducted in three districts on the reservation (Nespelem, Inchelium, and Omak) using sampling of people involved in tribal activities. The focus of this survey is seatbelt use by Indian reservation residents. The purpose is to collect data to investigate the major social and economic factors that may have significant impacts on the choice of whether to wear a seatbelt while driving. We would also explore and compare the driving habits and culture of tribal members on the reservation versus driving off the reservation. The questionnaire consisted of questions pertaining to sociodemographic status, seatbelt awareness, and driver behavior when driving on and off the reservations.

Convenience sampling was adopted for this survey. Given the fact that CCT is rural and isolated with low population density, a random sampling would be too difficult and time-consuming. The participants of the survey were selected during major tribal community events when people are easier to access. Surveys participants were randomly selected during these events. Table 1 summarizes event dates and number of survey participants. Survey data were then used for statistical analysis using a variety of inferential statistical methods.

Table 1 also shows the distribution of participants during the three events. 76% of our survey participants are tribal members, and among those members 77% are registered members of the Colville tribes.

Table 1. Survey Samples

Event Date	**Event Name**	**District**	**Number of Participants**
April 20, 2018	Earth Day	Nespelem	116
May 25, 2018	Sunflower Festival	Omak	140
May 26, 2018	Arrow Lakes Pow-wow	Inchelium	75
		Total	**331**

Are you a Tribal Member?								
	Nespelem		Omak		Inchelium		Total	
	Number	%	Number	%	Number	%	Number	%
Yes	100	86%	91	65%	61	81%	252	76%
No	16	14%	49	35%	14	19%	79	24%
Total	116	100%	140	100%	75	100%	331	100%

If yes, are you a member of the Colville Tribe?								
	Nespelem		Omak		Inchelium		Total	
	Number	%	Number	%	Number	%	Number	%
Yes	83	100%	73	70%	38	58%	194	77%
No	0	0%	32	30%	27	42%	59	23%
Total	83	100%	105	100%	65	100%	253	100%

ANALYZING FOCUS GROUPS INTERVIEWS

Analysis of the focus group interviews was based on careful review of transcripts by researchers and computer-based text mining. The following summarizes the procedure for data coding and cleaning to prepare data for text mining:

- The transcripts of all 7 interviews were converted into 801 sentences.
- Each sentence was assigned a code to indicate a specific category of life experience, seatbelt, enforcement, or messaging. Since all interview questions were designed in a structured format, coding was done based on the questions asked during each interview.
- Certain modifications were made to prepare the document for text-mining:
  1) All words were converted into lower cases.
  2) Certain key words were kept in singular form and plural key words were converted into singulars.

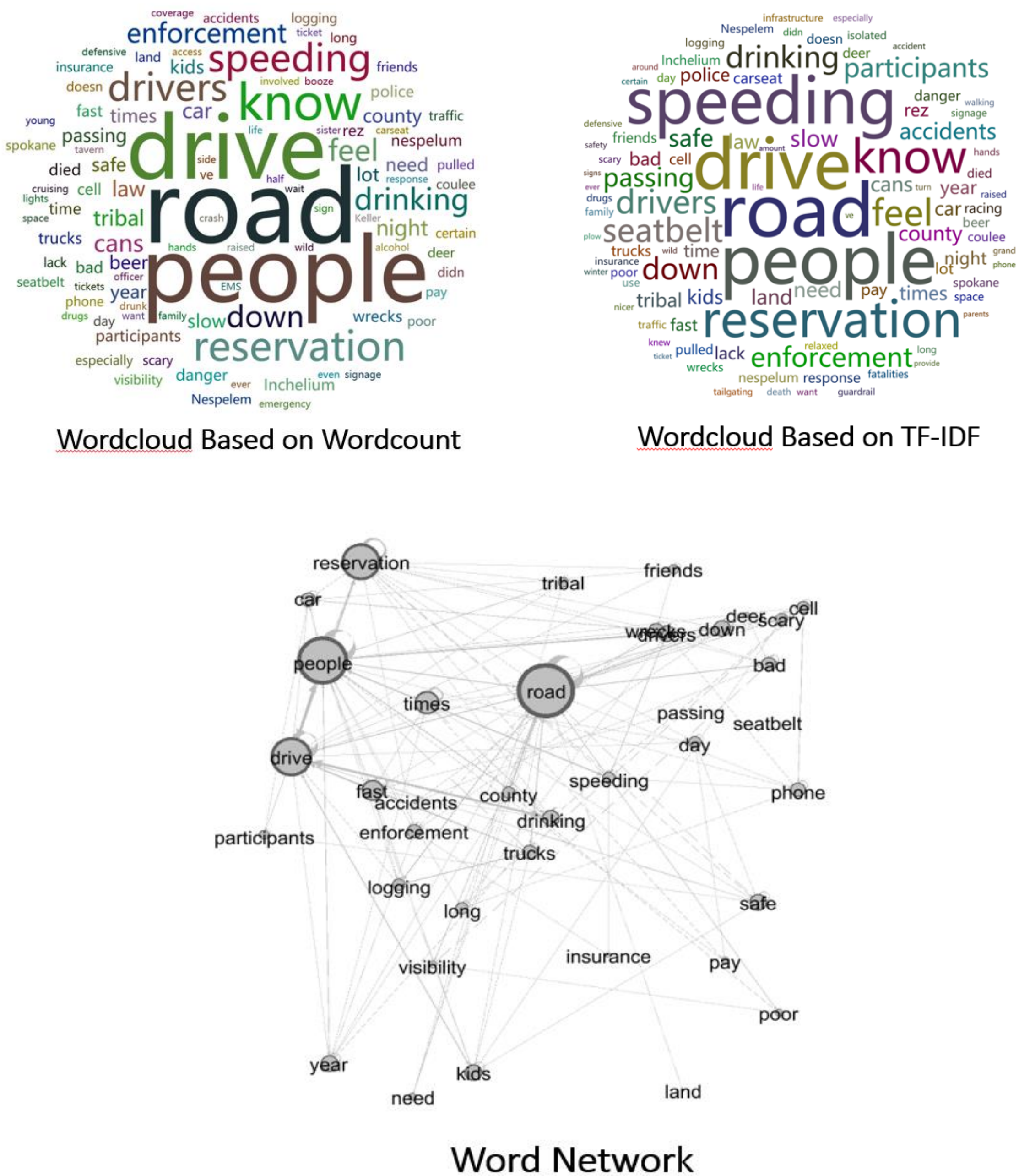
3) Several words with the same meaning were converted into the same word. For example, "reservation" and "reservations" were all converted to "reservation".
4) A file of "stop words" was created. This file contains a set of commonly used words that carry little information meaningful for text analysis. Examples are "a", "the", "of", "will", "around", "meanwhile" and etc.

Two software tools were used for the text mining of focus group interviews: SmartAnalyze and Gephi. The following were obtained from SmartAnalyze:

- Top 100 most frequently used words (excluding those in the Stop Words file) in each topic. These words are used to create WordCloud pictures of most frequently used words.
- Top 100 words ranked by TD-IDF scores. TF-IDF (Term Frequency-Inverse Document Frequency**)** is a technique to quantify a word in documents by assigning a weight to each word which signifies the importance of the word in the document. These words are used to create WordCloud charts of the top 100 words ranked by TD-IDF scores.
- A matrix of Words Co-Occurrence. Numbers indicate how many times two words co-occurred in a sentence.

Gephi was used to visualize the above words co-occurrence matrix by creating key word networks, with nodes representing different words and edges showing the links between words. The size of nodes indicates the frequencies of a word being used and the weights of edges indicates the strength of connections.

Figures 4 to7 depict the text mining results for each of the four categories. The text mining results provide another way in addition to transcripts review for researchers to form important themes. Worlcloud pictures help identify key terms participants used during the interviews and the Gephi maps show relationships as well as the strength of these relationships between those key terms. Charts in Figure 4 through Figure 7 suggest key terms that may be good candidates for the themes, such as reservation, speeding, road condition, drinking & driving, seatbelt, dirt road, people, law enforcement, kids, police, tickets, education, facebook, radio and slogan.

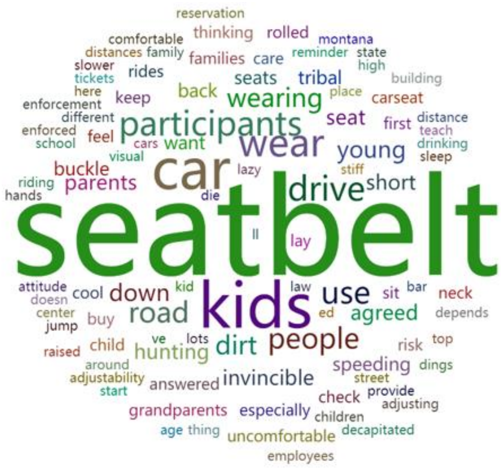


Wordcloud Based on Wordcount

Wordcloud Based on TF-IDF

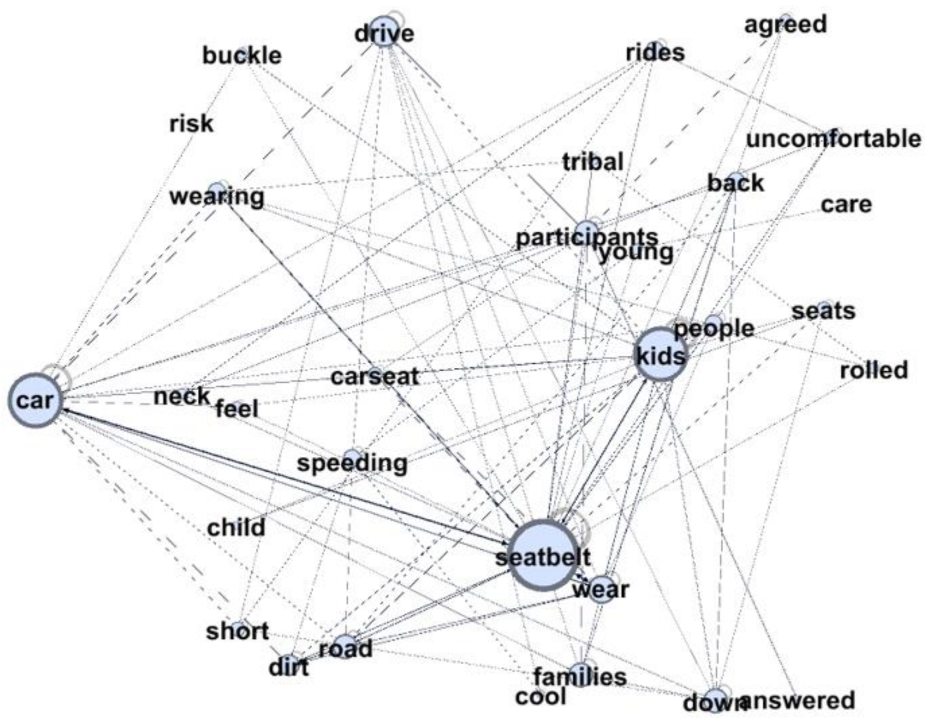
Word Network

Figure 4. Text Mining of Focus Group Interviews: Life Experience



Wordcloud Based on Wordcount

Wordcloud Based on TF-IDF



Word Network

Figure 5. Text Mining of Focus Group Interviews: Seatbelt

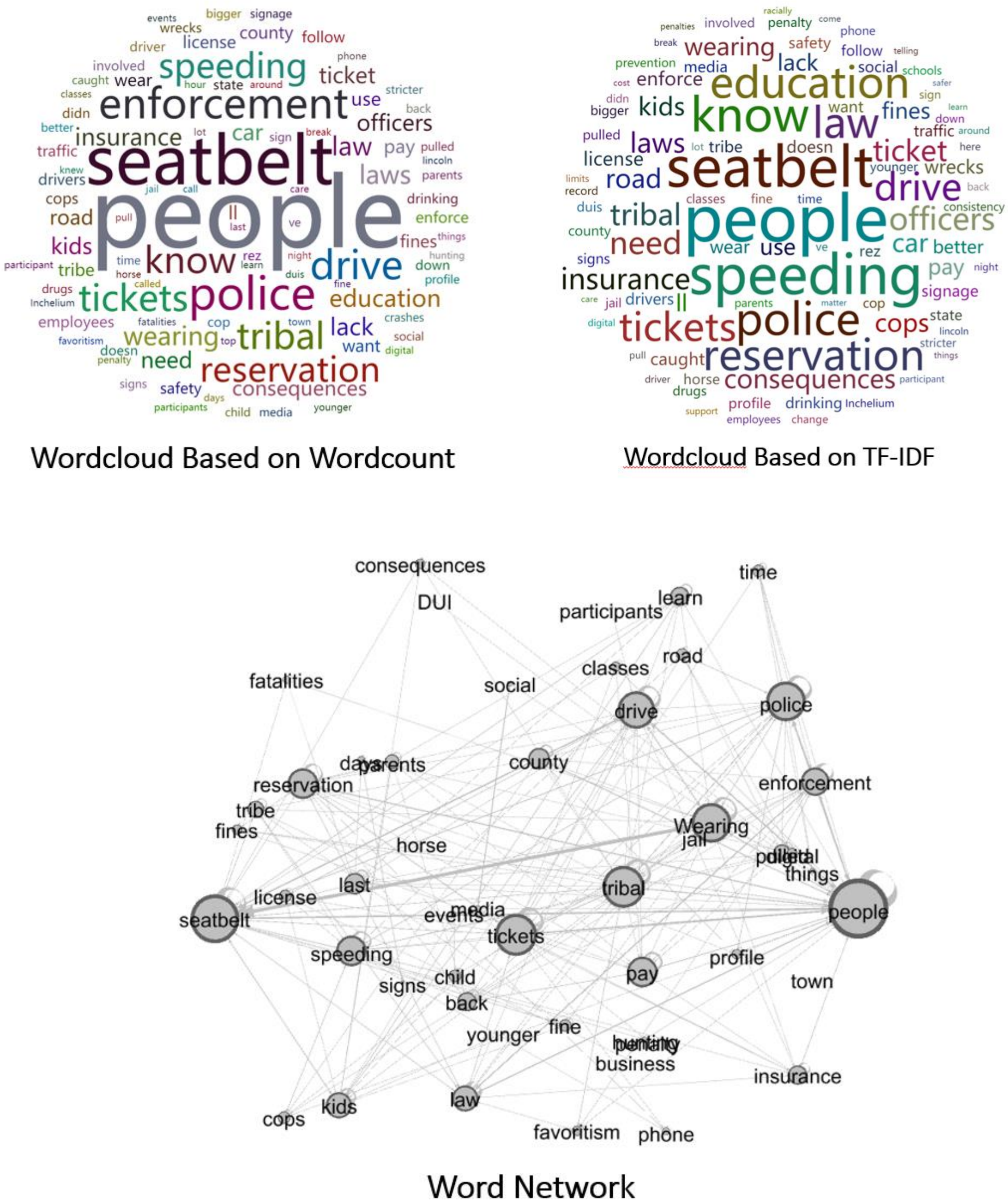


Figure 6. Text Mining of Focus Group Interviews: Enforcement

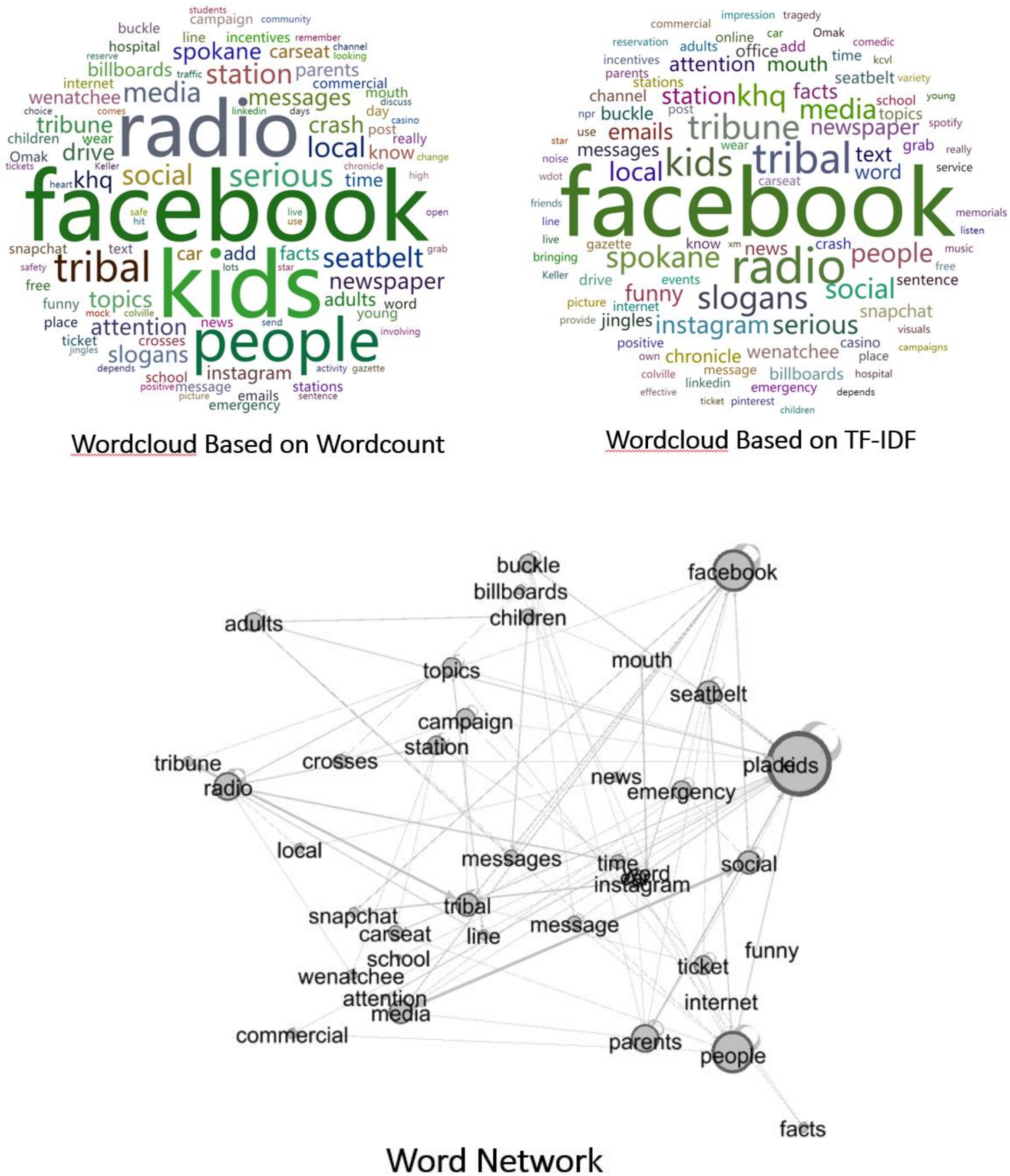


Figure 7. Text Mining of Focus Group Interviews: Messaging

Combining the above text mining results with careful review of the transcripts, our qualitative analysis reveals the following overarching themes that summarize major concerns of reservation residents on traffic safety issues.

DRINKING AND DRIVING

Drinking and driving is prevalent on the Colville Reservation. This behavior is socially acceptable within the Indian community even though people are aware of the danger associated with drinking and driving. One participant noted that, “We’ve become desensitized to this issue, it’s our norm. We all party at the wake to the funeral. Even though our buddy just died from a car wreck”. On the reservation, alcohol is visibly present on roads as drivers throw out alcoholic beverages out on the roads. Participants mentioned that one reason for this behavior being so perpetuated by community members is that in many cases there are no consequences and lack of enforcement for drinking and driving. Participants expressed a strong desire to address this alarming trend.

Drinking and driving is so popular on the reservation that residents know where drunk drivers are often present, and they do not feel safe driving there. Drinking and driving are more common during pay periods and social events such as 4th of July, Omak stampede, pow wows, and sports games. Many people avoid driving all together or stay in to avoid encountering drunk drivers.

ENFORCEMENT

Focus group participants stated that traffic safety challenges derive from lack of police enforcement and limited police officers working on the Colville Reservation Tribal Police. This lack of enforcement is believed to be the reason why drivers have different behaviors and attitudes of traffic safety and enforcement on and off the reservation. When participants were asked; What is the difference between driving on and off the reservation? An overwhelming majority answered police presence, lack of consequences, enforcement (on reservation), and traffic tickets (off reservation) as primary issues involving police enforcement.

One concern is short staffed tribal police and EMS. There are not enough police present throughout the districts of the large land base. In contrast, jurisdictions outside of the Colville reservation where law enforcement is highly visible. Another concern is lack of consequences for violating traffic safety codes as Tribal government workers often enable favoritism with traffic fines. As described by one participant, "Certain people get targeted, others aren't cited. It's all based on who they are and whom they work for." Meanwhile, participants noted that off the reservation, because of stricter law enforcement and police presence, people would immediately adhere to traffic laws.

SPEEDING

Speeding, or aggressive driving, is a common behavior because law enforcement is very relaxed, and distances are long on the reservation. There is a speed mentality among residents as they think there is no speed limit on the reservation and people usually don't stop at the stop signs. One common behavior is that drivers often strive to pass in front of moving cars or pass on no passing zones. A particular example is speeding log truck drivers. One participant stated: "Logging trucks are a danger, they drive fast, careless, and don't share road."

SEATBELTS

All participants agreed that seatbelts are important and a vast majority of them stated that buckling up their seatbelts was the first thing they did when entering their cars. However, they also talked about several cases when some people do not want to wear seatbelts. First, there are perceived seatbelt risks. Some learned from stories about someone who had died in a crash because of they were wearing a seatbelt. One participant stated: “Sometimes they help and half the time they kill you. It’s 50/50.” This misconception is widely held among reservation residents. Second, participants stated they behave differently on and off reservations regarding seatbelt use. They would immediately put the seatbelt on when driving off the reservation because of the enforcement consequences (insurance cost increasing and driver’s license suspending). Third, certain people believe there are acceptable reasons for not wearing a seatbelt when driving on the reservation. and the top two reasons are short distance and dirt/gravel roads. As stated by one participant: “When you hit the dirt road, kids can take their seatbelt off – especially the kids, it’s a basic rule”.

RURAL ROAD CONDITIONS

Participants raised concern about poor road conditions as large part of traffic safety on the Colville reservation. Many participants discussed lack of road maintenance and other road users as impediments of traffic safety on reservation roads.

Poor infrastructure and road maintenance were described as unsafe and dangerous. Participants discussed other road users such as logging trucks, cyclists and wildlife encounters as a danger that made them feel unsafe on Colville roads.

EMERGENCY SERVICES

Participants expressed concerns with isolated areas on the reservation with no access to cell phone coverage, internet or emergency services. Many shared that they avoid driving at night because they'd rather not take the risk of something happening and not being able to get assistance. Participants also expressed strong concerns with long wait times for Police or Emergency Medical Services to arrive at a crash scene.

EDUCATION

Participants were asked to provide inputs on how to improve traffic safety driving culture and how to increase seatbelt use on the Colville reservation, and to provide thoughts on why young men ages 18-25 are more prone to vehicle crashes. The need for education programs across all age demographics was mentioned frequently. Participants shared that they would like to see more Tribal leadership addressing traffic safety and designate resources towards educating children, youth and elders. Many expressed that parents and elders can be reached out through their children as they normally learn from their children on topics discussed at school. For youth, participants felt strongly about making driver's education more accessible and affordable. They believed that re-education would be effective way to recreate habits and patterns for drivers.

Participants expressed concern with the patterns of inexperienced young males that engage in high-risk behaviors and gain access to large sums of money that perpetuate dangerous habits. One participant stated: "No tribal jurisdiction over juveniles, we can't arrest them, so we detain them and have their parents come and get them. There aren't a lot of consequences, so they gain bad habits".

MESSAGING

Messaging on the reservation that meets the needs of each district can help improve seatbelt use and reduce fatalities on the reservation roads. As to how to communicate traffic safety to the Colville community members. the highest recommendation to communicate seatbelt safety were Road Signs. Periodic messaging and repetition are important as well. Facebook was described as a main source of information. Traffic safety should have an active Facebook page or more activity on the Colville tribal page where they can post statistics or information about crashes and seatbelt use. Publishing data on survival chances when wear seatbelts and when not wearing seatbelts is another method to publicize information. Many participants stated that they follow emergency services to stay informed on natural hazards that occur around the reservation.

ANALYZING THE SURVEYS

SEATBELT USE RATES

Participants of the survey reported that 82% of them always wear a seatbelt when driving on the reservation. When driving off the reservation, the seatbelt use rate rises to 86% (Table 2). Although these rates are still lower than the Washington State seatbelt use rate of 92%, they are much higher than the rates found by other seatbelt studies. In 2016 the Washington Traffic Safety Commission partnered with CCT to conduct an observational seatbelt survey and found the seatbelt use rate to be 64.1%. A follow-up survey was conducted in 2019 and found the rate dropped to 54.4%. The 2016 study observed 719 vehicles and 917 front seat occupants and the 2019 study observed 1989 vehicles and 2897 front seat occupants, both were conducted over a two- week period in May (Grondel and Hoff, 2019). This obvious difference in self-reported seatbelt use rate and the rate based on observations is not surprising. It is believed that participants will tell you what they think is the correct answer in some cases instead of being absolutely truthful. Holló, Henézi, and Berta (2018) assert that because survey participants are not sure that their data will be handled in an anonym way, self-reported data always show a bit "better" picture (i.e., a higher seatbelt use rate) about the driving behavior than the observed ones.

Table 2. Seatbelt Use Rate on the Reservation vs. Off the Reservation

	On the reservation	**Off the reservation**
Total number of people surveyed	309	312
Number of people who always wear a seatbelt	254	269
Percent	82.2%	86.2%

We also use the survey response data to conduct a paired t-test to see if there is a statistically significant difference of driving behavior when they drive on or off the reservation. The test results show that people are less likely to wear a seatbelt when they drive on the reservation than off the reservation ($t=-2.93$, $p=0.004$, $n=237$). People are more relaxed when they drive on the reservation.

SEATBELT USE AND SOCIODEMOGRAPHIC INDICATORS

Our surveys collected information about participants' demographics and social status, including tribal membership, education level, age and gender. It was hypothesized that these factors may have significant impact on the choices of whether to wear a seatbelt when driving on and off the reservation. Chi-square analysis was used to statistically test where a significant association exists between seatbelt use and these factors when driving one the reservation and off the reservation. See Tables 3 through 6.

Table 3. Chi-square Test: Seatbelt Use vs. Tribal Membership

On the reservation:			
	Tribal Member	Non-tribal Member	**Total**
Always wear a seatbelt	188	66	254
Sometimes or never wear a seatbelt	46	9	55
Total	234	75	309
$\chi^2=2.22, p=0.136>0.10$			
Off the reservation:			
	Tribal Member	Non-tribal Member	**Total**
Always wear a seatbelt	201	68	269
Sometimes or never wear a seatbelt	38	5	43
Total	239	73	312
$\chi^2=3.78, p=0.052<0.10$			

Table 4. Chi-square Test: Seatbelt Use vs. Age

On the reservation:						
Age	**Up to 20**	**21-30**	**31-40**	**41-50**	**>50**	**Total**
Always wear a seatbelt	20	41	76	67	43	247
Sometimes or never wear a seatbelt	12	15	10	6	10	53
Total	32	56	86	73	53	**300**
$\chi^2=18.23, p=0.001<0.10$						
Off the reservation:						
Age	**Up to 20**	**21-30**	**31-40**	**41-50**	**>50**	**Total**
Always wear a seatbelt	23	46	77	69	47	262
Sometimes or never wear a seatbelt	10	10	10	4	7	41
Total	33	56	87	73	54	**303**
$\chi^2=12.93, p=0.011<0.10$						

Table 5. Chi-square Test: Seatbelt Use vs. Gender

On the reservation:			
Gender	Male	Female	**Total**
Always wear a seatbelt	102	148	250
Sometimes or never wear a seatbelt	26	27	53
Total	128	175	303
$\chi^2=1.19, p=0.276>0.10$			
Off the reservation:			

Gender	Male	Female	**Total**
Always wear a seatbelt	109	154	263
Sometimes or never wear a seatbelt	20	23	43
Total	129	177	306
χ^2=0.37, p=0.544>0.10			

Table 6. Chi-square Test: Seatbelt Use vs. Education Level

On the reservation:					
Education	**Current HS Student or Some HS**	**HS Graduate**	**Some College**	**College Graduate or Higher**	**Total**
Always wear a seatbelt	15	59	85	88	247
Sometimes or never wear a seatbelt	7	23	9	14	53
Total	22	82	94	102	**300**
χ^2=14.18, p=0.003<0.10					
Off the reservation:					
Education	**Current HS Student or Some HS**	**HS Graduate**	**Some College**	**College Graduate or Higher**	**Total**
Always wear a seatbelt	18	65	89	90	262
Sometimes or never wear a seatbelt	7	17	8	11	43
Total	25	82	97	101	**305**
χ^2=10.33, p=0.016<0.10					

Our chi-square analysis results reveal the following:

- There is no relationship between tribal membership and the seatbelt use rate when driving on the reservation. However, when driving off the reservation, tribal members are less likely to put their seatbelts on than non-tribal members and this relationship is statistically significant.
- There is a significant relationship between age and seatbelt use rate. Older people tend to use seatbelt more often, on the reservation or off the reservation.
- There is no relationship between gender and the seatbelt use rate, not matter when they drive on the reservation or off the reservation.

- There is a significant relationship between educational background and seatbelt use rate. People with higher educational background tend to use seatbelt more often, no matter when they drive on the reservation or off the reservation.

SEATBELT USE AND THE RESIDENTS' PERCEPTION OF DRIVING SAFETY

The survey has seven questions asking people's perceptions or opinions of certain statements related to law enforcement, the seatbelt use myth, and seatbelt use awareness. These questions use Likert-scales. Table 7 summarizes the survey results of the 7 questions, which shows:

- People's attitudes toward certain driver safety statements vary greatly.
- They strongly support the notion that "the use of a child safety seat protects children better than holding them in your arms" and they strongly disagree with the notion "it is NOT important to use safety belts on trips of 5 miles or less."
- They generally support the following two statements: (1) "Staying in a vehicle during a crash gives you the best chance for survival." (2) "I know where I can go to get information about child safety seats."
- The average level of people's attitudes toward the following statement is close to neutral with a score slightly above 3.: "Tribal Law Enforcement actively enforces the tribal seatbelt ordinance."
- The average level of people's attitudes toward the following statement is close to neutral with a score slightly below 3: "Using seatbelts increases the chance of injuries or death in crashes". It seems that people have contradictory feelings about this statement, as their responses to this item are more disperse than other items (Standard Deviation=1.598).

Table 7. Attitudes toward certain driver safety statements

Do You Agree with the Following Statements (1=strongly disagree, 2-disagree, 3=neutral, 4=agree, 5=strongly agree)	**Mean**	**Standard Deviation**	**n**
Q1. Staying in a vehicle during a crash gives you the best chance for survival.	3.830	1.161	311
Q2. Using seatbelts increases the chance of injuries or death in crashes.	2.517	1.598	317
Q3. It is NOT important to use safety belts on trips of 5 miles or less.	2.556	0.874	315
Q4. Tribal Law Enforcement actively enforces the tribal seatbelt ordinance.	3.367	1.159	313
Q5. The law enforcement off the reservation actively enforces the state's seatbelt law.	3.994	0.997	313
Q6. The use of a child safety seat protects children better than holding them in your arms.	4.492	1.075	315
Q7. I know where I can go to get information about child safety seats.	4.010	1.024	313

To examine the relationship between residents' attitudes towards the above statements relevant to traffic safety issues and the choice of wearing a seatbelt or not when driving on the reservation and off the reservation, logistic Regression models are employed with seatbelt use on/off the reservation being the dependent variables. In addition, we also incorporate the demographic and social factors in our chi-square tests into the logistic regression to verify the findings from the chi-square tests.

Our correlation analysis reveals some significant relationships between the above seven measures. For the sake of reliability and validity, factor analysis was conducted, and 3 major factors were identified. We adopted the Principal Component Analysis (PCA) to identify the factors. The PCA with Varimax rotation indicated that the three factor together with Question 7 explained 73% of the total variance. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.56 and Bartlett's test of sphericity was significant ($\chi 2(21)=151.28$, $p<.001$). Factor loadings for Question 1 through Question 7 were 0.547, 0.655, 0.553, 0.789, 0.622, 0.668, and 0.412. The three factors are:

- Factor 1: Q1 and Q6;
- Factor 2: Q2 and Q3;
- Factor 3: Q4 and Q5

Apparently, Factor 1 is about seatbelt use awareness, Factor 2 is about the seatbelt use myth, and Factor 3 is about perceived effectiveness of law enforcement. We then created three new variables representing each of the three factors by calculating the mean values of the variables that form each factor.

For the regression analysis, we run two regression models and use seatbelt use on the reservation and off the reservation as dependent variables. Since the dependent variables are binary, we adopted logistic regression models. Independent variables include the following:

- **TribalMembership**
- **Age**
- **Gender**
- **Education**: highest education received.
- **Fine**: whether the respondent has received a fine for not wearing seatbelt either on or off the reservation.
- **SeatbeltAwareness**: Factor 1
- **SeatbeltMyths**: Factor 2
- **LawEnforcement**: Factor 3

- **Information**: to what extent the respondent agree/disagree with that statement “I know where I can go to get information about child safety seats.” This is Question 7 in our factor analysis.

Our analysis shows that age and education level are significantly correlated. To help explain the regression results, we also created a variable **Age*Edu** as the moderator, representing the interaction between age and education background. The logistic regression results are summarized in Table 8.

Table 8. Logistic Regression Results

	Off Reservation Seatbelt Use			On Reservation Seatbelt Use		
INDEPENDENT VARIABLES	**B**	**Sig.**	**Exp(B)**	**B**	**Sig.**	**Exp(B)**
Gender	.538	.211	1.713	.332	.384	1.394
Age	3.905	.014	49.656	3.787	.007	44.104
Education	4.406	.018	81.969	4.126	.009	61.910
SeatbelAwareness	.449	.055	1.567	.293	.167	1.341
SeatbeltMyth	-.477	.031	.621	-.157	.434	.855
LawEnforcement	.577	.015	1.780	.454	.030	1.574
Information	.128	.522	1.136	.203	.251	1.225
Fine	.864	.123	2.373	1.202	.015	3.328
Age*Edu	-2.387	.028	.092	-2.111	.023	.121
TribalMembership	1.212	.076	3.359	.324	.515	1.383
Constant	-9.580	.002	.000	-10.072	.000	.000
	-2 Log likelihood=153.571 Cox & Snell R Square=.147 Nagelkerke R Square=.266 Overall Percentage=86.1% n=237			-2 Log likelihood=188.297 Cox & Snell R Square=.142 Nagelkerke R Square=.231 Overall Percentage=8.9% n=237		

Based on the above results,

- Variables significantly contribute to on the reservation seatbelt use are Age, Education, LawEnforcement, Fine, and Age*Edu.
- Variables significantly contribute to off the reservation seatbelt use are Age, Education, SeatbeltAwareness, SeatbeltMyth, LawEnforcement, Age*Edu, and TribalMembership.
- "Information" (whether people know where to get information about child car seat) and "gender" does not matter whether driving on or off the reservation.
- Tribal membership only matters when driving off the reservation.
- Past experience of receiving a fine for not wearing seatbelt only matters when driving on the reservation.
- Age and education matter when driving both on and off reservation.

- Perceived effectiveness of law enforcement matters when driving both on and off the reservation.
- Both seatbelt awareness and seatbelt use myth matter, but only when driving off the reservation.

DISCUSSIONS AND CONCLUSIONS

A thorough comparison between findings of the qualitative and quantitative studies helps better understand the tribal traffic culture and attitudes and gain a comprehensive picture. While the quantitative method can be used to verify/falsify the statements derived from the main themes generated from qualitative studies, findings of qualitative studies greatly help explain the main findings of quantitative studies.

Our quantitative analysis focuses on seatbelt use and factors that may have significant impacts on the seatbelt use rate for reservation residents. Among the eight themes derived from the focus group interviews, drinking and driving, speeding, emergency service, and rural road conditions were not addressed in our survey. Observations and assertions derived from the remaining six themes implied important contributing factors to seatbelt use by the reservation residents and they are compared with the findings of the quantitative study.

1) The qualitative study found that residents are less likely to wear a seatbelt when driving on the reservation than driving off the reservation as violation of traffic codes may not lead to a consequence due the loose law enforcement in Indian tribes. Our quantitative study confirms these findings. To be specific, the paired-t test shows a significant higher seatbelt use rate when driving off the reservation than driving on the reservation. Our regression analysis confirms that law enforcement is a significant contributor to seatbelt

use, both on and off the reservation. In addition, the regression analysis indicates that receiving fines for violating traffic codes is a significant contributor to seatbelt use on the reservation, but it is not the case off the reservation. This implies stricter law enforcement on the reservation could lead to higher seatbelt use rate.

2) Our focus group interviews suggest that for reservation residents age and gender really matter regarding seatbelt use. Young males are identified as a group that often ignore the seatbelt use requirement. Our chi-square analysis and regression analysis both confirm age as a significant contributor to seatbelt use, both on and off the reservation. However, the quantitative analysis does not support the notion that gender is a factor that matters in seatbelt use, no matter when driving on or off the reservation. This implies that traffic safety education should not just focus on young males. Young females should be a fucus as well.

3) The themes suggest the importance of education. Here education does not mean whether somebody holds a HS diploma or a bachelor's degree. Rather, it means improving seat beat awareness and dispelling misconceptions about seatbelt use among tribal residents. The focus group interviews mentioned that some myths (i.e., using seatbelt may cause fatality during a car crash and no need to wear seatbelt on dirt roads) may hinder people from putting their seatbelts on. Our regression analysis results show that when driving on the reservation, either seatbelt awareness or seatbelt myths does not have significant impact on the seatbelt use. However, when driving off the reservation, both factors matter. This finding not only tells us both factors significantly contribute to the driving culture shared by tribal residents but also confirms that tribal residents have different attitudes towards traffic codes between driving on and off the reservation.

4) The focus group interviews suggest the importance of messaging in traffic safety. In our quantitative study, the regression analysis does not show knowing where to get information is a significant factor to seatbelt use. This is not surprising as our survey reveals a high score on this factor. The overall score of the question "I know where I can go to get information about child safety seats" is 4.01, equivalent to "agree" level, with a standard deviation of 1.024. Tribal residents know where to get information, but this factor does not have direct relationship to seatbelt use.

In addition to the above comparison, there are two factors that were not identified as themes in the focus group interviews but were included in our quantitative analysis. First, our chi-square analysis and the regression analysis both show education level is a significant factor to seatbelt use. Apparently, formal education (gaining education from schools) improves seatbelt use rate. Second, tribal membership does not matter when people drive on the reservation. That is, there is no significant difference between tribal members and non-members in seatbelt use rate when they drive on the reservation. However, when driving off the reservation, among reservation residents, tribal members are more likely to wear seatbelt than non-tribal members.

Overall, our analysis of the focus group interviews identified several themes and factors that influence behavioral patterns, including traffic law enforcement on/off reservation, driving on/off reservation, misconception of seatbelt use, education, age and gender (i.e., young males), and our quantitative results largely support the focus group findings. Sociodemographic factors such as age and educational background (but not gender) as well as perceived effectiveness of law enforcement were among the predictors of seatbelt use rate. More importantly, our analysis revealed that people behaved differently between driving on and off the reservation: they were less likely to wear seatbelts when driving on the reservation. In addition, people's awareness of the benefit of wearing seatbelts as well as their misconceptions of seatbelts significantly affect seatbelt use only when driving off the reservation.

The above findings of tribal traffic culture and attitudes could be used in the development of state, local, and tribal programs to promote the use of seatbelts and to ensure traffic safety on the Indian reservations. It is recommended that, with limited tribal resources and tribal programs, tribes should collaborate with state and local governments across many different programs and disciplines, such as engineering, enforcement, Emergency Medical Services (EMS) and education. These programs should aim to reducing traffic violations that may cause injuries and fatalities, including drunk driving, speeding, and failure to wear a seatbelt.

From the perspective of engineering, special attention should be paid to road maintenance on the reservation. Inferior road condition is a major factor contributing to more car crashes. On the one hand, global warming and climate change cause more extreme weather (heavy snows in winter and try heat in summer) that may have negative impacts on roadway materials, which makes road maintenance more imperative. On the other hand, a significant proportion of roadways on the reservation are unpaved. Increasing miles of paved roadways will also reduce vehicle accidents. In addition to road maintenance, removal of snow and ice in a timely manner during winter also helps cars from crashing.

Emergency services on Indian tribes are an integral part of ensuring safety of the tribal communities. Our fucus group interviews reveal that Indian tribes suffer from inadequate emergency services due to the remote and geographically isolate locations and limited infrastructure. Response time is often delayed. It is recommended tribal governments collaborate with neighboring municipalities, and state and federal agencies to build partnerships and benefit from shared resources. This is essential to improve emergency response capabilities and create a more coordinated approach to handling traffic crises.

As to law enforcement, the Tribal communities concern about the police staffing shortage and lack of consequences for traffic law violations on the Indian reservations. Resource constraint issues, such as limited funding, manpower and equipment, should be addressed and tribal government should collaborate with state authorities and federal agencies in seeking solutions to these issues. Lack of consequences happens when officers exercise discretion in enforcing traffic laws and when alternative approaches are preferred over punitive measures. Since lack of consequences contribute significantly to the failure of wearing a seatbelt, it is recommended that traffic law should be effectively enforced and penalties for violations, such as a fine, traffic school, and demerit points on the driver's record, should be imposed.

It is also recommended that state and tribal governments should work with the tribal community to develop traffic education programs for residents on the reservation for both tribal members and non-tribal members. The focus of the programs is to educate drivers and passengers on the importance of buckling up and always wearing a seatbelt. Meanwhile, the program should also strive to clarify misconceptions and myths in seatbelt usage. While people of all ages are potential audience of these programs, the youth, male or female, should the target group.

Although this study provides some in-dept understanding of driving culture and attitudes of Indian tribes based on information collected on the Colville reservation, one should take cautions when trying to generalize the findings to all Indian reservations. Our sample was not randomly selected, and all information was collected from only one Indian reservation. Note that the Colville Tribes possess some unique characteristics such as being rural and isolated, low population density, high unemployment rate, and inferior road conditions. Other tribes may possess totally different characteristics. A comprehensive and accurate picture that shows the Tribal traffics safety concerns and solutions is far from complete.

In addition, our quantitative study does not address issues related to driving habits such as DUI and speeding. They are important topics related to driving safety. It is suggested that future studies investigate the main causes of the driving culture of DUI and speeding shared by many reservation residents and figure out how to prevent them from happening. Further, since collaboration between tribal government and federal, state, and local governments become so imperative in order to promote traffic safety, it is recommended future studies address the issue of tribal-state (as well as federal and local) government relation and figure out effective collaboration models.

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Appendix A. Focus Group Interview Questions

LIFE EXPERIENCE

1. What is the first thing that comes to your mind when you think of tribal traffic safety?
2. Do you feel safe when driving on the reservation?
3. What makes driving on the reservation different for you than driving off the reservation?
4. From your own life and experience, how many people have you known who have been in a serious car crash?

SEATBELT

5. Is wearing a seatbelt beneficial to you and your family?
6. Question to law enforcement officer. Do you wear your seatbelt on dirt road to police?
7. Is a seatbelt the first thing you put on when you get in the car?
8. What are some of the reasons people don't wear a seatbelt?
9. Do all passengers in your vehicle wear a seatbelt?
10. Does your family use appropriate child safety seats? Do you know how to find out those guidelines?
11. Why don't young males, ages between 18-25 not wear their seatbelts, and are more prone to vehicle crashes?

ENFORCEMENT

12. What do you think about police enforcement of traffic laws?
13. What can the tribe do to promote traffic safety driving culture?
14. What kind of penalties should be enforced for not wearing seatbelts?
15. Why do you think drivers wear their seatbelts outside of the reservation, and respect the laws off the reservation?
16. What do you think would encourage tribal members to wear their seatbelt?
17. How do we get to zero fatalities on the Colville Reservation?

MESSAGING

18. What is the best way to get messages out to contact people?
19. What is the best way to get messages to you?
20. What local radio stations do you listen to?
21. What is the social media sites you use the most?
22. Where do you get the local news from?
23. What types of messaging do you prefer (fun, sad, etc.) ?
24. Which are the messages you remember the most?
25. How would you communicate better seatbelt safety?

Appendix B. The Survey Questionnaire

We would like to invite you to take part in our Tribal Traffic Safety Survey, in which we will ask you how you drive on and off the Reservation. A 2016 study shows the Colville Reservation has an observed seatbelt use rate of **64.1%,** as opposed to the Washington State seatbelt use rate of **94.7%.** Your responses will help us develop a better understanding of traffic safety on the Colville Reservation. Your answers are confidential and independent of any institution. They will be compiled together and combined with other experts' opinions into a report that will be published through the Tribal Tribune.

Part I. Background Information

1. **Are you a Tribal member?** O Yes O No

   If yes, are you a member of the Colville Tribe? **O** Yes **O** No

2. **If you are a member of the Colville Tribe, what district do you live in?**

   O Keller **O** Inchelium **O** Nespelem **O** Omak **O** Off reservation

3. **Age:** **O** 14 and younger **O** 15-17 **O** 18-20 **O** 21-30 **O** 31-40
   O 41-50 **O** 51-60 **O** 61-65 **O** 66 or older

4. **Gender:** **O** Male **O** Female **O** Other

5. **Are you currently employed?** **O** Yes **O** No

   If yes, is your employment: **O** Full-time **O** Part-time **O** Seasonal/Temporary

   And, your employment location is: **O** On reservation **O** Off reservation **O** Both

   And, your current job is:

   O Clerical **O** First responder **O** Wild land **O** Firefighter **O** Health

   O Other (specify):____________________

6. **Highest Education Completed?**

   O Current HS Student **O** Some High School **O** High school Diploma/GED

   O Some College **O** College Graduate **O** Post Graduate

7. **Do you have a valid Washington State Driver's License?** **O** Yes **O** No

   If no, do you have a driver learner's permit? **O** Yes **O** No

Part II. Traffic Safety Questions

Note: For survey purposes, a **TRIP** is defined as a nonstop driving trip from one location to another location. For example, if you drive from home to work and back, it is counted as two trips; the trip to work and the trip home from work. If you stop by the McDonalds drive-thru on your way home from work the that also counts as two trips: from work to McDonalds and from McDonalds to home.

8. Approximately how many trips do you take <u>on the reservation</u> in a week?

Your best estimate is __________times (If no trip, then enter 0).

Among those trips, how many times are you the driver?

Your best estimate is __________times (If never drive, then enter 0).

As a driver, how often do you wear a seatbelt? (On a 1 to 10 scale, please indicate the likelihood of seatbelt use, 0 = never and 10 = always.)

0 1 2 3 4 5 6 7 8 9 10

On average how many miles do you drive <u>per day</u> on the reservation?

Your best estimate is __________miles.

9. Approximately how many trips do you take <u>off the reservation</u> in a week?

Your best estimate is __________times (If no trip, then enter 0).

Among those trips, how many times are you the driver?

Your best estimate is __________times (If never drive, then enter 0).

As a driver, how often do you wear a seatbelt? (On a 1 to 10 scale, please indicate the likelihood of seatbelt use, 0 = never and 10 = always.)

0 1 2 3 4 5 6 7 8 9 10

On average how many miles do you drive <u>per day</u> off the reservation?

Your best estimate is __________miles.

10. Do you normally travel off-reservation for groceries?

O Yes **O** No

If yes, how many trips to the grocery store do you take?

O 1 **O** 2 **O** 3 **O** 4 **O** 5 or more

How many miles do you need to drive to get to your off-reservation grocery store?

Your best estimate is __________miles.

11. **For the following social events, check ALL that you normally attend and tell us on average how many miles do you travel to get there.**

______**Sports (basketball, track).** Your best estimate is __________miles.

______**Cultural (pow-wow/stickgame).** Your best estimate is __________miles.

______**Music, concert, movie.** Your best estimate is __________miles.

______**Shopping (goods, services).** Your best estimate is __________miles.

______**Clothes.** Your best estimate is __________miles.

12. **When you have a child in your car, how often do you use a safety seat? (On a scale of 1 to 10, please indicate the likelihood of use, 0 = never and 10 = always.)**

0 1 2 3 4 5 6 7 8 9 10

13. **During the past five years (since June 2013), have you ever been in any car crash?**

O Yes **O** No

If yes, then how many car crashes (please circle one)?

1 2 3 4 5 6 7 8 9 10 11 or more

During the crash(es), how many times were you wearing your seatbelt?

0 1 2 3 4 5 6 7 8 9 10 Always

14. **During the past five years (since June 2013), have you ever received a fine on the reservation for not wearing a seatbelt?** **O** Yes **O** No

If yes, for how many times (please circle one)?

1 2 3 4 5 6 7 8 9 10 10+

15. **During the past five years (since June 2013), have you ever received a fine off the reservation for not wearing a seatbelt?** **O** Yes **O** No

If yes, how many times (please circle one)?

1 2 3 4 5 6 7 8 9 10 10+

16. **Do you own a vehicle?** **O** Yes **O** No

If yes, what year is your vehicle?

O 1990 or older **O** 1991-2000 **O** 2001-2010 **O** 2011 or newer

Does your car beep if you do not fasten the seatbelt? **O** Yes **O** No

17. Please indicate how you feel about each of the following statements by circling your level of agreement:

Staying in a vehicle during a crash gives you the best chances for survival.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Using seatbelts increases the chance of injuries or death in crashes.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
It is NOT important to use safety belts on trips of 5 miles of less.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Tribal Law Enforcement actively enforces the tribal seatbelt ordinance.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
The law enforcement off the reservation actively enforces the state's seatbelt law.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
The use of a child safety seat protects children better than holding them in your arms.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
I know where I can go to get information about child safety seats.	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

18. We would like to know how to reach you to provide safety information, future projects, and the results of this survey. How do you receive public messages?

O Flyer, please specify:________________________________
O Radio, please specify________________________________
O Social Media, please specify_________________________
O TV, please specify__________________________________
O Newspaper, please specify___________________________
O Other, please specify: _______________________________