In 2015 it was reported that 18.2% (or approximately 42.5 million) of U.S. adults suffered from Mental illness (1). Mental health disorders can lead to risky health behaviors and disrupted daily functioning, impaired relationships and premature death.

The economic burden due to mental illness is an estimated $193 billion, of which about two thirds is related to indirect costs such as loss of income resulting from unemployment, productivity loss and quality of life expenses (2).

The U.S. has the highest incarceration rate of any country in the world. It is estimated that more than half of all prison and jail inmates, including 56% of state prisoners, 45% of federal prisoners and 64% of local jail inmates were found to have a mental health problem (3). Rates of incarceration have more than quadrupled and have increased more rapidly among women than among men (4). The post-release ramifications of the incarceration experience can amplify negative social determinants of health, resulting in adverse psychiatric health and socioeconomic outcomes for individuals and entire communities (5).

This study assesses the mental health of adults (18+ years old) in Los Angeles County and aims to determine whether or not there is any relationship between having a history of incarceration (HOI) and increased risk of having any current mental health outcome.

**METHODS**

- Data were from the 2011 Adult Los Angeles County Health Survey (LACHS) (n=7,679), a population-based, random-digit dial phone survey that includes information on health conditions, health behaviors, healthcare access and other health related data from a representative sample of Los Angeles County residents.
- Respondents were asked targeted questions to determine the following:
  - Any Current Mental Health Outcomes (AnyMHO): This variable was created as an inclusive measure that combined the following indicators to allow for improved statistical stability:
    - Respondents were asked if they had ever been diagnosed by a health care professional with depression or an anxiety disorder.
    - To determine current depression and/or current anxiety (CDASP), respondents were then asked whether they were currently being treated (taking medications and/or receiving counseling) or currently experiencing symptoms of their disorder.
    - Risk of Major Depressive Episode (PHQ2) was determined by using two validated screening questions to inquire about the frequency of depressed mood over the past two weeks (6).
    - Frequent Mental Distress (FMD) was determined among adults who reported stress, depression, or emotional problems for 14 or more days in the past month.
    - History of Incarceration (HOI): “As an adult, have you spent more than 24 hours living in a detention center, jail or prison?”
  - Descriptive analyses were conducted to assess the variation in mental health outcomes among different socio-demographic groups including housing instability defined as not having your own place to live or sleep in the past five years.
  - Logistic regression analysis was done to determine if HOI is independently associated with current mental health (Any MHO) when controlling for age, gender, race/ethnicity, income (Federal Poverty Level - FPL), and housing instability.
  - All analysis was done using SurveyMeans and SurveyLogistic procedures in SAS 9.3, Cary, NC.

**RESULTS**

- Adults with HOI had significantly higher prevalence levels for mental health outcomes (Figure 1).
- Descriptive analyses show disparities in adults with any current mental health outcomes among different socio-demographic groups (Figure 2). While women are incarcerated in smaller numbers, they report significantly higher prevalence of Current mental health outcomes based on HOI compared to men.
- Logistic regression model results show that adults with HOI had almost twice the odds [OR=1.7 (1.2-2.5)] of having AnyMHO (Figure 3).
- Income level was a significant factor in explaining “AnyMHO” since the model shows a consistent reduction in odds as income levels increased. Compared to adults at or above 300%FPL, low income adults <100%FPL [OR=2.7 (2.1-3.4), 100-199%FPL [OR=2.4 (1.9-3.0), and 200-299%FPL [OR=1.5 (1.2-1.9)], had significantly higher odds of having a current mental health outcome.
- Those with housing instability in the past five years had the highest odds of having AnyMHO [OR=2.8 (2.0-4.0)]
- We also found that Asians [OR=0.5 (0.4-0.6)] and Latinos [OR=0.4 (0.4-0.7)] had significantly lower odds of having AnyMHO compared to whites.
- Males [OR=0.7 (0.6-0.9)] had significantly lower odds compared to females.

**DISCUSSION**

- Though causation cannot be established using cross-sectional data, this study found that there is an association between HOI, gender, income, past housing instability, and mental health outcomes of adults in Los Angeles County.
- Reintegration policies should incorporate mental health screening and provide resources to those formerly incarcerated and experiencing housing instability (7).
- More research would be needed to determine if mental health outcomes contributed to their incarceration or was a result of experiencing incarceration.

**CONCLUSIONS**

- This study is based on self-reported data which may result in underreporting of mental health issues and HOI, particularly due to sensitivity and stigma surrounding these issues.
- Temporal ambiguity is a limitation due to the nature of cross-sectional studies.
- LACHS data is also not representative of persons living in jails or prisons at the time of the survey.

**REFERENCES**

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