Depression is a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration. Over 20% of adults aged 60 and over suffer from a mental or neurological disorder (excluding headache disorders) and 6.8% of all disability (disability adjusted life years-DALYs) among over 60s is attributed to neurological and mental disorders. The most common neuropsychiatric disorders in this age group are dementia and depression.

Depression also increases the perception of poor health, the utilization of medical services and health care costs. Older adults with depressive symptoms have poorer functioning compared to those with chronic medical conditions such as lung disease, hypertension or diabetes. Because of this, it is important to research and develop new options to early contribute for diagnostic and prevention methods in older adults. (WHO, 2012).

Methods:
This study will be performed in the elderly population of Saltillo Coahuila city (Mexico), from January to December 2015. The study will have a descriptive comparative correlation design with two different groups: depression group and non-depression group. The depression group will be constituted by patients using the center for epidemiological studies-depression score (CESD). Total summary scores range from 0 to 30, with clinical levels of depressive symptomatology being associated with scores of 16 or higher. The sample size will be estimated using the nQuery Advisor 7.0 software; level of confidence 90%, margin of error 5%, and a correlation of .35. Written informed consent will be obtained in accordance with the Research Ethics Board of the University of Coahuila.

Results:
The results of two groups will be compared. Descriptive statistics, comparison of personality, education level, economic status and gender will be done using independent sample t-tests. Polynomial regression will be utilized to test the hypothesis of differential associations between depressive symptoms and polymorphism genotype, a multiple regression analysis with genotype will be realized. Tests for behavioral differences between groups on age, symptoms, and depression group, the serotonin transporter linked polymorphic domain (5-HTTLPR) Forward (5′-ATTGCCAGCACCCAAGCAGCTGGTG-3′) and reverse (5′-GGCCAGCTTGCCTCAGGGA-3′) specific primers will be used. These primers amply a 419 base pair fragment for the 16-repeat L allele, and a 375 base pair fragment for the 16-repeat S allele. Each participant will provide peripheral blood samples. Genomic deoxyribonucleic acid (DNA) will be prepared from lymphocytes cells using the Qiagen QIAamp® Blood Mini Kit (Qiagen, Inc, Valencia, California). Polymerase chain reaction (PCR) will be used to amplify the serotonin transporter promoter region (5-HTTLPR). Forward (5′-ATTGCCAGCACCCAAGCAGCTGGTG-3′) and reverse (5′-GGCCAGCTTGCCTCAGGGA-3′) specific primers will be used. These primers amplify a 419 base pair fragment for the 16-repeat L allele, and a 375 base pair fragment for the 14-repeat S allele (Michaelovsky et al. 1999).

Conclusion:
In order to test the hypothesis of differential associations between depressive symptoms and polymorphism genotype, a multiple regression analysis with genotype will be realized. Tests for behavioral differences between groups on age, personality, education level, economic status and gender will be done using independent sample t-tests.

Results:
The results of two groups will be compared. Descriptive statistics, comparison of means and correlation analysis will be used.

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