

Background

Suicide is a serious public health concern that has a significant impact on people all over the world. The World Health Organization (WHO, 2023) reports that it is the fourth most common cause of death for individuals aged 15-19 globally and the second for those aged 10-24 in America (Curtin & Heron, 2019). The suicide mortality rate in Latin America and the Caribbean's low and middle-income countries was 6.2 per 100,000 population, as stated by The World Bank (2019). In Mexico, suicide cases have been steadily increasing for the last 30 years (Luna & Davila, 2018; Martín-del-Campo, González, & Bustamante, 2013; Sánchez-Cervantes, Serrano-González, & Márquez-Caraveo, 2015; Santos, Villa, García, León, Quezada, & Tapia, 2003), with the estimated suicide rate among youths aged 15 to 29 increasing from 8.1 deaths per 100,000 people in 2015 to 10.4 per 100,000 in 2021, according to the National Institute of Statistics and Geography (INEGI, 2021). The 2021 National Health and Nutrition Survey discovered that 5.3% of adolescents aged 10-19 had attempted suicide at least once in their lifetime, and 6.3% had experienced suicidal thoughts (Shamah-Levy et al., 2022). Although the issue of suicide rates in Mexico is recognized, there is a lack of comprehensive literature on the risk factors involved. Studies on risk factors for suicidality primarily come from high-income countries (HIC). These factors can be broadly classified into two categories mental health problems and adverse childhood experiences (ACEs), as identified by Becker & Correll (2020)

Objective

Since suicidality risk factors in adolescents and young people have been identified primarily in HIC, these risk factors mainly encompass mental health problems and ACEs, and few studies have reported these issues in LMIC. Therefore, this study aims to determine the relationship between symptoms of mental health problems and ACEs with suicidal behavior in Mexican adolescents.

Methods  
Design

A cross-sectional online survey was conducted from April to July 2021.

Sample

A nonprobability convenience sampling method was used to invite 78 public high schools from 20 of the 32 states of Mexico, The states were selected randomly to represent the eight geographical, natural, historical, economic, and cultural zones of Mexico (Bassols & Batalla,1992). Students between 11 and 19 years old were asked to register and participate through the school’s social media. 8,894 adolescents registered, 8,626 provided individual assent and parental consent, 7,329 opened the survey, and 5,836 fully completed it.

Instruments and Measures

Through validated questionnaires in Mexican adolescents, the variables of interest were collected. 14 ACEs were measured with the Adverse Childhood Experience International Questionnaire (ACE-IQ; Moraleda, Ballesta, Delgado, Lietor, Moreno, & Delgado, 2015): 1) Living with a household member with psychoactive substances consume, 2) Living with a household member with a mental health problem or suicide attempt, 3) Living with a household member that has been incarcerated, 4) One or both parents seriously ill, 5) Parental loss, 6) Exposure to collective violence, 7) Exposure to community violence, 8) Exposure to domestic violence, 9) Exposure to physical violence towards the mother, 10) Physical abuse, 11) Psychological abuse, 12) Neglect, 13) Sexual abuse, and 14) Bullying. Besides these ACEs, parental divorce, separation or loss, and low socioeconomic status were assessed since they have been reported as suicidality risk factors in HIC.

Across the screening instrument Youth Self Report (YSR; Giráldez, Vallejo, & Mena, 2002), the symptoms for eight mental health problems (MHP) based on the Diagnostic and Statistical Manual of Mental Disorders (DSM) were measured: 1) Affective problems, 2) Anxiety problems, 3) Somatic problems, 4) Attention Deficit/Hyperactivity Problems, 5) Oppositional Defiant Problems, 6) Behavior Problems, 7) Obsessive-Compulsive Problems, and 8) Stress Problems—two YSR questions measured suicidality: Y18. I harm myself on purpose or have attempted suicide, Y91. I think about killing myself.

Statistical Analysis

The frequencies of the variables of interest and measures of central tendency for the numerical variables are described.

A logistic regression was performed in binary to find the association between the variables, expressed in OR, as their cumulative effect. The model was tested with the 14 ACEs validated questionnaire for Mexican adolescents and the extended ACEs (parental divorce, separation or loss, and low socioeconomic status).

Ethical considerations

This study followed ethical standards for researching children, with approval and registration from relevant committees. Parental consent was obtained for minors, and all information was kept confidential. Participants received a small reward and access to psychological care services.

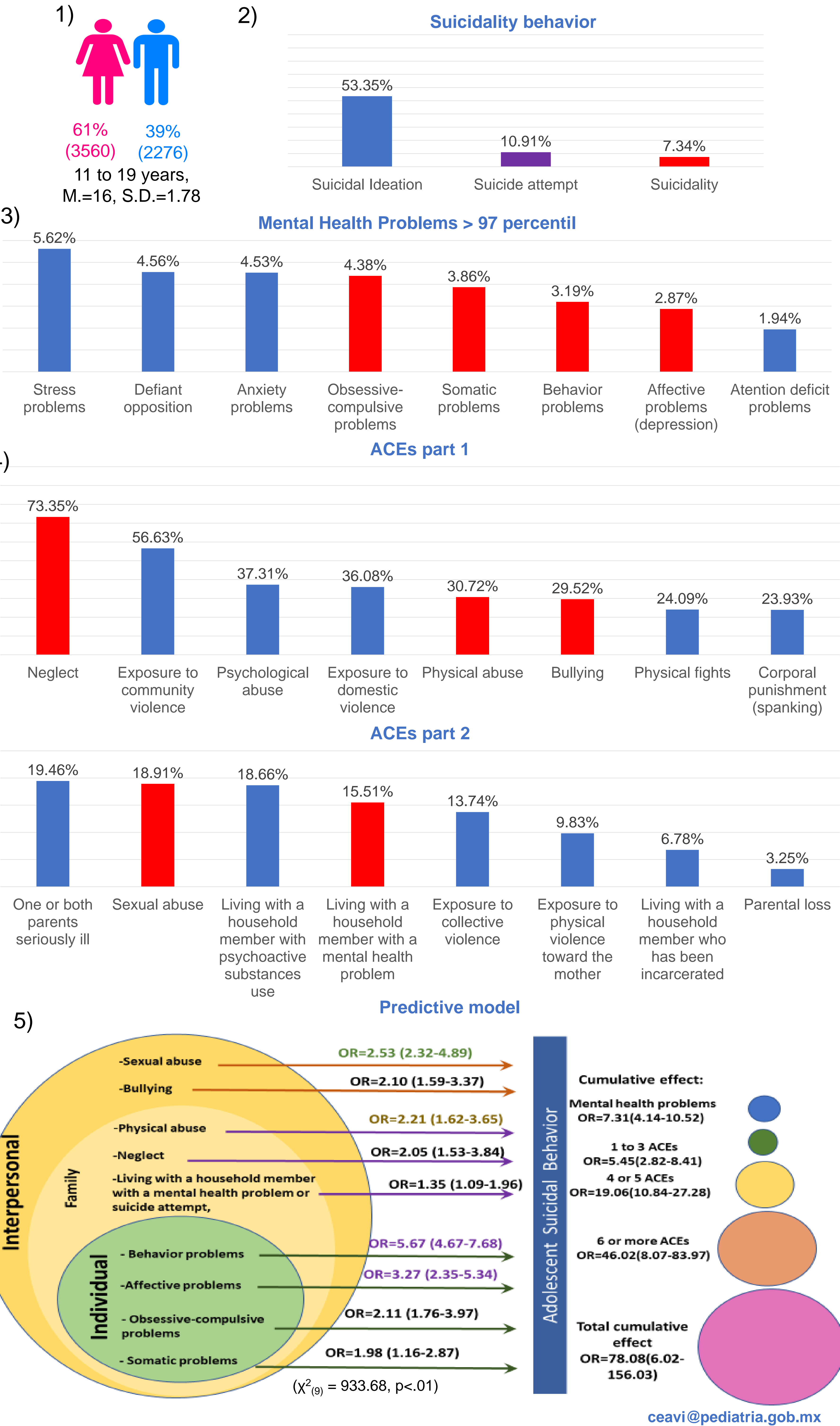
Results

Next, we present 1) sociodemographic characteristics, 2) suicidality behaviors, 3) mental health symptoms, 4) Adverse Childhood Experiences, and 5) the predictive model.

Conclusion

Detecting ACEs and MHP can help identify adolescents at risk of suicidal behavior. Addressing the problems from the ecological model allows us to have more chances of identifying adolescents at risk. Early interventions might help to reduce illness burden and costs for individuals, families, communities, and society (Bellis et al., 2019)

5836 complete answers out of 7329 adolescents



ACEs and Mental Health Problems as Suicidality predictors  
in Mexican adolescents

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