OVERVIEW
Marijuana use has increased among most age levels and is the most abused illicit drug in America (National Institute on Drug Abuse, 2010). Marijuana has several known short- and long-term effects on the body (Narcon Fresh Start, 2010). Some of the short-term effects include: impaired short-term memory, attention, judgment, and other cognitive functions, increased heart rate, and sleep impairment. Long-term effects are known to include: possible addiction, chronic cough and bronchitis, anxiety, and depression. Cocaine use has also increased over the past decade. Cocaine is a powerfully addictive drug that stimulates the central nervous system. Emotional signs of cocaine abuse include: change in eating or sleeping patterns, withdrawal, depression, carelessness towards personal appearance, loss of interest, increased time away from family, stealing/lying/financial problems, thoughts of suicide, and paranoia (National Institute on Drug Abuse, 2013).
The drug war costs American taxpayers billions of dollars every year (Drug Enforcement Administration, 2014). The government is spending nearly $18 billion annually on agencies that work to research, control, and eliminate illegal drugs (Bush, 2010; DEA, 2010). Drug abuse in rural communities is a problem related to public health issues. There are several studies related to substance abuse, but they focus on youth and young adults and their use of substances such as methamphetamine and alcohol (Lambert et al., 2008; Gfroerer et al., 2007; Van Gundy, 2006; Botvin et al., 2000; Pettigrew et al., 2012). There are several studies that focus on addiction issues in urban areas, but not many that focus exclusively on rural areas (Young and Havens, 2012). Educators play a vital role in communities to recognize drug abuse before it becomes an addiction. Individuals in rural communities need to continue to be informed about drug abuse and its impact on their health and how to avoid these problems (Lenardson et al., 2012).

The objectives of this article were to explore to what extent rural residents were involved with illicit substance abuse such as marijuana and cocaine and to investigate factors associated with marijuana and cocaine consumption among individuals residing in rural communities. This study employed data from the 2012 National Survey on Drug Use and Health (U.S. Department of Health and Human Services, 2012). The 2012 survey was designed to provide information on the use of illicit drugs, alcohol, and tobacco among nearly 70,000 randomly selected study participants aged 12 and older. For the purpose of this article, individuals who resided in non-metro rural areas were selected, resulting in 11,800 individuals. These rural residents were compared with 43,468 urban residents. Using logistic regression analyses, this study determined what socio-economic factors predict the probability of marijuana and cocaine uses among those residing in rural and urban communities.

FINDINGS

Marijuana and Cocaine Use in Rural Communities

Those with heavy drinking patterns (e.g., more than 15 days in a month) were more likely to be marijuana users than those with no alcoholic drinks in a month. This study found that 38.2 percent of the rural residents used marijuana, and that rural residents aged 30-49 were more likely to use marijuana than other age groups. Rural residents with poor health were more likely to use marijuana than those with good or excellent health. Male rural residents were more likely to use marijuana than females. Lower levels of education were positively related to the use of marijuana among rural residents, and income level was not associated with the use of marijuana. Blacks were less likely to use marijuana than their White counterparts, but there was no significant difference in the use of marijuana between White and Hispanic rural residents.

Those consuming more alcohol within a month were more likely to use cocaine than those consuming no alcohol. This study found that about 10.3 percent of rural residents have used cocaine. Rural residents aged 30-49 were more likely to take up cocaine than residents of other age groups. Male rural residents...
were more likely to try cocaine than females. Rural residents of more than one race were more likely to use cocaine than White residents. This study found that those with no college education were more likely to use cocaine than those with college education. Rural residents with poor health were more likely to use cocaine than those with excellent health.

**RURAL AND URBAN DIFFERENCE IN ILICIT DRUG USE**

Figures 1 and 2 present the rural and urban differences in marijuana and cocaine use according to socio-economic characteristics of the respondents. Figure 1 shows that while 38.2 percent of the rural residents reported the use of marijuana, 40.8 percent of the urban residents have used marijuana. The reported cocaine use was also higher for urban residents (11.0 percent) than rural residents (10.3 percent). Males and females in urban communities were more likely to use illicit drugs than those in rural communities (Figure 2). Additionally, both rural and urban residents with annual incomes of $20,000 - $50,000 were most likely to use marijuana and cocaine. According to the results of regression analyses, socio-economic factors that predict the probability of marijuana and cocaine use among those residing in rural and urban communities were those aged 30-49, those with poor health, males, those with no college degree, those with less than $20,000 in annual income, and those with alcohol dependence.

**IMPLICATIONS AND CONCLUSIONS**

**Implications**

According to the findings of this research, heavy drinking is strongly associated with marijuana and cocaine use by residents in rural communities. Alcohol abuse and dependence can have long term and lasting effects on individuals, couples, and the family dynamics (Mattiko et al., 2011; Martin, 2008). Alcohol education in early stages of life such as teens and young adults is important, but should not exclude older age groups (Center for Disease Control and Prevention, 2010). It is necessary to have consistent youth education in rural communities regarding illicit drug abuse and its negative impact on their health and later life. Community educators and program leaders might need to consider this issue in rural communities.

There might be generational differences in substance use in rural communities. Individuals aged 30-49, who represent Generation X (born between 1965 and 1976), are the age group that most frequently used marijuana and cocaine in rural communities compared to other age groups such as Baby Boomers (born between 1946 and 1964) or Generation Y (born between the mid-1970 and the mid-2000s). The age group (30-49) represents those
who could be in the labor force and could be raising young children, so understanding this generation’s substance use is very important for productivity in work places and for family issues. Poor health is positively associated with marijuana and cocaine use by residents in rural communities. If poor health is connected to illicit drug abuse, it is important to understand why. It is difficult to determine whether this is because illicit substance use causes poor health or if those with poor health are more drawn to these substances. Health practitioners in rural communities might need to understand the correlation between health and substance abuse. Thus, further investigation of this relationship and health education might be needed for residents in rural communities.

This study found that gender, education, and racial background were associated with both marijuana and cocaine use among residents in rural communities. For example, male, less educated, and White residents were more likely to be illicit substance users. Compared to Blacks, White residents were more likely to be both marijuana and cocaine users. However, residents of other races were more likely to be cocaine users than Whites. The findings imply that community-based education and intervention programs that target these categories of demographics could be designed and disseminated for healthy lives and its outcomes such as increased worker productivity, family wellbeing, and community sustainability in rural areas.

In comparing rural and urban communities, a slightly higher proportion of urban residents reported use of marijuana and cocaine than in rural communities. However, marijuana is more of an issue in rural than urban communities, whereas cocaine problems could be more of an issue in urban than rural communities. It was found that middle age adults were the age groups who most frequently used illicit drugs in both regions. In both communities, as the level of education decreases so does their likelihood of using illicit drugs. Blacks in urban communities were two times more likely to use marijuana than Blacks in rural communities. Lower income groups were more likely to use marijuana and cocaine in rural communities; however, in urban communities, those with an annual income of $20,000-$50,000 were most likely to use marijuana and cocaine. Overall, the rates of marijuana and cocaine use were higher for urban residents with poor health than those with good health. However, marijuana and cocaine use is higher in rural communities among those in the poor health category than urban residents.

Conclusions
This research concludes that individuals aged 30-49, males, Whites, and alcohol dependents are important predictors of illicit drug abuse in both rural and urban communities. Thus, drug abuse prevention programs could be designed to target the middle age working group. It should also focus on the link between alcohol drinking patterns and illicit drug use. Since the types of drug abuse were different among those with different ethnicities (e.g., Whites were more likely to abuse marijuana, while residents of other races were more likely to abuse cocaine), this information might need to be included in drug abuse intervention programs. While there was no association between income level and illicit drug abuse in rural communities, other economic variables such as wealth or debt levels of individuals and families residing in rural communities could be considered in understanding illicit drug abuse in rural communities.

RURAL CONNECTIONS 20