

The Impact of Life Trauma on the Mental Health and Suicidal Behavior: A Study from Portuguese Language Countries

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Psicologia Clínica e da Saúde
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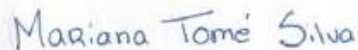
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Universidade da Beira Interior, Covilhã 17 /06 /2022

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Dedicatória

À minha avó, Piedade, e à minha tia, Glória, que acompanharam este meu percurso de uma perspetiva diferente. Obrigada pela força constante daí de cima, sei que estão orgulhosas.

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Abstract

The present dissertation was written in a scientific article format, allowing the development of research skills in field of Clinical and Health Psychology expected by students on this stage of their academic path, according with EuroPsy – The European Certificate in Psychology. Several studies approach the impact of life trauma on mental health and suicidal behavior in several populations, however, no references are available to studies that consider these variables in the Community of Portuguese Language Countries (CPLC). Therefore, the present study intends to fill this gap and aims to 1) describe the traumatic experiences, mental health levels and suicidal behavior of participants, comparing differences between country of residence; 2) assess correlations between traumatic experiences and mental health, and suicidal behavior; and 3) assess the impact of exposure to a lifetime traumatic event on mental health and suicidal behavior. The participants of this study were 1006 individuals from Portugal, Brazil, and African Countries with Portuguese as an Official Language (ACPOL). The measurement instruments included a sociodemographic questionnaire, the Portuguese version of the Brief Symptoms Inventory-18 (BSI-18), the Brief Trauma Questionnaire (BTQ), and the Portuguese version of Suicidal Behaviors Questionnaire-Revised (SBQ-R). The ACPOL participants reported greater impact of war, while Portuguese participants reported greater impact of disasters and Brazilian participants reported greater impact of psychological and sexual abuse, assault, and death of a family member. Brazilian participants showed the worst levels of mental health and greater suicidal thoughts, but Portuguese participants showed greater probability of committing suicide. Although strong correlations were found between traumatic experiences and mental health levels and suicidal behavior, only physical and sexual abuse were positively correlated with all BSI-18 and SBQ-R subscales. A linear regression analysis revealed that traumatic experiences explained 23.4% of the variance in mental health levels and 11.6% of the variance in suicide probability.

Keywords

Life trauma; traumatic experiences; mental health; suicide; suicidal behavior; Community of Portuguese Language Countries

Resumo alargado

Segundo Giller (2010), a palavra “trauma” é comumente utilizada em referência a um evento stressante, contudo, é a capacidade de adaptação e coping de cada pessoa que define se um evento é ou não traumático para si. Quando um evento ou situação traumática excede as habilidades de coping da pessoa, este cria um trauma psicológico (Giller, 2010), comprometendo a saúde mental e física da pessoa (World Health Organization, 2020; World Health Organization Regional Office for Africa, n.d.).

Vários estudos indicam que a exposição a eventos traumáticos contribuem para piores níveis de saúde mental (Ackan et al., 2021; Husain et al., 2021; Van Assche et al., 2020) e constituem um fator de risco para o comportamento suicidário (Pham et al., 2021; Watters & Yalch, 2021; Yroni et al., 2021). Contudo, esta área permanece por explorar na Comunidade de Países de Língua Portuguesa (CPLP), sendo objetivo da presente dissertação combater esta lacuna e 1) descrever as experiências traumáticas, os níveis de saúde mental e o comportamento suicidário, comparando diferenças entre países de residência; 2) avaliar correlações entre as experiências traumáticas e a saúde mental e o comportamento suicidário; e 3) avaliar o impacto da exposição a um evento traumático na saúde mental e no comportamento suicidário.

A amostra do estudo é composta por 1006 participantes provenientes de Portugal, do Brasil e de Países Africanos com Língua Oficial Portuguesa (PALOP). Os instrumentos de medida incluem um questionário sociodemográfico; a versão portuguesa do Brief Symptom Inventory-18 (BSI-18); o Brief Trauma Questionnaire (BTQ); e a versão portuguesa do Suicidal Behavior Questionnaire-Revised (SBQ-R).

Os valores de média para a sintomatologia ansiosa, depressiva e somática reportados pelos participantes encontram-se dentro das médias para a população comunitária portuguesa (Nazaré et al., 2017). Cerca de 10% dos participantes reportou histórico de tentativa de suicídio, e cerca de 19% da amostra reportou alguma probabilidade de vir a cometer suicídio. Os participantes residentes no Brasil apresentaram piores níveis de saúde mental e maior número de pensamentos suicida, no entanto, foram os participantes provenientes de Portugal que apresentaram maior probabilidade de cometer suicídio.

Foi avaliado o impacto de dez experiências traumáticas na saúde mental e no comportamento suicidário: (1) zona de guerra ou área militar com tragédias de guerra;

(2) acidente grave; (3) desastre natural ou tecnológico; (4) doença com risco de vida; (5) abuso físico antes dos 18 anos; (6) abuso psicológico antes dos 18 anos; (7) abuso sexual antes dos 18 anos; (8) assalto, rapto ou ataque; (9) morte violenta de um familiar ou alguém próximo; e (10) testemunhar morte ou acidente trágico. De entre estas dez experiências, o assalto, abuso psicológico, testemunhar morte ou acidente trágico e morte violenta de um familiar ou alguém próximo foram as experiências mais reportadas. Diferenças estatisticamente significativas foram encontradas no impacto das experiências traumáticas entre país de residência: os participantes dos PALOP reportaram maior impacto da guerra, enquanto os participantes residentes em Portugal reportaram maior impacto de desastres e os participantes provenientes do Brasil reportaram maior impacto do abuso psicológico e sexual, do assalto e da morte de um familiar ou alguém próximo. No Teste de Correlação de Pearson, apenas o abuso físico e o abuso psicológico foram positivamente correlacionados com todas as subescalas do BSI-18 e do SBQ-R. Uma análise de regressão linear revelou que as experiências traumáticas explicam 23.4% da variância nos níveis de saúde mental e 11.6% da variância na probabilidade de cometer suicídio.

Os resultados deste estudo indicam que o abuso psicológico foi a experiência traumática mais reportada pela generalidade dos participantes e demonstram uma correlação entre esta experiência e todas as subescalas do BSI-18 e a ideação e tentativa de suicídio. Nesse sentido, os resultados são consistentes com os resultados de diversos estudos. Por exemplo, no estudo de Li e colaboradores (2015), a experiência traumática mais reportada foi a negligência emocional. O estudo de Van Assche e colaboradores (2020) encontrou correlações entre a exposição a eventos traumáticos e os níveis de ansiedade e depressão, especificamente com o abuso/negligência emocional. Haug e colaboradores (2015) encontraram correlações entre o abuso/negligência emocional e o comportamento suicidário.

O contributo mais relevante do presente estudo é o facto de ser pioneiro no tema do trauma, saúde mental e comportamento suicidário na Comunidade de Países de Língua Portuguesa, elucidando e reforçando o impacto que as experiências traumáticas têm na saúde mental e o seu papel enquanto preditor do comportamento suicidário. Desta forma, contribuem para uma melhor compreensão destes temas e suportam futuras intervenções preventivas e remediativas.

Palavras-chave

Trauma; experiências traumáticas; saúde mental; suicídio; comportamento suicidário;
Comunidade de Países de Língua Portuguesa

Introduction

The present dissertation is part of the study “Adjustment, Psychosocial Risk and Protective Factors in CPLC citizens”, approved by the University of Beira Interior ethics committee (Portugal): CE-UBI-Pj-2021-047. This study aims to assess psychological aspects associated with well-being, with a specific path that focus on impact of life trauma on mental health and suicidal behavior in Community of Portuguese Language Countries (CPLC) citizens.

The Substance Abuse and Mental Health Services Administration (SAMHSA) presents trauma as the result of “an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life-threatening and that has lasting adverse effects on individual’s functioning and mental, physical, social, emotional, or spiritual wee-being” (SAMHSA, 2014, p.7). However, witnessing an event that threatens the life or safety of someone close can equally be considered a traumatic event (About Child Trauma, n.d.; What is Child Trauma?, n.d.).

Again, SAMHSA (SAMHSA, 2014) proposed a way to understand traumatic events that considers the event, the experience and the effects as components of the traumatic experience – the three E’s of trauma:

- Event – the circumstances and the event itself that include the situation of actual threat of physical or psychological danger. These can occur individually or repeatedly.
- Experience – the individual’s experience of the events or circumstances. An event can be experienced as traumatic for one individual and not for another. The individual’s interpretation of the event, the meaning attributed to it and the way in which the individual is physically and psychologically disturbed by the event contributed to its being experienced as traumatic. How an event is experienced as traumatic may be related to factors such as cultural beliefs, availability of social support and the individual’s development state.
- Effects – effects can occur immediately after the event or appear later and can be short or long in duration. Some examples of adverse effects are inability to deal with normal stress, inability to trust and benefit from social relationships, inability to control cognitive processes such as memory and thinking, inability to regulate behavior or control emotional expressions.

Trauma is, thus, a complex and multifaceted concept that encompasses a wide range of experiences and can be a single incident, cumulative experiences, or unresolved experiences, sometimes known as complex trauma (see figure 1) (Agency for Clinical Innovation, 2019).

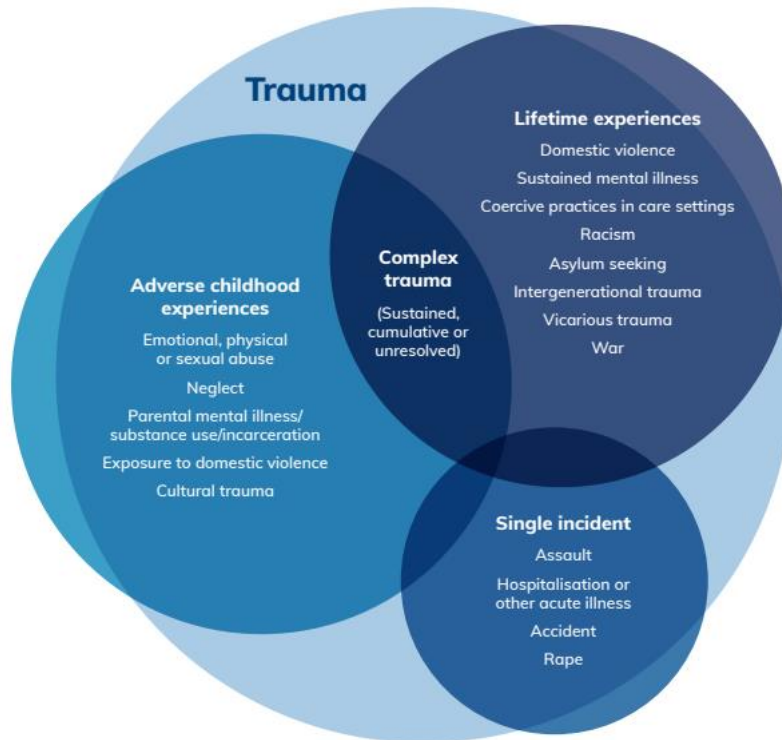


Figure 1 - Trauma concept

Some of the most common traumatic experiences are physical, psychological and sexual abuse; life-threatening illness; be attacked; natural disasters; war experiences; child neglect; and living with a family member who has a mental illness or uses substances (About Child Trauma, n.d.; Leonard, 2020; What is Trauma?, n.d.). In scientific literature, the most reported traumatic experiences are physical and emotional neglect (Van Assche et al., 2020) and the unexpected death of a loved one (Schrok et al., 2021).

Due to its strong ability to shape the individual's physical, emotional and intellectual development, especially when they occur at an early stage of life, trauma is a public health problem and has been associated with chronic health problems and mental, emotional, and behavioral disorders (SAMHSA, 2014).

Anxiety and depressive disorders are the two main diagnostic categories, with a high prevalence in the world population and a strong impact on people's health and functionality (World Health Organization, 2017). Several studies have shown the impact of exposure to traumatic events on mental health (Humphreys et al., 2010; Li et al., 2015; Van Assche et al., 2020), especially in these two categories, indicating that traumatic experiences are associated with higher rates of anxious and depressive symptoms.

On the other hand, suicide is among the most common causes of death. Globally, more than 700,000 people die from suicide each year around the world (World Health Organization, 2021). Several studies have reported high rates of suicide attempts and a history of suicidal ideation (Capuzzi et al., 2021; Hadland et al., 2011; O'Hare et al., 2014). Therefore, for a comprehensive and coordinated prevention response, it is extremely important to understand the risk factors associated with suicidal behavior (World Health Organization, 2021).

The Suicide Prevention Resource Center and the American Foundation for Suicide Prevention presents as risk factors to suicide mental health conditions, such as depression and anxiety disorders or substance abuse, stressful life events, prolonged stress, previous suicide attempts, family history of suicide and childhood abuse, neglect or trauma (Risk and Protective Factors, n.d.; Risk Factors, Protective Factors and Warning Signs, n.d.).

Exposure to traumatic events has been clearly pointed as a risk factor of suicidal behavior (Yroni et al., 2021) and a contributor to worse mental health outcomes (Van Assche et al., 2020). However, this area remains unexplored in the Community of Portuguese Language Countries (CPLC). The CPLC has close to 250 million inhabitants, occupies an area of about 10.7 million square kilometers on four different continents and has as its general objectives the promotion and diffusion of Portuguese Language, cooperation in various fields and political-diplomatic concentration between its members (<https://www.cplp.org>).

Considering all the above, the present dissertation was developed and is composed by two parts: Chapter 1 corresponding to the scientific article of the investigation; and Chapter 2 corresponding to a general discussion about all the process of the present dissertation. The investigation in the chapter 1 aimed to assess the impact of traumatic experiences on mental health functioning and suicidal behavior, more specifically aimed to 1) describe the traumatic experiences, mental health levels and suicidal

behavior, comparing differences between country of residence; 2) assess correlations between traumatic experiences and mental health and suicidal behavior; and 3) assess the impact of exposure to a traumatic event on mental health and suicidal behavior. Expected results will show that: assault, psychological abuse, violent death of a family member, and witness to death or tragic accident will be the most reported traumatic experiences; several correlations will be found between the all traumatic experiences under study and the BSI-18 and SBQ-R subscales but only sexual and physical abuse will show significant correlation with all SBQ-R and BSI-18 subscales; in conclusion, we will demonstrate that traumatic experiences do contribute to the explanation of mental health levels and the probability to commit suicide.

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List of Acronyms

| | |
|--------|---|
| ACPOL | African Countries with Portuguese as an Official Language |
| BSI-18 | Brief Symptom Inventory-18 |
| BTQ | Brief Trauma Questionnaire |
| CPLC | Community of Portuguese Language Countries |
| CPLP | Comunidade de Países de língua Portuguesa |
| PALOP | Países Africanos de Língua Oficial Portuguesa |
| SBQ-R | Suicidal Behaviors Questionnaire-Revised |
| SAMHSA | Substance Abuse and Mental Health Services Administration |

Chapter 1: The Impact of Life Trauma on the Mental Health and Suicidal Behavior: a Study from Portuguese Language Countries

This chapter is written based on the following scientific activities:

- Publications

Silva, M., & Pereira, H. (2022). The impact of life trauma on mental health and suicidal behavior: A study from Portuguese language countries. *Behavioral Sciences*, 12(4), 1-15. <http://dx.doi.org/10.3390/bs12040102>

Silva, M., Pereira, H., & Beatriz, C. (2022). The impact of life trauma on the mental health and suicidal behavior: a study from Portuguese language countries. *Sağlık Akademisi Kastamonu*, 7(1), 173-174.

Silva, M., Pereira, H., & Beatriz, C. (2021). Trauma, mental health, and suicidal tendencies: Lessons from Portuguese language countries. *Journal of Loss and Trauma*. <http://doi.org/10.1080/15325024.2021.2007651>

- Communications

Silva, M., & Pereira, H. (16 de dezembro de 2021). The impact of life trauma on the mental health and suicidal behavior: a study from Portuguese language countries. Comunicação apresentada no II Congresso Internacional Interdisciplinar sobre Representações Sociais e sobre Qualidade de Vida do Vale do São Francisco - CIRSQVASF (Grupo de Pesquisa Interdisciplinar sobre Saúde, Educação e Educação Física – GIPEEF), Vale do São Francisco, Brasil.

Silva, M., & Pereira, H. (3 de junho de 2022). The impact of life trauma on the mental health and suicidal behavior: a study from Portuguese language countries. Comunicação apresentada nas I Conferências Internacionais em Psicologia Clínica e da Saúde da Universidade da Beira Interior (Universidade da Beira Interior – UBI), Covilhã, Portugal.

Abstract

Several studies report the incidence of traumatic experiences in community and clinical samples, and substantial research demonstrates the impact of traumatic events on mental health and suicidal behavior, but this area remains unexplored in the Community of Portuguese Language Countries (CPLC). Thus, this study aims to (1) describe traumatic experiences, mental health levels and suicidal behavior among individuals from Portugal, Brazil and African Countries with Portuguese as an Official Language (ACPOL); (2) assess correlations between traumatic experiences and mental health and suicidal behavior; and (3) assess the impact of exposure to a traumatic event on mental health and suicidal behavior. The measurement instruments included a sociodemographic questionnaire, Brief Trauma Questionnaire, Brief Symptoms Inventory-18, and the Portuguese version of the Suicidal Behaviors Questionnaire-Revised. ACPOL participants reported greater impact of war, Portuguese participants reported greater impact of disasters, and Brazilian participants reported greater impact of psychological and sexual abuse, assault, and death of a family member. Brazilian participants showed the worst levels of mental health and suicidal thoughts. Strong correlations were found between traumatic experiences and mental health levels and suicidal behavior. Traumatic experiences contributed to the explanation of mental health levels and probability of committing suicide.

Keywords

Life trauma; traumatic experiences; mental health; suicidal behavior; suicidal thoughts; suicide attempts; Community of Portuguese Language Countries.

1. Introduction

1.1. Traumatic experiences

The word “trauma” is commonly used to refer to a stressful event; however, each person’s individual adaptability and coping capacity is what defines whether an event is traumatic for them. Because of this, the same event may be traumatic for one person and not for another. When a situation considered traumatic exceeds a person’s coping abilities, it creates psychological trauma [1]. Several studies have reported high rates of different traumatic experiences, and the impact that trauma has on people’s physical and mental health, causing suicidal behavior. However, this issue is still not properly explored in the Community of Portuguese Language Countries.

The World Health Organization points out that 40 million children under the age of 15 become victims of violence each year [2]. Recent data report that 3 out of 4 children between the ages of 2 and 4 years suffer from physical and/or psychological violence at home, 1 out of 5 women and 1 out of 13 men are sexually abused before the age of 20 years, and about 120 million girls and young women suffer from some type of forced sexual contact before turning 20 years old [3].

The psychological trauma resulting from a traumatic event depends on the severity of the violence and the person’s experience [2], and can vary from anxiety symptoms and fear to aggressive symptoms and externalizing anger [4], compromising both the mental and physical health of the traumatized individual [2,3].

Several studies report the incidence of exposure to traumatic events in community samples [5–9], clinical samples [10–16], and specific samples [17–23]. Several authors report rates of traumatic experiences higher than 50% in the general population [5,21], in clinical populations, such as schizophrenic patients [15] or patients with anxiety and depression disorders [16], and in specific populations, such as institutionalized adolescents [22].

In general, the most reported traumatic experiences are emotional neglect [8,13,16,17,22,24], physical neglect [8,17,18,21,24], and the unexpected death of someone close [5,7,9,21].

Several studies have shown the impact of exposure to traumatic events on mental health, namely anxiety and depression disorders, which are the two main diagnostic categories [25]. Li and collaborators [13] found significant positive correlations between exposure to a traumatic event and anxiety levels in schizophrenic patients, and

specifically found that emotional neglect and sexual abuse contribute to a higher probability of anxiety symptoms. In the study by Humphreys and collaborators [26], associations were found between child maltreatment and depressive symptoms, with the strongest correlations among those who experienced emotional abuse and neglect. Van Assche and collaborators [8] found that any childhood trauma was positively correlated with anxiety and/or depression levels, and emotional neglect and abuse were positively related with both anxiety and depressive levels. Other studies have demonstrated similar results with regard to the impact of exposure to a traumatic event on anxiety and/or depressive levels [12,22,24,27–31]. Another widely documented correlation is between exposure to traumatic events and suicidal behavior.

1.2. Suicide

Globally, more than 700,000 people die from suicide every year. A 2014 study by O'Hare and collaborators [21] found that 52.1% of participants tried to commit suicide at least once. Furthermore, a study by Hadland and collaborators [32] found that 36.8% of participants reported a history of suicidal ideation, and a study by Capuzzi and collaborators [18] found that 23.7% of participants have a history of suicide attempts.

Suicide is one of the most common causes of death, so it is extremely important to comprehend risk factors of suicide in order to have a complete and directed response for its prevention [33]. Many studies have found that exposure to a traumatic event increases the risk of suicidal behavior [6,10,13,18,21,32,34–37]. Saraçlı and collaborators [24] found that the prevalence of suicidal thoughts among participants who were exposed to some traumatic event (18.3%) was nearly double that of participants without history of trauma during their childhood (9.6%). Mostly, emotional neglect or abuse and physical abuse were found to be linked with higher rates of suicidal behavior [22,38,39].

1.3. CPLC

The Community of Portuguese Language Countries (CPLC), an organization founded on 17 July 1996, comprises nine member states: Portugal, Brazil, Angola, Mozambique, Cape Verde, São Tomé and Príncipe, Guinea Bissau, Equatorial Guinea, and East Timor. CPLC occupies an area of about 10.7 million square kilometers across four different continents, and has a population of nearly 250 million. It has, as general objectives, the promotion and diffusion of the Portuguese language, cooperation on

several domains, and political–diplomatic concentration between its members. Some of the principles that rule de CPLC are the sovereign equality of its member states, promotion of development and mutually beneficial cooperation, and respect for national identity and territorial integrity (<https://www.cplp.org>; accessed on 4 February 2022).

The countries in this community share the Portuguese language and some cultural and religious issues, as well as cooperative relations at the economic, medical, and military levels. However, they have their differences in other cultural and religious aspects, as well as in the evolution of each country, namely in the economic sector, security, and daily violence. Therefore, these countries can be considered as a whole due to their similarities, but special attention must be paid to the differences between each one of them.

Given the lack of research on the impact of exposure to a traumatic event on mental health and suicidal behavior in CPLC, the present study aims to (1) describe traumatic experiences, mental health levels, and suicidal behavior, comparing differences between country of residence; (2) assess correlations between traumatic experiences and mental health and suicidal behavior; (3) and assess the impact of exposure to a traumatic event on mental health and suicidal behavior.

Hence, we intend to explore the issues mentioned above in a population with such specific characteristics, making known the difference in how each situation is experienced and its impact on mental health and suicidal behavior. In addition, it is our goal to reinforce the importance of the subject under study and sensitize readers to the issues mentioned throughout the article.

2. Materials and Methods

2.1. Participants

The study sample consists of 1006 participants, of which 296 (29.4%) live in Portugal, 409 (40.75%) live in Brazil, and 301 (29.9%) live in ACPOL (African Countries with Portuguese as Official Language). The sample is composed of 424 men (41.2%), 576 women (57.3%), and 6 (0.6%) individuals of other genders. The ages range between 18 and 80 years, with a mean age of 41.76 (SD = 14.185). Additional socioeconomic information can be seen in more detail in Table 1.

Table 1 - Sociodemographic characteristics (Mean = 41.76; SD = 14.185).

| Variable | Categories | n | % |
|------------------------|-------------------------------------|----------|----------|
| Country of residence | Portugal | 296 | 29.4 |
| | Brazil | 409 | 40.7 |
| | ACPOL | 301 | 29.9 |
| Gender | Man | 424 | 42.1 |
| | Woman | 576 | 57.3 |
| | Other | 6 | .6 |
| Sexual orientation | Heterosexual | 880 | 87.5 |
| | Bisexual | 66 | 6.5 |
| | Gay/lesbian | 60 | 6 |
| Ethnicity/race | White/European | 502 | 49.9 |
| | African/black | 253 | 25.1 |
| | Mixed race | 251 | 24.9 |
| Professional situation | Employed | 608 | 60.4 |
| | Unemployed | 47 | 4.7 |
| | Student | 143 | 14.2 |
| | Student worker | 82 | 8.1 |
| | Self-employed | 65 | 6.4 |
| | Retired | 52 | 5.2 |
| | Sick leave | 3 | .3 |
| | Volunteering/community service | 6 | .6 |
| Educational attainment | Up to 12 years of schooling | 100 | 9.9 |
| | University – bachelor's degree | 249 | 24.7 |
| | University – master's degree | 339 | 33.7 |
| | University – doctorate | 318 | 31.6 |
| Socioeconomic status | Low | 35 | 3.5 |
| | Medium-low | 109 | 10.8 |
| | Medium | 584 | 58.0 |
| | Medium-high | 227 | 22.5 |
| | High | 51 | 5.1 |
| Place of residence | Small rural area | 71 | 7.0 |
| | Large rural area | 27 | 2.7 |
| | Small urban area | 345 | 34.3 |
| | Large urban area | 563 | 56.0 |
| Marital status | Single without dating | 221 | 21.9 |
| | Single with dating | 169 | 16.8 |
| | Married to same sex | 14 | 1.4 |
| | Married to different sex | 372 | 37.0 |
| | De facto union to same sex | 12 | 1.2 |
| | De facto union to different sex | 134 | 13.3 |
| | Separated or divorced same sex | 11 | 1.1 |
| | Separated or divorced different sex | 60 | 5.9 |
| | Widow of a different sex | 13 | 1.3 |
| Housing circumstances | Lives alone | 172 | 17.1 |
| | Lives with his/her partner | 146 | 14.5 |
| | Lives with his/her husband/wife | 325 | 32.3 |
| | Lives with his/her children | 73 | 7.2 |
| | Lives with his/her parents | 169 | 16.8 |
| | Live with his/her friends | 47 | 4.7 |
| | Another family constellation | 74 | 7.3 |
| Religion | Yes | 676 | 67.2 |
| | No | 330 | 32.8 |

2.2. Measurement Instruments

Participant sociodemographic information was obtained using a questionnaire in which participants indicated their country of residence, age, sexual orientation, ethnicity/race, professional status, educational attainment, socioeconomic status, place of residence, marital status, housing circumstances, and religion.

Participant psychosymptomatology was evaluated using three subscales (somatization, anxiety, and depression) of the Brief Symptom Inventory 18 (BSI-18). These subscales are evaluated by 18 items with Likert-type response scale ranging from 0 = nothing to 4 = extremely. The depression subscale assesses symptoms of depressive disorders such as dysphoric mood states and anhedonia. The anxiety subscale assesses symptoms that indicate panic states, such as nervousness, tension, and motor agitation. The somatic subscale assesses the distress associated with manifestations of automatically regulated systems. The global severity index, obtained through the sum of the 18 items, provides a measurement of the individuals' general psychological distress levels, where higher scores indicate more intense psychosymptomatology [40]. Cronbach's alpha, which measures internal reliability for the anxiety, depression and somatic subscales, was 0.87, 0.86 and 0.78, respectively. Cronbach's alpha for the total scale was 0.93.

An adapted version of the Brief Trauma Questionnaire (BTQ) was used to assess self-reported trauma. While the original version of the BTQ includes 10 dichotomous items [41], this adapted version measures the intensity of the impact of each traumatic experience using a Likert-type response scale ranging from 0 = 'It didn't happen to me' to 9 = 'It happened and it was very traumatizing'. In the scoring, trauma intensity levels were divided into four categories: 0 = absence (answers 0 on the scale), 1 = mild intensity (answers from 1 to 3 on the scale), 2 = moderate intensity (answers from 4 to 6 on the scale) and 3 = severe intensity (answers from 7 to 9 on the scale). The traumatic experiences reported were: (1) war zone or military area with war tragedies; (2) serious accident; (3) major natural or technological disaster; (4) life-threatening illness; (5) physical maltreatment before age 18; (6) psychological/emotional maltreatment before age 18; (7) sexual maltreatment before age 18; (8) assault, abduction or attack; (9) violent death of a family member or someone close; and (10) witness to death or tragic accident.

To assess the frequency and severity of present and past suicidal behavior, the participant also responded to the Suicidal Behaviors Questionnaire-Revised (SBQ-R) [42]. This study utilized the Portuguese version of this instrument [43], which is composed of four items on a Likert-type response scale that reports lifetime suicidal

thoughts (SBQ1), lifetime suicidal attempts (SBQ2), suicidal thoughts in the last year (SBQ3), and suicidal attempts in the last year (SBQ4). The answers to the SBQ1 item ranged from 'Never' to 'I had a plan to commit suicide, and I really wanted to die'; the answers to the SBQ2 item ranged from 'Never' to 'I tried to commit suicide, and I really wanted to die'; the answers to the SBQ3 and SBQ4 items ranged from 'Never' to 'Many times (five or more times)'. The coefficient alpha value for the 4-item SBQ-R scale scores was 0.77. Corrected item total correlations for the 4 items were 0.60, 0.58, 0.54, and 0.55, respectively. A fifth item that asked about the self-assessed probability of committing suicide (SBQ5) and had the same response type, on a scale from 1 = not likely to 7 = very likely, was also included in the measurement of suicidal behavior.

2.3. Procedure

The present study was approved by the researchers' university ethics committee (CE-UBI-Pj-2021-047), and all the objectives were carefully considered before a secure online website was created on Office Forms for research purposes. After approval, the form was disseminated online between May 2021 and mid-October 2021 using both social networks and mailing lists. The participation was voluntary and followed all ethical and deontological principles, and the inclusion criteria were 18 years old or older, connection to any country in the Community of Portuguese Countries, and internet access to answer the questionnaire. Following data collection, all participants' submitted online data were entered into IBM® SPSS® STATISTICS (version 25). All data cleaning and statistical analysis were performed through this statistical program, using several procedures necessary to fulfill the aims of this study. That is, descriptive statistics were conducted to describe the sample. Student t-tests and ANOVA were performed to evaluate differences between groups. Pearson correlation coefficients were conducted to assess the correlation between traumatic experiences, mental health, and suicidal behavior. And finally, a hierarchical linear regression analysis was performed to explore the effects of independent variables (age, gender, sexual orientation, country of residence, and 10 traumatic experiences) on the dependent variable (mental health and probability to commit suicide).

3. Results

The results show that 10.6% of the participants served in a war zone or were in a military area with war tragedies, 27.3% were involved in a serious accident, 13.3% were involved in a major natural or technological disaster, 16.7% had life-threatening illness, 23.8% were physically abused by someone close during childhood or adolescence, 38.9% were psychologically or emotionally abused by someone close during childhood

or adolescence, 15.3% were sexually abused by someone close during childhood or adolescence, 43.4% were assaulted, abducted, or attacked, 31% lived through the violent death of a family member or someone close, and 32.3% witnessed death in a tragic accident. Table S1 of Supplemental shows these results in more detail.

When comparing differences in traumatic experiences by country of residence, statistically significant differences ($p < 0.05$) were observed for war [$X^2(6) = 52.418, p < 0.001$], disasters [$X^2(6) = 16.220, p = 0.013$], psychological abuse [$X^2(6) = 24.059, p = 0.001$], sexual abuse [$X^2(6) = 28.952, p < 0.001$], assault [$X^2(6) = 85.256, p < 0.001$], and death of a family member [$X^2(6) = 14.032, p = 0.029$]. As shown in Table 2, Brazilian participants reported the greatest impact from all these traumatic experiences, except war, where ACPOL participants reported the greatest impact, and disaster, where Portuguese participants reported the greatest impact. The BSI-18 subscales results show that 43.1% of the participants had anxious symptomatology, 51.3% had depressive symptomatology, and 23.1% had somatic symptomatology. More details about the BSI-18 subscales results are shown in Table S2 of Supplemental. Further analysis examined the differences in mental health levels by county of residence. The results presented in Table 3 show statistically significant differences ($p < 0.05$) in anxiety ($F(2; 974) = 17.688; p < 0.001$), depression ($F(2; 977) = 9.716; p < 0.001$), somatization levels ($F(2; 988) = 4.543; p = 0.011$), and BSI-18 total score ($t(2) = 9.425; p < 0.001$), indicating that participants from Brazil have the worst mental health levels, with higher scores on BSI-18 total scale and all the subscales.

Tukey's HSD Test for multiple comparisons found that the mean value of somatization was significantly different between Portugal and Brazil ($p = 0.026, 95\% \text{ C.I.} = [-0.236, -0.012]$) and between Brazil and ACPOL ($p = 0.036, 95\% \text{ C.I.} = [0.006, 0.229]$); the mean value of depression was significantly different between Portugal and Brazil ($p = 0.003, 95\% \text{ C.I.} = [-0.336, -0.056]$) and between Brazil and ACPOL ($p = 0.000, 95\% \text{ C.I.} = [0.101, 0.381]$); the mean value of anxiety was significantly different between Portugal and Brazil ($p = 0.002, 95\% \text{ C.I.} = [-0.341, -0.064]$) and between Brazil and ACPOL ($p = 0.000, 95\% \text{ C.I.} = [0.207, 0.485]$); and the mean value of BSI-18 total scale was significantly different between Portugal and Brazil ($p = 0.002, 95\% \text{ C.I.} = [-0.287, -0.052]$) and between Brazil and ACPOL ($p = 0.000, 95\% \text{ C.I.} = [0.102, 0.335]$).

Table 2 - Traumatic experiences by country of residence.

Life Trauma, Mental Health and Suicidal Behavior

| Experience | Country | 0 Absence | 1 Mild intensity | 2 Moderate intensity | 3 Severe intensity | χ^2 | p |
|-----------------------------|----------------|----------------------|---------------------------------|-------------------------------------|-----------------------------------|----------------------------|----------|
| War | PT | 26.1% | 1.4% | 1.2% | 0.5% | 52.418 (6) | 0.000** |
| | BR | 39.5% | 0.6% | 0.6% | 0.2% | | |
| | ACPOL | 23.8% | 3.0% | 1.8% | 1.2% | | |
| Accident | PT | 20.6% | 4.8% | 2.4% | 1.5% | 2.708 (6) | 0.845 |
| | BR | 29.5% | 6.3% | 3% | 2% | | |
| | ACPOL | 22.6% | 3.8% | 1.9% | 1.5% | | |
| Disaster | PT | 23.9% | 3.2% | 1% | 1% | 16.220 (6) | 0.013 |
| | BR | 36.5% | 2.5% | 1.7% | 0.2% | | |
| | ACPOL | 26.3% | 1.8% | 1% | 0.7% | | |
| Illness | PT | 24.6% | 1.2% | 1.5% | 2% | 7.340 (6) | 0.291 |
| | BR | 33.6% | 2.4% | 2.4% | 2.1% | | |
| | ACPOL | 25.1% | 2.2% | 1.8% | 0.9% | | |
| Physical abuse | PT | 22.7% | 3.7% | 1.8% | 1.1% | 6.600 (6) | 0.359 |
| | BR | 31.3% | 4.6% | 2.6% | 2.2% | | |
| | ACPOL | 22.3% | 5% | 1.3% | 1.3% | | |
| Psychological abuse | PT | 18.3% | 5.4% | 2.5% | 2.9% | 24.059 (6) | 0.001 |
| | BR | 22.2% | 9.1% | 4.6% | 5% | | |
| | ACPOL | 20.5% | 6.3% | 2.1% | 1.1% | | |
| Sexual abuse | PT | 26.2% | 1.6% | 0.3% | 1.3% | 28.952 (6) | 0.000** |
| | BR | 31.7% | 5% | 1.8% | 2% | | |
| | ACPOL | 26.8% | 1.7% | 1.1% | 0.4% | | |
| Assault | PT | 22% | 4.8% | 1.3% | 1% | 85.356 (6) | 0.000** |
| | BR | 17.3% | 13.5% | 7.1% | 3.1% | | |
| | ACPOL | 17.3% | 8.4% | 2.2% | 2% | | |
| Death of a family member | PT | 22.1% | 2.4% | 1.9% | 2.9% | 14.032 (6) | 0.029* |
| | BR | 28.2% | 4.5% | 2.8% | 5.2% | | |
| | ACPOL | 18.8% | 4.7% | 2.8% | 3.5% | | |
| Witness of death | PT | 21.3% | 4% | 1.8% | 2.3% | 8.824 (6) | 0.184 |
| | BR | 27.9% | 5.6% | 3.7% | 3.6% | | |
| | ACPOL | 18.5% | 5% | 2.6% | 3.6% | | |

* <0.05 ; ** <0.001 ; Note: PT – Portugal; BR – Brazil; ACPOL – African Countries with Portuguese as an Official Language

Table 3 - Differences in mental health symptoms by country of residence.

| Symptom | Country | <i>M</i> | <i>SD</i> | <i>F(df)</i> | <i>p</i> |
|------------------|---------|----------|-----------|----------------|----------|
| Somatization | PT | 0.51 | 0.55 | 4.543(2; 988) | 0.011* |
| | BR | 0.64 | 0.69 | | |
| | ACPOL | 0.52 | 0.57 | | |
| | Total | 0.56 | 0.62 | | |
| Depression | PT | 0.84 | 0.75 | 9.716(2; 977) | 0.000** |
| | BR | 1.04 | 0.82 | | |
| | ACPOL | 0.79 | 0.73 | | |
| | Total | 0.91 | 0.78 | | |
| Anxiety | PT | 0.92 | 0.70 | 17.688(2; 974) | 0.000** |
| | BR | 1.12 | 0.86 | | |
| | ACPOL | 0.77 | 0.69 | | |
| | Total | 0.96 | 0.78 | | |
| Overall symptoms | PT | 0.76 | 0.58 | 11.101(2; 991) | 0.000** |
| | BR | 0.93 | 0.71 | | |
| | ACPOL | 0.71 | 0.63 | | |
| | Total | 0.81 | 0.66 | | |

* <0.05 ; ** <0.001 ; Note: PT – Portugal; BR – Brazil; ACPOL – African Countries with Portuguese as an Official Language

Regarding lifetime suicidal thoughts, 40% of the participants reported a lifetime history of suicidal thoughts and 19.5% reported suicidal thoughts within the last year. In regard to suicide attempts, 10.1% of the participants reported a lifetime suicide attempt and 3.2% of participants reported a suicide attempt in the past year. Furthermore, 19.2% of the participants reported some self-assessed probability of attempting suicide, of which, on a 1–7 scale, 4% reported a self-assessed probability equal to or greater than 4. Table S3 of Supplemental shows all these results in more detail.

Table 4 shows the differences found in suicidal behavior by country of residence. Statistically significant differences ($p < 0.05$) were observed for the SBQ1 ($F(2; 945) = 11.441$; $p < 0.001$), SBQ3 ($F(2; 987) = 7.112$; $p = 0.001$) and SBQ5 variables ($F(2; 981) = 5.525$; $p = 0.004$). Brazilian participants were found to have greater lifetime suicidal thoughts and suicidal thoughts in the last year, while Portuguese participants had greater self-assessed probability of committing suicide.

Tukey's HSD Test for multiple comparisons found that the mean value of SBQ1 was significantly different between Portugal and ACPOL ($p = 0.010$, 95% C.I. = $[-0.270, -0.030]$) and between Brazil and ACPOL ($p = 0.000$, 95% C.I. = $[-0.338, -0.115]$); the mean value of SBQ3 was significantly different between Brazil and ACPOL ($p = 0.001$, 95% C.I. = $[0.090, 0.386]$); and the mean value of SBQ5 was significantly different between Portugal and ACPOL ($p = 0.005$, 95% C.I. = $[-0.415, -0.062]$) and between Brazil and ACPOL ($p = 0.029$, 95% C.I. = $[-0.342, -0.015]$).

Table 4 - Differences in suicidal behavior by country of residence.

| Variable | Country | M | SD | F(df) | p |
|---|----------------|----------|-----------|----------------|----------|
| SBQ 1 - Lifetime suicidal thoughts | PT | 1.48 | 0.60 | 11.441(2; 945) | 0.000** |
| | BR | 1.56 | 0.66 | | |
| | ACPOL | 1.33 | 0.55 | | |
| | Total | 1.46 | 0.61 | | |
| SBQ 2 - Lifetime suicidal attempts | PT | 1.17 | 0.58 | 0.451(2; 989) | 0.637 |
| | BR | 1.20 | 0.62 | | |
| | ACPOL | 1.16 | 0.55 | | |
| | Total | 1.18 | 0.59 | | |
| SBQ 3 - Suicidal thoughts in the last year | PT | 1.33 | 0.86 | 7.112(2; 987) | 0.001 |
| | BR | 1.44 | 0.92 | | |
| | ACPOL | 1.20 | 0.63 | | |
| | Total | 1.33 | 0.83 | | |
| SBQ 14 - Suicidal attempts in the last year | PT | 1.06 | 0.38 | 1.913(2; 986) | 0.148* |
| | BR | 1.03 | 0.23 | | |
| | ACPOL | 1.08 | 0.42 | | |
| | Total | 1.05 | 0.39 | | |
| SBQ 5 - Probability of committing suicide | PT | 1.44 | 0.97 | 5.525(2; 981) | 0.004* |
| | BR | 1.38 | 0.99 | | |
| | ACPOL | 1.20 | 0.71 | | |
| | Total | 1.35 | 0.91 | | |

* <0.05 ; ** <0.001 ; Note: PT – Portugal; BR – Brazil; ACPOL – African Countries with Portuguese as an Official Language

Using all the variables, two matrix correlations were made to assess the association between the 10 traumatic experiences, mental health levels, and suicidal behavior. Table S4 of Supplemental shows the significant correlations found between anxiety, depression and somatization levels and the different traumatic experiences, and Table S5 of Supplemental shows the significant correlations found between the traumatic experiences and SBQ subscales. Trauma 1 (war) and 3 (disasters) didn't show significant correlations with any BSI-18 or SBQ-R subscales. Trauma 6 (psychological abuse) showed significant correlations with all BSI-18 and SBQ-R subscales, except for the self-assessed probability of committing suicide. Only trauma 5 (physical abuse) and 7 (sexual abuse) showed significant correlations with all BSI-18 and SBQ-R subscales.

Finally, two multiple linear regressions were created to assess the predictive value of traumatic experiences in mental health levels and in the self-assessed probability of committing suicide. The age, gender, sexual orientation, and socioeconomic status variables were included in the first model; the country of residence variable was added in the second model, and all 10 traumatic experiences were added in the third model. Table 5 shows that all three models were found to be significant, and indicates that traumatic experiences explain 23.4% of the variance in mental health levels, with greater contribution from war, psychological abuse, and witness to death. Similarly, traumatic experiences explain 11.6% of the variance in the self-assessed probability of

committing suicide, with greater contribution from accident and psychological abuse, as shown in Table 6.

Table 5 - Hierarchical linear regression analysis predicting mental health.

| Variable | Model 1 | | | Model 2 | | | Model 3 | | |
|--------------------------|---------|-------|----------|---------|-------|----------|---------|-------|----------|
| | B | SE B | β | B | SE B | β | B | SE B | β |
| Age | - | 0.002 | -0.155** | - | 0.002 | -0.157** | - | 0.002 | -0.207** |
| Gender | 0.007 | 0.042 | 0.142** | 0.007 | 0.043 | 0.146** | 0.009 | 0.041 | 0.098** |
| Sexual orientation | 0.184 | 0.040 | 0.091** | 0.189 | 0.041 | 0.093** | 0.126 | 0.040 | 0.014* |
| Socioeconomic status | 0.113 | 0.027 | -0.194** | 0.116 | 0.027 | -0.192** | 0.018 | 0.026 | -0.173** |
| Country of residence | - | | | - | 0.028 | 0.016* | -0.141 | 0.027 | 0.010* |
| War | 0.158 | | | 0.156 | | | 0.008 | 0.037 | 0.038* |
| Accident | | | | 0.014 | | | 0.042 | 0.025 | 0.014* |
| Disaster | | | | | | | 0.011 | 0.034 | -0.052* |
| Illness | | | | | | | - | 0.025 | 0.090** |
| Physical abuse | | | | | | | 0.055 | 0.035 | 0.015* |
| Psychological abuse | | | | | | | 0.072 | 0.028 | 0.241** |
| Sexual abuse | | | | | | | 0.013 | 0.033 | 0.060** |
| Assault | | | | | | | 0.161 | 0.024 | 0.001* |
| Death of a family member | | | | | | | 0.057 | 0.020 | 0.014* |
| Witness of death | | | | | | | 0.001 | 0.022 | 0.129** |
| | | | | | | | 0.009 | | |
| | | | | | | | 0.084 | | |
| R^2 | | | 0.116 | | | 0.116 | | | 0.234 |
| F | | | 28.798** | | | 23.064** | | | 17.699** |

Table 6 - Hierarchical linear regression analysis predicting the probability of committing suicide.

| Variable | Model 1 | | | Model 2 | | | Model 3 | | |
|--------------------------|---------|-------|----------|---------|-------|----------|---------|-------|---------|
| | B | SE B | β | B | SE B | β | B | SE B | β |
| Age | - | 0.002 | -0.018* | - | 0.002 | -0.012* | - | 0.002 | -0.048* |
| Gender | 0.001 | 0.062 | 0.041* | 0.001 | 0.063 | 0.023* | 0.003 | 0.064 | -0.011* |
| Sexual orientation | 0.075 | 0.059 | 0.213** | 0.042 | 0.060 | 0.203** | - | 0.061 | 0.144** |
| Socioeconomic status | 0.374 | 0.040 | -0.069** | 0.355 | 0.040 | -0.079** | 0.020 | 0.039 | -0.67* |
| Country of residence | - | | | - | 0.041 | -0.078** | 0.252 | 0.041 | - |
| War | 0.080 | | | 0.091 | | | - | 0.056 | 0.082* |
| Accident | | | | - | | | 0.077 | 0.038 | * |
| Disaster | | | | 0.094 | | | - | 0.052 | 0.011* |
| Illness | | | | | | | 0.099 | 0.038 | 0.074** |
| Physical abuse | | | | | | | 0.018 | 0.053 | -0.048* |
| Psychological abuse | | | | | | | 0.082 | 0.043 | 0.053* |
| Sexual abuse | | | | | | | - | 0.051 | -0.015* |
| Assault | | | | | | | 0.072 | 0.036 | 0.150** |
| Death of a family member | | | | | | | 0.060 | 0.031 | 0.068* |
| Witness of death | | | | | | | - | 0.034 | 0.043* |
| | | | | | | | 0.018 | | -0.004* |
| | | | | | | | 0.142 | | 0.049* |
| | | | | | | | 0.092 | | |
| | | | | | | | 0.045 | | |
| | | | | | | | - | | |
| | | | | | | | 0.004 | | |
| | | | | | | | 0.045 | | |
| R^2 | | | 0.055 | | | 0.060 | | | 0.116 |
| F | | | 12.617** | | | 11.179** | | | 7.500** |

4. Discussion

The purpose of this study was to increase the body of knowledge and scientific literature on trauma, mental health, and suicidal behavior in the Community of Portuguese Language Countries. We described differences in the three variables under study between country of residence, evaluated correlations between exposure to traumatic events and mental health and suicidal behavior, and analyzed the impact that trauma has on both mental health and the self-assessed probability to commit suicide.

Overall, the participants reported a mean of 0.96 for anxious symptomatology, 0.91 for depressive symptomatology, and 0.56 for somatic symptomatology. These values are within the averages for a Portuguese community population [41]. It should be noted, however, that there are no reference values for Brazilian or ACPOL populations.

With regard to suicidal behavior, although the rates of suicidal thoughts and suicide attempts reported in this study are lower than the rates reported by other studies [18,21,33], the self-assessed probability of the participants in the present study committing suicide is higher than that reported by Souza and collaborators [39].

From among the 10 traumatic experiences assessed in this study, assault, psychological abuse, violent death of a family member, and witness to death or tragic accident were the most reported by the participants. This study results are in line with the results of the study of Pham and collaborators [22] and Schmahl and collaborators [16], where emotional/psychological abuse/negligence were traumatic experiences most reported by participants. In the studies of Grasso and collaborators [5] and Wamser-Nanney and collaborators [9], the death of a family member or someone close was one of the traumatic experiences most reported, which corroborates the results of this study. In the revised literature, having been assaulted, abducted, or attacked, and having witnessed a death or a tragic accident, were not reported as common traumatic experiences, but in this study, these are two of the most reported traumatic experiences. This discrepancy can be explained by the differences between the samples, considering that a sample of this study has participants living in countries that often experience conflicts and acts of violence [44].

Although several correlations were found between all traumatic experience under study and the BSI-18 and SBQ-R subscales, only sexual and physical abuse showed significant correlation with all SBQ-R and BSI-18 subscales. The study of Saraçlı and collaborators [24] reports a correlation between anxiety levels and exposure to a traumatic event. On the other hand, the study of Huh and collaborators [28] reports a correlation between

depression levels and exposure to a traumatic event. The study of Van Assche and collaborators [8] reports a specific correlation between emotional neglect or abuse and both anxiety and depression levels. Additionally, Haug and collaborators [12] reported a correlation between emotional neglect or abuse and suicidal thoughts, and between physical abuse and suicide attempt. All these results corroborate the results of the present study, which shows a correlation between psychological maltreatment and both suicidal thought and attempt and all BSI-18 subscales.

The results of this study show that traumatic experiences contribute to the explanation of mental health levels, namely war, psychological abuse, and witness to death. This adds to the results of the study by Pham and collaborators [22], where emotional abuse and negligence were found to contribute depressive symptoms, and the study of Mal-Sarkar and collaborators [30], where childhood trauma significantly predicted increased depression symptoms. Furthermore, the present study presents psychological abuse as a predictor of the probability to commit suicide, which coincides with the results presented by Pham and collaborators [22], where suicidal thoughts were predicted by emotional abuse.

Suicide is still a major global public health worry, and its prevention is critical to guaranteeing that millions do not continue being affected by the loss of loved ones [34]. The intervention and prevention of suicidal behavior is always complex, and the knowledge of specific issues that can be behind suicidal thoughts and attempts allows direct intervention in these factors. In this case, knowing that traumatic experiences have a role in predicting suicidal behavior, and the greater impact of particular experiences, enables work on the trauma caused by these specific experiences, reducing their impact on suicidal thoughts and attempts.

Being a pioneer on the theme of trauma, mental health, and suicidal behavior in the Community of Portuguese-Speaking Countries is a great advantage of this study. As far as we know, there is no investigation that assesses the variables in these populations. Our results clarify and emphasize the impact of traumatic experiences on mental health and its influence on suicidal behavior, contributing to better comprehension of these topics to support future interventions and highlighting the necessity of reducing the risk of exposure to traumatic events.

Our study shows important differences in the variables under study between the countries of residence. As stated earlier, the similarities between these countries should not outweigh the differences. One reason that may explain why war was reported with greater impact by ACPOL participants is the fact that these countries still live in

situations of war and conflict, unlike Portugal and Brazil, where war is no longer present. On the other hand, Brazil is a country with less security and more acts of violence, which may justify the higher incidence of psychological and sexual abuse, as well as assaults and witnessed deaths.

Because it is a country with a lower human development index, Brazil's investments and mental health policies may justify poor access to mental health care, leading to the worst levels of mental health found in our study. Furthermore, the reality of each country, including how its demographic and cultural differences influence perceptions about mental health and the existence of taboos around suicide, may explain a higher self-assessed probability of committing suicide reported by Portuguese participants, where more and more attention has been given to suicide in the past years.

However, the present study also presents some limitations, namely the questionnaire's accessibility, since it was disseminated online and some ACPOL still lack technological resources, leading to a reduced number of participants from these countries. Additionally, the sample—owing to its higher educational level—was not representative of the population as a whole. Furthermore, the participant age at the time of trauma and the number of traumatic events were not considered, and these issues may have had some influence on psychological trauma. Also, the self-assessed probability of committing suicide was measured using only one item from de SBQ-R, making the results less strong. Future studies should address these limitations by carrying out investigations with more participants from ACPOL and analyzing the traumatic experiences in greater detail, taking into consideration the number of traumatic experiences, the age at which the trauma was experienced, and how much time has passed since that experience.

5. Conclusion

This study allowed us to identify the traumatic experiences most commonly experienced by the population of Portuguese Language Countries, and look at how those traumatic experiences overall contributed to the explanation of mental health levels and self-assessed probability to commit suicide, with greater contributions from psychological abuse, war, and witness to death.

These findings reinforce the importance and need to implement intervention strategies aimed at alleviating trauma, as well as campaigns to prevent suicidal behavior and promote the psychological well-being of populations. Considering the high incidence of violence and traumatic experiences in these countries, when implementing mental

health policies and suicide prevention campaigns, the governments and policy makers of Portuguese Language Countries must consider the characteristics of their population and meet their needs. This study contributes to a better understanding of those traumatic experiences, and the impact they have on the population under study.

Given the important and delicate global issue of suicide, we hope that our results will encourage future research to explore in more detail the issues surrounding suicidal behavior in diverse populations in an effort to reduce the rate of suicidal thoughts and attempts.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/bs12040102/s1>, Table S1: Incidence of traumatic experiences; Table S2: Results for mental health symptoms; Table S3: Incidence of suicidal behavior; Table S4: Correlation values among mental health symptoms and traumatic experiences; Table S5: Correlation values among suicidal behavior and traumatic experiences.

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Informed Consent Statement: All subjects gave their informed consent for inclusion before they participated in the study.

Data Availability Statement: Data available upon request.

Conflicts of Interest: The authors declare no conflict of interest.

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Chapter 2: Discussion

The present master's dissertation is a requisite for obtaining a master's degree in Clinical and Health Psychology, aiming to assess the impact of traumatic experiences on mental health levels and suicidal behavior in CPLC citizens, since there is no reference to previous studies with these variables. In the present study, we proceeded to describe mental health levels (anxiety, depression and somatization symptoms) and suicidal behavior; comparisons between country of residence were performed using the variables under study, and the impact of traumatic experiences on both mental health levels, and suicidal behavior was assessed. Hence, the present study presents itself as a pioneer and innovative in its effort to relate the different concepts under analysis.

The results are in line with what was initially expected, demonstrating that traumatic experiences were correlated with mental health symptoms and suicidal behavior, highlighting psychological and physical abuse, and were a strong predictor of worse mental health levels and the probability of committing suicide, as found in a literature review carried out. Thus, these results reinforce current results on the impact of traumatic experiences on both mental health levels, and suicidal behavior.

As this is a pioneer study, it is essential to continue to develop studies in this area, in order to understand if these results can be generalized to the entire Community of Portuguese Language Countries and may or may not be corroborated. Future investigations should try to include in the sample as many CPLC citizens as possible, ideally residing in all member-states of CPLC, and with more representative sociodemographic characteristics, and other sampling methods that are not exclusively online. Furthermore, it will be important to analyze the traumatic experiences with greater detail, for example the number of traumatic experiences and the age at the time of the traumatic experience, for a better understanding of the topic.

Suicide is still a public health problem, and every effort should be made to prevent it. Due to the complexity of intervention and prevention of suicidal behavior, it is important to be aware of specific risk factors that contribute to thoughts and suicide attempts, in order to develop direct and specific target interventions. The present study pointed to life trauma as a risk factor for suicidal behavior, showing the need for direct intervention in the trauma caused by specific experiences, minimizing its impact on suicide ideation and attempt. In addition, the governments of the Community of Portuguese Language Countries should include in their public mental health policies

and prevention campaigns strategies that minimize the impact of traumatic experiences.

Furthermore, it has been recognized that trauma-specific interventions are not enough to support people experiencing trauma. The context in which the trauma is treated contributes to the results of the intervention, being beneficial for those receiving the services and for the staff who provide these services (SAMHSA, 2014).

Thus, the SAMHSA presented the Trauma-Informed Care concept, based on four assumptions and six key principles (SAMHSA, 2014) that allow replacing the question “what’s wrong with you?” to “what happened to you?”, recognizing that a complete picture of the patient’s life situation is needed in order to promote more efficient services (What is Trauma-Informed Care?, n.d.).

In a trauma-informed approach, there are four base assumptions, the four R’s (SAMHSA, 2014):

- Realization – everyone in the organization or system where trauma is treated must have a basic realization about trauma and how it affects not only the individual but also their families, groups, organizations, and communities. The individual’s experience is interpreted in the context of coping strategies created to overcome adversity and overwhelming circumstances and there is an understanding of the role trauma plays in mental disorders and substance abuse, with prevention of these issues always in mind.
- Recognize – everyone in the organization or system must recognize the signs and symptoms of trauma in all people and group affected by it.
- Responds – the organization or system will respond by applying the set of principles that guide a trauma-informed approach in areas of person’s functioning.
- Resists re-traumatization – a trauma-informed approach always tries to resist the re-traumatization of people, avoiding stressful environments that interfere with people’s recovery and trigger painful memories.

In addition to these four assumptions, there are six key principles that guide a trauma-informed approach (SAMHSA, 2014): (1) safety – the physical setting and interpersonal interactions should promote a sense of safety; (2) trustworthiness and transparency – the organization’s operations are conducted with transparency and the decisions take

aim at building and sustaining a relationship of trust with patients and family members; (3) peer support – the support provided by people who have experienced similar trauma promotes the establishment of hope and security and helps build trust and collaboration; (4) collaboration and mutuality – leveling power and demonstrating that trauma will only be overcome through relationships and sharing power and decision-making; (5) empowerment, voice and choice – recognize people's strengths and experiences, promoting their empowerment; (6) cultural, historical and gender issues – the organization must go beyond the stereotypes and preconceptions established in society, enhancing the cultural traditions of each one and recognizing the history of trauma.

That said, Menschner & Maul (2016) present some key-ingredients for trauma-informed clinical practice: i) involving patients in the treatment process, providing them with a voice in the intervention planning and decision-making; ii) tracking trauma, which involves identifying the person's trauma history as early as possible, obtaining as much detailed information as possible; iii) coach the staff in specific treatment approach, developing skills for the various treatment possibilities proposed, such as motivational interviewing, mindfulness training, etc.; iv) involve referral sources and partner organizations, that is, prepare other professionals so that they can respond when trauma is referred to in different services, doctors and beyond.

In short, knowledge about trauma, its impact, and consequences are extremely important so that specialized and efficient interventions can be conducted and, at the same time, that organizations or systems that provide help services have the capacity to help people who experience trauma. Trauma tracking is often referred to as the most important aspect for a trauma-informed approach (SAMHSA, 2014) and considering the numerous benefits of this type of approach, the results of the present study allow to increase the body of knowledge on this subject, providing a stronger foundation for future interventions.

The decision to write this dissertation in an article format allowed the development of research skills in the field of Clinical and Health Psychology, namely with regard to the integration of information from different sources, the collection and processing of statistical data in informatic programs, the critical analysis and interpretation of the results obtained, the comparison of the results obtained with existing data in the literature on the subject, culminating in the written communication of all the work carried out. In fact, and according to the EuroPsy – The European Certificate in Psychology (EFPA, 2015), it is expected that students in this stage of their academic

path develop some basic skills with regard to research in order to be introduced to ethical issues of psychological research, applying basic methods used in the field. It is our conviction that the work presented here allowed the development of all these skills.

The dissemination of the results through international diffusion vehicles, namely congresses and publications in international peer-reviewed journals, allowed sharing with wide audiences and contributed to more globalized understanding of trauma and its implications on mental health and suicidal behavior. With this, the noble mission of the investigation of guiding evidence-based interventions and making explicit the intervention needs in the area of trauma and mental health is fulfilled, promoting the values of beneficence, equality and respect for human ethics, affecting positively the overall quality of life of human beings.

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Supplements

Supplement 1 – Scientific publication 1

Article

The Impact of Life Trauma on Mental Health and Suicidal Behavior: A Study from Portuguese Language Countries

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Abstract: Several studies report the incidence of traumatic experiences in community and clinical samples, and substantial research demonstrates the impact of traumatic events on mental health and suicidal behavior, but this area remains unexplored in the Community of Portuguese Language Countries (CPLC). Thus, this study aims to (1) describe traumatic experiences, mental health levels and suicidal behavior among individuals from Portugal, Brazil and African Countries with Portuguese as an Official Language (ACPOL); (2) assess correlations between traumatic experiences and mental health and suicidal behavior; and (3) assess the impact of exposure to a traumatic event on mental health and suicidal behavior. The measurement instruments included a sociodemographic questionnaire, Brief Trauma Questionnaire, Brief Symptoms Inventory-18, and the Portuguese version of the Suicidal Behaviors Questionnaire-Revised. ACPOL participants reported greater impact of war, Portuguese participants reported greater impact of disasters, and Brazilian participants reported greater impact of psychological and sexual abuse, assault, and death of a family member. Brazilian participants showed the worst levels of mental health and suicidal thoughts. Strong correlations were found between traumatic experiences and mental health levels and suicidal behavior. Traumatic experiences contributed to the explanation of mental health levels and probability of committing suicide.

Keywords: life trauma; traumatic experiences; mental health; suicidal behavior; suicidal thoughts; suicide attempts; Community of Portuguese Language Countries



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1. Introduction

1.1. Traumatic Experiences

The word “trauma” is commonly used to refer to a stressful event; however, each person’s individual adaptability and coping capacity is what defines whether an event is traumatic for them. Because of this, the same event may be traumatic for one person and not for another. When a situation considered traumatic exceeds a person’s coping abilities, it creates psychological trauma [1]. Several studies have reported high rates of different traumatic experiences, and the impact that trauma has on people’s physical and mental health, causing suicidal behavior. However, this issue is still not properly explored in the Community of Portuguese Language Countries.

The World Health Organization (WHO) points out that 40 million children under the age of 15 become victims of violence each year [2]. Recent data report that 3 out of 4 children between the ages of 2 and 4 years suffer from physical and/or psychological violence at home, 1 out of 5 women and 1 out of 13 men are sexually abused before the age of 20 years, and about 120 million girls and young women suffer from some type of forced sexual contact before turning 20 years old [3].

The psychological trauma resulting from a traumatic event depends on the severity of the violence and the person’s experience [2], and can vary from anxiety symptoms and fear

to aggressive symptoms and externalizing anger [4], compromising both the mental and physical health of the traumatized individual [2,3].

Several studies report the incidence of exposure to traumatic events in community samples [5–9], clinical samples [10–16], and specific samples [17–23]. Several authors report rates of traumatic experiences higher than 50% in the general population [5,21], in clinical populations, such as schizophrenic patients [15] or patients with anxiety and depression disorders [16], and in specific populations, such as institutionalized adolescents [22].

In general, the most reported traumatic experiences are emotional neglect [8,13,16,17,22,24], physical neglect [8,17,18,21,24], and the unexpected death of someone close [5,7,9,21].

Several studies have shown the impact of exposure to traumatic events on mental health, namely anxiety and depression disorders, which are the two main diagnostic categories [25]. Li and collaborators [13] found significant positive correlations between exposure to a traumatic event and anxiety levels in schizophrenic patients, and specifically found that emotional neglect and sexual abuse contribute to a higher probability of anxiety symptoms. In the study by Humphreys and collaborators [26], associations were found between child maltreatment and depressive symptoms, with the strongest correlations among those who experienced emotional abuse and neglect. Van Assche and collaborators [8] found that any childhood trauma was positively correlated with anxiety and/or depression levels, and emotional neglect and abuse were positively related with both anxiety and depressive levels. Other studies have demonstrated similar results with regard to the impact of exposure to a traumatic event on anxiety and/or depressive levels [12,22,24,27–31]. Another widely documented correlation is between exposure to traumatic events and suicidal behavior.

1.2. Suicide

Globally, more than 700,000 people die from suicide every year. A 2014 study by O'Hare and collaborators [21] found that 52.1% of participants tried to commit suicide at least once. Furthermore, a study by Hadland and collaborators [32] found that 36.8% of participants reported a history of suicidal ideation, and a study by Capuzzi and collaborators [18] found that 23.7% of participants have a history of suicide attempts.

Suicide is one of the most common causes of death, so it is extremely important to comprehend risk factors of suicide in order to have a complete and directed response for its prevention [33]. Many studies have found that exposure to a traumatic event increases the risk of suicidal behavior [6,10,13,18,21,32,34–37]. Saraçlı and collaborators [24] found that the prevalence of suicidal thoughts among participants who were exposed to some traumatic event (18.3%) was nearly double that of participants without history of trauma during their childhood (9.6%). Mostly, emotional neglect or abuse and physical abuse were found to be linked with higher rates of suicidal behavior [22,38,39].

1.3. CPLC

The Community of Portuguese Language Countries (CPLC), an organization founded on 17 July 1996, comprises nine member states: Portugal, Brazil, Angola, Mozambique, Cape Verde, São Tomé and Príncipe, Guinea Bissau, Equatorial Guinea, and East Timor. CPLC occupies an area of about 10.7 million square kilometers across four different continents, and has a population of nearly 250 million. It has, as general objectives, the promotion and diffusion of the Portuguese language, cooperation on several domains, and political–diplomatic concentration between its members. Some of the principles that rule de CPLC are the sovereign equality of its member states, promotion of development and mutually beneficial cooperation, and respect for national identity and territorial integrity (<https://www.cplp.org>; accessed on 4 February 2022).

The countries in this community share the Portuguese language and some cultural and religious issues, as well as cooperative relations at the economic, medical, and military levels. However, they have their differences in other cultural and religious aspects, as well as in the evolution of each country, namely in the economic sector, security, and daily

violence. Therefore, these countries can be considered as a whole due to their similarities, but special attention must be paid to the differences between each one of them.

Given the lack of research on the impact of exposure to a traumatic event on mental health and suicidal behavior in CPLC, the present study aims to (1) describe traumatic experiences, mental health levels, and suicidal behavior, comparing differences between country of residence; (2) assess correlations between traumatic experiences and mental health and suicidal behavior; (3) and assess the impact of exposure to a traumatic event on mental health and suicidal behavior.

Hence, we intend to explore the issues mentioned above in a population with such specific characteristics, making known the difference in how each situation is experienced and its impact on mental health and suicidal behavior. In addition, it is our goal to reinforce the importance of the subject under study and sensitize readers to the issues mentioned throughout the article.

2. Materials and Methods

2.1. Participants

The study sample consists of 1006 participants, of which 296 (29.4%) live in Portugal, 409 (40.75%) live in Brazil, and 301 (29.9%) live in ACPOL (African Countries with Portuguese as Official Language). The sample is composed of 424 men (41.2%), 576 women (57.3%), and 6 (0.6%) individuals of other genders. The ages range between 18 and 80 years, with a mean age of 41.76 (SD = 14.185). Additional socioeconomic information can be seen in more detail in Table 1.

2.2. Measurement Instruments

Participant sociodemographic information was obtained using a questionnaire in which participants indicated their country of residence, age, sexual orientation, ethnicity/race, professional status, educational attainment, socioeconomic status, place of residence, marital status, housing circumstances, and religion.

Participant psychosymptomatology was evaluated using three subscales (somatization, anxiety, and depression) of the Brief Symptom Inventory 18 (BSI-18). These subscales are evaluated by 18 items with Likert-type response scale ranging from 0 = nothing to 4 = extremely. The depression subscale assesses symptoms of depressive disorders such as dysphoric mood states and anhedonia. The anxiety subscale assesses symptoms that indicate panic states, such as nervousness, tension, and motor agitation. The somatic subscale assesses the distress associated with manifestations of automatically regulated systems. The global severity index, obtained through the sum of the 18 items, provides a measurement of the individuals' general psychological distress levels, where higher scores indicate more intense psychosymptomatology [40]. Cronbach's alpha, which measures internal reliability for the anxiety, depression and somatic subscales, was 0.87, 0.86 and 0.78, respectively. Cronbach's alpha for the total scale was 0.93.

An adapted version of the Brief Trauma Questionnaire (BTQ) was used to assess self-reported trauma. While the original version of the BTQ includes 10 dichotomous items [41], this adapted version measures the intensity of the impact of each traumatic experience using a Likert-type response scale ranging from 0 = 'It didn't happen to me' to 9 = 'It happened and it was very traumatizing'. In the scoring, trauma intensity levels were divided into four categories: 0 = absence (answers 0 on the scale), 1 = mild intensity (answers from 1 to 3 on the scale), 2 = moderate intensity (answers from 4 to 6 on the scale) and 3 = severe intensity (answers from 7 to 9 on the scale). The traumatic experiences reported were: (1) war zone or military area with war tragedies; (2) serious accident; (3) major natural or technological disaster; (4) life-threatening illness; (5) physical maltreatment before age 18; (6) psychological/emotional maltreatment before age 18; (7) sexual maltreatment before age 18; (8) assault, abduction or attack; (9) violent death of a family member or someone close; and (10) witness to death or tragic accident.

Table 1. Sociodemographic characteristics (Mean = 41.76; SD = 14.185).

| Variable | Categories | n | % |
|--------------------------------|-------------------------------------|-----|------|
| Country of residence | Portugal | 296 | 29.4 |
| | Brazil | 409 | 40.7 |
| | ACPOL | 301 | 29.9 |
| Gender | Man | 424 | 42.1 |
| | Woman | 576 | 57.3 |
| | Other | 6 | 0.6 |
| Sexual orientation | Heterosexual | 880 | 87.5 |
| | Bisexual | 66 | 6.5 |
| | Gay/lesbian | 60 | 6 |
| Ethnicity/race | White/European | 502 | 49.9 |
| | African/black | 253 | 25.1 |
| | Mixed race | 251 | 24.9 |
| Professional situation | Employed | 608 | 60.4 |
| | Unemployed | 47 | 4.7 |
| | Student | 143 | 14.2 |
| | Student worker | 82 | 8.1 |
| | Self-employed | 65 | 6.4 |
| | Retired | 52 | 5.2 |
| | Sick leave | 3 | 0.3 |
| Volunteering/community service | 6 | 0.6 | |
| Educational attainment | Up to 12 years of schooling | 100 | 9.9 |
| | University—bachelor's degree | 249 | 24.7 |
| | University—master's degree | 339 | 33.7 |
| | University—doctorate | 318 | 31.6 |
| Socioeconomic status | Low | 35 | 3.5 |
| | Medium-low | 109 | 10.8 |
| | Medium | 584 | 58.0 |
| | Medium-high | 227 | 22.5 |
| | High | 51 | 5.1 |
| Place of residence | Small rural area | 71 | 7.0 |
| | Large rural area | 27 | 2.7 |
| | Small urban area | 345 | 34.3 |
| | Large urban area | 563 | 56.0 |
| Marital status | Single without dating | 221 | 21.9 |
| | Single with dating | 169 | 16.8 |
| | Married to same sex | 14 | 1.4 |
| | Married to different sex | 372 | 37.0 |
| | De facto union to same sex | 12 | 1.2 |
| | De facto union to different sex | 134 | 13.3 |
| | Separated or divorced same sex | 11 | 1.1 |
| | Separated or divorced different sex | 60 | 5.9 |
| Widow of a different sex | 13 | 1.3 | |
| Housing circumstances | Lives alone | 172 | 17.1 |
| | Lives with his/her partner | 146 | 14.5 |
| | Lives with his/her husband/wife | 325 | 32.3 |
| | Lives with his/her children | 73 | 7.2 |
| | Lives with his/her parents | 169 | 16.8 |
| | Live with his/her friends | 47 | 4.7 |
| | Another family constellation | 74 | 7.3 |
| Religion | Yes | 676 | 67.2 |
| | No | 330 | 32.8 |

To assess the frequency and severity of present and past suicidal behavior, the participant also responded to the Suicidal Behaviors Questionnaire-Revised (SBQ-R) [42]. This

study utilized the Portuguese version of this instrument [43], which is composed of four items on a Likert-type response scale that reports lifetime suicidal thoughts (SBQ1), lifetime suicidal attempts (SBQ2), suicidal thoughts in the last year (SBQ3), and suicidal attempts in the last year (SBQ4). The answers to the SBQ1 item ranged from 'Never' to 'I had a plan to commit suicide, and I really wanted to die'; the answers to the SBQ2 item ranged from 'Never' to 'I tried to commit suicide, and I really wanted to die'; the answers to the SBQ3 and SBQ4 items ranged from 'Never' to 'Many times (five or more times)'. The coefficient alpha value for the 4-item SBQ-R scale scores was 0.77. Corrected item total correlations for the 4 items were 0.60, 0.58, 0.54, and 0.55, respectively. A fifth item that asked about the self-assessed probability of committing suicide (SBQ5) and had the same response type, on a scale from 1 = not likely to 7 = very likely, was also included in the measurement of suicidal behavior.

2.3. Procedure

The present study was approved by the researchers' university ethics committee (CE-UBI-Pj-2021-047), and all the objectives were carefully considered before a secure online website was created on Office Forms for research purposes. After approval, the form was disseminated online between May 2021 and mid-October 2021 using both social networks and mailing lists. The participation was voluntary and followed all ethical and deontological principles, and the inclusion criteria were 18 years old or older, connection to any country in the Community of Portuguese Countries, and internet access to answer the questionnaire. Following data collection, all participants' submitted online data were entered into IBM® SPSS® STATISTICS (version 25). All data cleaning and statistical analysis were performed through this statistical program, using several procedures necessary to fulfill the aims of this study. That is, descriptive statistics were conducted to describe the sample. Student t-tests and ANOVA were performed to evaluate differences between groups. Pearson correlation coefficients were conducted to assess the correlation between traumatic experiences, mental health, and suicidal behavior. And finally, a hierarchical linear regression analysis was performed to explore the effects of independent variables (age, gender, sexual orientation, country of residence, and 10 traumatic experiences) on the dependent variable (mental health and probability to commit suicide).

3. Results

The results show that 10.6% of the participants served in a war zone or were in a military area with war tragedies, 27.3% were involved in a serious accident, 13.3% were involved in a major natural or technological disaster, 16.7% had life-threatening illness, 23.8% were physically abused by someone close during childhood or adolescence, 38.9% were psychologically or emotionally abused by someone close during childhood or adolescence, 15.3% were sexually abused by someone close during childhood or adolescence, 43.4% were assaulted, abducted, or attacked, 31% lived through the violent death of a family member or someone close, and 32.3% witnessed death in a tragic accident. Table S1 of Supplemental shows these results in more detail.

When comparing differences in traumatic experiences by country of residence, statistically significant differences ($p < 0.05$) were observed for war [$X^2(6) = 52.418, p < 0.001$], disasters [$X^2(6) = 16.220, p = 0.013$], psychological abuse [$X^2(6) = 24.059, p = 0.001$], sexual abuse [$X^2(6) = 28.952, p < 0.001$], assault [$X^2(6) = 85.256, p < 0.001$], and death of a family member [$X^2(6) = 14.032, p = 0.029$]. As shown in Table 2, Brazilian participants reported the greatest impact from all these traumatic experiences, except war, where ACPOL participants reported the greatest impact, and disaster, where Portuguese participants reported the greatest impact.

Table 2. Traumatic experiences by country of residence.

| Experience | Country | 0 Absence | 1 Mild Intensity | 2 Moderate Intensity | 3 Severe Intensity | χ^2 | <i>p</i> |
|--------------------------------|---------|--------------|------------------------|----------------------------|--------------------------|---------------|----------|
| War | PT | 26.1% | 1.4% | 1.2% | 0.5% | 52.418 (6) | 0.000 ** |
| | BR | 39.5% | 0.6% | 0.6% | 0.2% | | |
| | ACPOL | 23.8% | 3.0% | 1.8% | 1.2% | | |
| Accident | PT | 20.6% | 4.8% | 2.4% | 1.5% | 2.708 (6) | 0.845 |
| | BR | 29.5% | 6.3% | 3% | 2% | | |
| | ACPOL | 22.6% | 3.8% | 1.9% | 1.5% | | |
| Disaster | PT | 23.9% | 3.2% | 1% | 1% | 16.220 (6) | 0.013 |
| | BR | 36.5% | 2.5% | 1.7% | 0.2% | | |
| | ACPOL | 26.3% | 1.8% | 1% | 0.7% | | |
| Illness | PT | 24.6% | 1.2% | 1.5% | 2% | 7.340 (6) | 0.291 |
| | BR | 33.6% | 2.4% | 2.4% | 2.1% | | |
| | ACPOL | 25.1% | 2.2% | 1.8% | 0.9% | | |
| Physical abuse | PT | 22.7% | 3.7% | 1.8% | 1.1% | 6.600 (6) | 0.359 |
| | BR | 31.3% | 4.6% | 2.6% | 2.2% | | |
| | ACPOL | 22.3% | 5% | 1.3% | 1.3% | | |
| Psychological abuse | PT | 18.3% | 5.4% | 2.5% | 2.9% | 24.059 (6) | 0.001 |
| | BR | 22.2% | 9.1% | 4.6% | 5% | | |
| | ACPOL | 20.5% | 6.3% | 2.1% | 1.1% | | |
| Sexual abuse | PT | 26.2% | 1.6% | 0.3% | 1.3% | 28.952 (6) | 0.000 ** |
| | BR | 31.7% | 5% | 1.8% | 2% | | |
| | ACPOL | 26.8% | 1.7% | 1.1% | 0.4% | | |
| Assault | PT | 22% | 4.8% | 1.3% | 1% | 85.356 (6) | 0.000 ** |
| | BR | 17.3% | 13.5% | 7.1% | 3.1% | | |
| | ACPOL | 17.3% | 8.4% | 2.2% | 2% | | |
| Death of a family member | PT | 22.1% | 2.4% | 1.9% | 2.9% | 14.032 (6) | 0.029 * |
| | BR | 28.2% | 4.5% | 2.8% | 5.2% | | |
| | ACPOL | 18.8% | 4.7% | 2.8% | 3.5% | | |
| Witness of death | PT | 21.3% | 4% | 1.8% | 2.3% | 8.824 (6) | 0.184 |
| | BR | 27.9% | 5.6% | 3.7% | 3.6% | | |
| | ACPOL | 18.5% | 5% | 2.6% | 3.6% | | |

* < 0.05; ** < 0.001; Note: PT—Portugal; BR—Brazil; ACPOL—African Countries with Portuguese as an Official Language.

The BSI-18 subscales results show that 43.1% of the participants had anxious symptomatology, 51.3% had depressive symptomatology, and 23.1% had somatic symptomatology. More details about the BSI-18 subscales results are shown in Table S2 of Supplemental. Further analysis examined the differences in mental health levels by county of residence. The results presented in Table 3 show statistically significant differences ($p < 0.05$) in anxiety ($F(2; 974) = 17.688; p < 0.001$), depression ($F(2; 977) = 9.716; p < 0.001$), somatization levels ($F(2; 988) = 4.543; p = 0.011$), and BSI-18 total score ($t(2) = 9.425; p < 0.001$), indicating that participants from Brazil have the worst mental health levels, with higher scores on BSI-18 total scale and all the subscales.

Table 3. Differences in mental health symptoms by country of residence.

| Symptom | Country | M | SD | F(df) | p |
|------------------|---------|------|------|-----------------|----------|
| Somatization | PT | 0.51 | 0.55 | 4.543 (2; 988) | 0.011 * |
| | BR | 0.64 | 0.69 | | |
| | ACPOL | 0.52 | 0.57 | | |
| | Total | 0.56 | 0.62 | | |
| Depression | PT | 0.84 | 0.75 | 9.716 (2; 977) | 0.000 ** |
| | BR | 1.04 | 0.82 | | |
| | ACPOL | 0.79 | 0.73 | | |
| | Total | 0.91 | 0.78 | | |
| Anxiety | PT | 0.92 | 0.70 | 17.688 (2; 974) | 0.000 ** |
| | BR | 1.12 | 0.86 | | |
| | ACPOL | 0.77 | 0.69 | | |
| | Total | 0.96 | 0.78 | | |
| Overall symptoms | PT | 0.76 | 0.58 | 11.101 (2; 991) | 0.000 ** |
| | BR | 0.93 | 0.71 | | |
| | ACPOL | 0.71 | 0.63 | | |
| | Total | 0.81 | 0.66 | | |

* < 0.05; ** < 0.001; Note: PT—Portugal; BR—Brazil; ACPOL—African Countries with Portuguese as an Official Language.

Tukey's HSD Test for multiple comparisons found that the mean value of somatization was significantly different between Portugal and Brazil ($p = 0.026$, 95% C.I. = [−0.236, −0.012]) and between Brazil and ACPOL ($p = 0.036$, 95% C.I. = [0.006, 0.229]); the mean value of depression was significantly different between Portugal and Brazil ($p = 0.003$, 95% C.I. = [−0.336, −0.056]) and between Brazil and ACPOL ($p = 0.000$, 95% C.I. = [0.101, 0.381]); the mean value of anxiety was significantly different between Portugal and Brazil ($p = 0.002$, 95% C.I. = [−0.341, −0.064]) and between Brazil and ACPOL ($p = 0.000$, 95% C.I. = [0.207, 0.485]); and the mean value of BSI-18 total scale was significantly different between Portugal and Brazil ($p = 0.002$, 95% C.I. = [−0.287, −0.052]) and between Brazil and ACPOL ($p = 0.000$, 95% C.I. = [0.102, 0.335]).

Regarding lifetime suicidal thoughts, 40% of the participants reported a lifetime history of suicidal thoughts and 19.5% reported suicidal thoughts within the last year. In regard to suicide attempts, 10.1% of the participants reported a lifetime suicide attempt and 3.2% of participants reported a suicide attempt in the past year. Furthermore, 19.2% of the participants reported some self-assessed probability of attempting suicide, of which, on a 1–7 scale, 4% reported a self-assessed probability equal to or greater than 4. Table S3 of Supplemental shows all these results in more detail.

Table 4 shows the differences found in suicidal behavior by country of residence. Statistically significant differences ($p < 0.05$) were observed for the SBQ1 ($F(2; 945) = 11.441$; $p < 0.001$), SBQ3 ($F(2; 987) = 7.112$; $p = 0.001$) and SBQ5 variables ($F(2; 981) = 5.525$; $p = 0.004$). Brazilian participants were found to have greater lifetime suicidal thoughts and suicidal thoughts in the last year, while Portuguese participants had greater self-assessed probability of committing suicide.

Table 4. Differences in suicidal behavior by country of residence.

| Variable | Country | M | SD | F(df) | p |
|--|---------|------|------|-----------------|----------|
| SBQ 1—Lifetime suicidal thoughts | PT | 1.48 | 0.60 | 11.441 (2; 945) | 0.000 ** |
| | BR | 1.56 | 0.66 | | |
| | ACPOL | 1.33 | 0.55 | | |
| | Total | 1.46 | 0.61 | | |
| SBQ 2—Lifetime suicidal attempts | PT | 1.17 | 0.58 | 0.451 (2; 989) | 0.637 |
| | BR | 1.20 | 0.62 | | |
| | ACPOL | 1.16 | 0.55 | | |
| | Total | 1.18 | 0.59 | | |
| SBQ 3—Suicidal thoughts in the last year | PT | 1.33 | 0.86 | 7.112 (2; 987) | 0.001 |
| | BR | 1.44 | 0.92 | | |
| | ACPOL | 1.20 | 0.63 | | |
| | Total | 1.33 | 0.83 | | |
| SBQ 4—Suicidal attempts in the last year | PT | 1.06 | 0.38 | 1.913 (2; 986) | 0.148 * |
| | BR | 1.03 | 0.23 | | |
| | ACPOL | 1.08 | 0.42 | | |
| | Total | 1.05 | 0.39 | | |
| SBQ 5—Probability of committing suicide | PT | 1.44 | 0.97 | 5.525 (2; 981) | 0.004 * |
| | BR | 1.38 | 0.99 | | |
| | ACPOL | 1.20 | 0.71 | | |
| | Total | 1.35 | 0.91 | | |

* < 0.05; ** < 0.001; Note: PT—Portugal; BR—Brazil; ACPOL—African Countries with Portuguese as an Official Language.

Tukey's HSD Test for multiple comparisons found that the mean value of SBQ1 was significantly different between Portugal and ACPOL ($p = 0.010$, 95% C.I. = $[-0.270, -0.030]$) and between Brazil and ACPOL ($p = 0.000$, 95% C.I. = $[-0.338, -0.115]$); the mean value of SBQ3 was significantly different between Brazil and ACPOL ($p = 0.001$, 95% C.I. = $[0.090, 0.386]$); and the mean value of SBQ5 was significantly different between Portugal and ACPOL ($p = 0.005$, 95% C.I. = $[-0.415, -0.062]$) and between Brazil and ACPOL ($p = 0.029$, 95% C.I. = $[-0.342, -0.015]$).

Using all the variables, two matrix correlations were made to assess the association between the 10 traumatic experiences, mental health levels, and suicidal behavior. Table S4 of Supplemental shows the significant correlations found between anxiety, depression and somatization levels and the different traumatic experiences, and Table S5 of Supplemental shows the significant correlations found between the traumatic experiences and SBQ subscales. Trauma 1 (war) and 3 (disasters) didn't show significant correlations with any BSI-18 or SBQ-R subscales. Trauma 6 (psychological abuse) showed significant correlations with all BSI-18 and SBQ-R subscales, except for the self-assessed probability of committing suicide. Only trauma 5 (physical abuse) and 7 (sexual abuse) showed significant correlations with all BSI-18 and SBQ-R subscales.

Finally, two multiple linear regressions were created to assess the predictive value of traumatic experiences in mental health levels and in the self-assessed probability of committing suicide. The age, gender, sexual orientation, and socioeconomic status variables were included in the first model; the country of residence variable was added in the second model, and all 10 traumatic experiences were added in the third model. Table 5 shows that all three models were found to be significant, and indicates that traumatic experiences explain 23.4% of the variance in mental health levels, with greater contribution from war, psychological abuse, and witness to death. Similarly, traumatic experiences explain 11.6% of the variance in the self-assessed probability of committing suicide, with greater contribution from accident and psychological abuse, as shown in Table 6.

Table 5. Hierarchical linear regression analysis: predicting mental health.

| Variable | Model 1 | | | Model 2 | | | Model 3 | | |
|--------------------------|---------|-------|----------|---------|-------|----------|---------|-------|----------|
| | B | SE B | β | B | SE B | β | B | SE B | β |
| Age | -0.007 | 0.002 | -0.155** | -0.007 | 0.002 | -0.157** | -0.009 | 0.002 | -0.207** |
| Gender | 0.184 | 0.042 | 0.142** | 0.189 | 0.043 | 0.146** | 0.126 | 0.041 | 0.098** |
| Sexual orientation | 0.113 | 0.040 | 0.091** | 0.116 | 0.041 | 0.095** | 0.018 | 0.040 | 0.014* |
| Socioeconomic status | -0.158 | 0.027 | -0.194** | -0.156 | 0.027 | -0.192** | -0.141 | 0.026 | -0.173** |
| Country of residence | | | | 0.014 | 0.028 | 0.016* | 0.008 | 0.027 | 0.010* |
| War | | | | | | | 0.042 | 0.037 | 0.038* |
| Accident | | | | | | | 0.011 | 0.025 | 0.014* |
| Disaster | | | | | | | 0.025 | 0.024 | 0.021* |
| Illness | | | | | | | 0.072 | 0.025 | 0.080** |
| Physical abuse | | | | | | | 0.013 | 0.035 | 0.015* |
| Psychological abuse | | | | | | | 0.161 | 0.028 | 0.241** |
| Sexual abuse | | | | | | | 0.057 | 0.033 | 0.060** |
| Assault | | | | | | | 0.001 | 0.024 | 0.001* |
| Death of a family member | | | | | | | 0.009 | 0.020 | 0.014* |
| Witness of death | | | | | | | 0.084 | 0.022 | 0.129** |
| R ² | | | 0.116 | | | 0.116 | | | 0.234 |
| F | | | 28.798** | | | 23.064** | | | 17.669** |

* $p < 0.05$; ** $p < 0.001$.

Table 6. Hierarchical linear regression analysis predicting the probability of committing suicide.

| Variable | Model 1 | | | Model 2 | | | Model 3 | | |
|--------------------------|---------|-------|-----------|---------|-------|-----------|---------|-------|-----------|
| | B | SE B | β | B | SE B | β | B | SE B | β |
| Age | -0.001 | 0.002 | -0.018 * | -0.001 | 0.002 | -0.012 * | -0.003 | 0.002 | -0.048 * |
| Gender | 0.075 | 0.062 | 0.041 * | 0.042 | 0.063 | 0.023 * | -0.020 | 0.064 | -0.011 * |
| Sexual orientation | 0.374 | 0.059 | 0.213 ** | 0.335 | 0.060 | 0.203 ** | 0.252 | 0.061 | 0.144 ** |
| Socioeconomic status | -0.080 | 0.040 | -0.069 ** | -0.091 | 0.040 | -0.078 ** | -0.077 | 0.039 | -0.059 ** |
| Country of residence | | | | -0.094 | 0.041 | -0.078 ** | -0.099 | 0.041 | -0.082 ** |
| Witness | | | | | | | 0.018 | 0.056 | 0.011 * |
| Accident | | | | | | | 0.082 | 0.038 | 0.074 ** |
| Disaster | | | | | | | -0.072 | 0.052 | -0.048 * |
| Illness | | | | | | | 0.060 | 0.038 | 0.053 * |
| Physical abuse | | | | | | | -0.018 | 0.053 | -0.015 * |
| Psychological abuse | | | | | | | 0.142 | 0.043 | 0.150 ** |
| Sexual abuse | | | | | | | 0.092 | 0.051 | 0.068 * |
| Assault | | | | | | | 0.045 | 0.036 | 0.043 * |
| Death of a family member | | | | | | | -0.004 | 0.031 | -0.004 * |
| Witness of death | | | | | | | 0.045 | 0.034 | 0.049 * |
| R ² | | | 0.055 | | | 0.060 | | | 0.116 |
| F | | | 12.617 ** | | | 11.179 ** | | | 7.500 ** |

* $p < 0.05$; ** $p < 0.001$.

4. Discussion

The purpose of this study was to increase the body of knowledge and scientific literature on trauma, mental health, and suicidal behavior in the Community of Portuguese Language Countries. We described differences in the three variables under study between country of residence, evaluated correlations between exposure to traumatic events and mental health and suicidal behavior, and analyzed the impact that trauma has on both mental health and the self-assessed probability to commit suicide.

Overall, the participants reported a mean of 0.96 for anxious symptomatology, 0.91 for depressive symptomatology, and 0.56 for somatic symptomatology. These values are within the averages for a Portuguese community population [41]. It should be noted, however, that there are no reference values for Brazilian or ACPOL populations.

With regard to suicidal behavior, although the rates of suicidal thoughts and suicide attempts reported in this study are lower than the rates reported by other studies [18,21,33], the self-assessed probability of the participants in the present study committing suicide is higher than that reported by Souza and collaborators [39].

From among the 10 traumatic experiences assessed in this study, assault, psychological abuse, violent death of a family member, and witness to death or tragic accident were the most reported by the participants. This study results are in line with the results of the study of Pham and collaborators [22] and Schmahl and collaborators [16], where emotional/psychological abuse/negligence were traumatic experiences most reported by participants. In the studies of Grasso and collaborators [5] and Wamser-Nanney and collaborators [9], the death of a family member or someone close was one of the traumatic experiences most reported, which corroborates the results of this study. In the revised literature, having been assaulted, abducted, or attacked, and having witnessed a death or a tragic accident, were not reported as common traumatic experiences, but in this study, these are two of the most reported traumatic experiences. This discrepancy can be explained by the differences between the samples, considering that a sample of this study has participants living in countries that often experience conflicts and acts of violence [44].

Although several correlations were found between all traumatic experience under study and the BSI-18 and SBQ-R subscales, only sexual and physical abuse showed significant correlation with all SBQ-R and BSI-18 subscales. The study of Saraçlı and collaborators [24] reports a correlation between anxiety levels and exposure to a traumatic event. On the other hand, the study of Huh and collaborators [28] reports a correlation between depression levels and exposure to a traumatic event. The study of Van Assche and collaborators [8] reports a specific correlation between emotional neglect or abuse and both anxiety and depression levels. Additionally, Haug and collaborators [12] reported a correlation between emotional neglect or abuse and suicidal thoughts, and between physical abuse and suicide attempt. All these results corroborate the results of the present study, which shows a correlation between psychological maltreatment and both suicidal thought and attempt and all BSI-18 subscales.

The results of this study show that traumatic experiences contribute to the explanation of mental health levels, namely war, psychological abuse, and witness to death. This adds to the results of the study by Pham and collaborators [22], where emotional abuse and negligence were found to contribute depressive symptoms, and the study of Mal-Sarkar and collaborators [30], where childhood trauma significantly predicted increased depression symptoms. Furthermore, the present study presents psychological abuse as a predictor of the probability to commit suicide, which coincides with the results presented by Pham and collaborators [22], where suicidal thoughts were predicted by emotional abuse.

Suicide is still a major global public health worry, and its prevention is critical to guaranteeing that millions do not continue being affected by the loss of loved ones [34]. The intervention and prevention of suicidal behavior is always complex, and the knowledge of specific issues that can be behind suicidal thoughts and attempts allows direct intervention in these factors. In this case, knowing that traumatic experiences have a role in predicting suicidal behavior, and the greater impact of particular experiences, enables work on the

trauma caused by these specific experiences, reducing their impact on suicidal thoughts and attempts.

Being a pioneer on the theme of trauma, mental health, and suicidal behavior in the Community of Portuguese-Speaking Countries is a great advantage of this study. As far as we know, there is no investigation that assesses the variables in these populations. Our results clarify and emphasize the impact of traumatic experiences on mental health and its influence on suicidal behavior, contributing to better comprehension of these topics to support future interventions and highlighting the necessity of reducing the risk of exposure to traumatic events.

Our study shows important differences in the variables under study between the countries of residence. As stated earlier, the similarities between these countries should not outweigh the differences. One reason that may explain why war was reported with greater impact by ACPOL participants is the fact that these countries still live in situations of war and conflict, unlike Portugal and Brazil, where war is no longer present. On the other hand, Brazil is a country with less security and more acts of violence, which may justify the higher incidence of psychological and sexual abuse, as well as assaults and witnessed deaths.

Because it is a country with a lower human development index, Brazil's investments and mental health policies may justify poor access to mental health care, leading to the worst levels of mental health found in our study. Furthermore, the reality of each country, including how its demographic and cultural differences influence perceptions about mental health and the existence of taboos around suicide, may explain a higher self-assessed probability of committing suicide reported by Portuguese participants, where more and more attention has been given to suicide in the past years.

However, the present study also presents some limitations, namely the questionnaire's accessibility, since it was disseminated online and some ACPOL still lack technological resources, leading to a reduced number of participants from these countries. Additionally, the sample—owing to its higher educational level—was not representative of the population as a whole. Furthermore, the participant age at the time of trauma and the number of traumatic events were not considered, and these issues may have had some influence on psychological trauma. Also, the self-assessed probability of committing suicide was measured using only one item from de SBQ-R, making the results less strong. Future studies should address these limitations by carrying out investigations with more participants from ACPOL and analyzing the traumatic experiences in greater detail, taking into consideration the number of traumatic experiences, the age at which the trauma was experienced, and how much time has passed since that experience.

5. Conclusions

This study allowed us to identify the traumatic experiences most commonly experienced by the population of Portuguese Language Countries, and look at how those traumatic experiences overall contributed to the explanation of mental health levels and self-assessed probability to commit suicide, with greater contributions from psychological abuse, war, and witness to death.

These findings reinforce the importance and need to implement intervention strategies aimed at alleviating trauma, as well as campaigns to prevent suicidal behavior and promote the psychological well-being of populations. Considering the high incidence of violence and traumatic experiences in these countries, when implementing mental health policies and suicide prevention campaigns, the governments and policy makers of Portuguese Language Countries must consider the characteristics of their population and meet their needs. This study contributes to a better understanding of those traumatic experiences, and the impact they have on the population under study.

Given the important and delicate global issue of suicide, we hope that our results will encourage future research to explore in more detail the issues surrounding suicidal behavior in diverse populations in an effort to reduce the rate of suicidal thoughts and attempts.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/bs12040102/s1>, Table S1: Incidence of traumatic experiences; Table S2: Results for mental health symptoms; Table S3: Incidence of suicidal behavior; Table S4: Correlation values among mental health symptoms and traumatic experiences; Table S5: Correlation values among suicidal behavior and traumatic experiences.

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Life Trauma, Mental Health and Suicidal Behavior

Table S1. Incidence of traumatic experiences.

| Experience | Trauma intensity | n | % |
|--------------------------|------------------|-----|------|
| War | 0 | 890 | 89.4 |
| | 1 | 51 | 5.1 |
| | 2 | 36 | 3.6 |
| | 3 | 19 | 1.9 |
| Accident | 0 | 731 | 72.7 |
| | 1 | 150 | 14.9 |
| | 2 | 75 | 7.4 |
| | 3 | 50 | 5 |
| Disaster | 0 | 872 | 86.7 |
| | 1 | 77 | 7.6 |
| | 2 | 38 | 3.8 |
| | 3 | 19 | 1.9 |
| Illness | 0 | 838 | 83.3 |
| | 1 | 60 | 5.9 |
| | 2 | 58 | 5.8 |
| | 3 | 50 | 5 |
| Physical abuse | 0 | 767 | 76.2 |
| | 1 | 135 | 13.4 |
| | 2 | 58 | 5.8 |
| | 3 | 46 | 4.6 |
| Psychological abuse | 0 | 615 | 61.1 |
| | 1 | 208 | 20.7 |
| | 2 | 93 | 9.2 |
| | 3 | 90 | 9 |
| Sexual abuse | 0 | 852 | 84.7 |
| | 1 | 83 | 8.3 |
| | 2 | 32 | 3.2 |
| | 3 | 39 | 3.8 |
| Assault | 0 | 569 | 56.6 |
| | 1 | 268 | 26.6 |
| | 2 | 107 | 10.6 |
| | 3 | 62 | 6.2 |
| Death of a family member | 0 | 694 | 69 |
| | 1 | 118 | 11.7 |
| | 2 | 76 | 7.6 |
| | 3 | 118 | 11.7 |
| Witness of death | 0 | 681 | 67.7 |
| | 1 | 146 | 14.5 |
| | 2 | 82 | 8.2 |
| | 3 | 97 | 9.6 |

Table S2. Results for mental health symptoms.

| Symptom | Frequency | n | % | Mean | S.D. |
|------------|------------|-----|------|------|-------|
| Anxiety | Never | 572 | 56.9 | 0.96 | 0.779 |
| | Few times | 318 | 31.6 | | |
| | Sometimes | 100 | 9.9 | | |
| | Often | 13 | 1.3 | | |
| | Many times | 3 | 0.3 | | |
| Depression | Never | 590 | 58.7 | 0.91 | 0.781 |
| | Few times | 303 | 30.1 | | |
| | Sometimes | 90 | 8.9 | | |

Life Trauma, Mental Health and Suicidal Behavior

| | | | | | |
|--------------|------------|-----|------|------|-------|
| | Often | 19 | 1.9 | | |
| | Many times | 4 | 0.4 | | |
| Somatization | Never | 774 | 76.9 | 0.56 | 0.622 |
| | Few times | 194 | 19.3 | | |
| | Sometimes | 32 | 3.2 | | |
| | Often | 6 | 0.6 | | |
| | Many times | 0 | 0 | | |

Table S3. Incidence of suicidal behavior.

| Variable | Frequency | n | % |
|---|---|-----|------|
| SBQ 1 - Lifetime suicidal thoughts | Never | 604 | 60 |
| | Only a passing thought | 337 | 33.5 |
| | I had a plan to commit suicide, at least once but I never accomplished anything | 65 | 6.5 |
| | I had a plan to commit suicide and I really wanted to die | 0 | 0 |
| SBQ 2 - Lifetime suicidal attempts | Never | 905 | 89.9 |
| | Just a fleeting attempt | 52 | 5.2 |
| | I tried to commit suicide, but I didn't really want to die | 24 | 2.4 |
| | I tried to commit suicide and I really wanted to die | 25 | 2.5 |
| SBQ 3 - Suicidal thoughts in the last year | Never | 821 | 81.6 |
| | Rarely (once) | 103 | 10.2 |
| | Sometimes (twice) | 35 | 3.5 |
| | Several times (three or four times) | 29 | 2.9 |
| | Often (five or more times) | 18 | 1.8 |
| SBQ 4 - Suicidal attempts in the last year | Never | 973 | 96.8 |
| | Rarely (once) | 17 | 1.7 |
| | Sometimes (twice) | 10 | 1 |
| | Several times (three or four times) | 3 | 0.3 |
| | Often (five or more times) | 2 | 0.2 |
| SBQ 5 - Probability of committing suicide (1 = not likely - 7 = very likely) | 1 | 813 | 80.8 |
| | 2 | 121 | 12 |
| | 3 | 32 | 3.2 |
| | 4 | 17 | 1.7 |
| | 5 | 11 | 1.1 |
| | 6 | 6 | 0.6 |
| | 7 | 6 | 0.6 |

Table S4. Correlation values among mental health symptoms and traumatic experiences.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----|
| 1-ANX | - | | | | | | | | | | | | |
| 2-DEP | 0.726** | - | | | | | | | | | | | |
| 3-SOM | 0.662** | 0.592** | - | | | | | | | | | | |
| 4-TI | -0.040 | -0.001 | 0.010 | - | | | | | | | | | |
| 5-T2 | 0.022 | 0.036 | 0.078* | 0.222** | - | | | | | | | | |
| 6-T3 | 0.051 | 0.022 | 0.054 | 0.177** | 0.217** | - | | | | | | | |
| 7-T4 | 0.101** | 0.059 | 0.121** | 0.069* | 0.135** | 0.134** | - | | | | | | |
| 8-T5 | 0.228** | 0.258** | 0.195** | 0.061 | 0.181** | 0.172** | 0.092** | - | | | | | |
| 9-T6 | 0.331** | 0.309** | 0.233** | -0.013 | 0.117** | 0.169** | 0.098** | 0.638** | - | | | | |
| 10-T7 | 0.225** | 0.189** | 0.209** | -0.017 | 0.091** | 0.091** | 0.068* | 0.469** | 0.686** | - | | | |
| 11-T8 | 0.113** | 0.076* | 0.098** | 0.069* | 0.185** | 0.174** | 0.168** | 0.185** | 0.230** | 0.120** | - | | |
| 12-T9 | 0.070* | 0.067* | 0.043 | 0.167** | 0.131** | 0.117** | 0.068* | 0.172** | 0.121** | 0.104** | 0.181** | - | |
| 13-T10 | 0.102* | 0.102* | 0.110** | 0.234** | 0.216** | 0.180** | 0.173** | 0.131** | 0.088** | 0.090** | 0.232** | 0.312** | - |

*p<0.05;
**p<0.01

Table S5. Correlation values among suicidal behavior and traumatic experiences.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----|----|----|----|
| 1-SBQ1 | - | | | | | | | | | | | | | | |
| 2-SBQ2 | 0.413** | - | | | | | | | | | | | | | |
| 3-SBQ3 | 0.336** | 0.342** | - | | | | | | | | | | | | |
| 4-SBQ4 | 0.170** | 0.448** | 0.386** | - | | | | | | | | | | | |
| 5-SBQ5 | 0.403** | 0.401** | 0.366** | 0.436** | - | | | | | | | | | | |
| 6-T1 | -0.042 | -0.048 | -0.013 | 0.012 | -0.006 | - | | | | | | | | | |
| 7-T2 | 0.012 | 0.034 | 0.007 | 0.071* | 0.095** | 0.222** | - | | | | | | | | |
| 8-T3 | 0.040 | 0.042 | 0.002 | 0.029 | 0.035 | 0.177** | 0.217** | - | | | | | | | |
| 9-T4 | 0.088* | 0.104** | 0.046 | 0.134** | 0.095** | 0.069* | 0.134** | 0.134** | - | | | | | | |
| 10-T5 | 0.162** | 0.191** | 0.183** | 0.118** | 0.135** | 0.061 | 0.181** | 0.179** | 0.092** | - | | | | | |
| 11-T6 | 0.289** | 0.238** | 0.242** | 0.223** | -0.013 | 0.117** | 0.168** | 0.098** | 0.688** | 0.688** | - | | | | |
| 12-T7 | 0.201** | 0.223** | 0.153** | 0.086** | 0.175** | -0.017 | 0.091** | 0.091** | 0.088** | 0.469** | 0.469** | - | | | |

| | | | | | | | | | | | | | |
|-------|---------|-------|--------|--------|---------|---------|---------|---------|---------|---------|---------|--------|---------|
| 13-18 | 0.081* | 0.059 | 0.073* | 0.000 | 0.115** | 0.069* | 0.185** | 0.174** | 0.166** | 0.187** | 0.206** | 0.120* | - |
| 14-19 | -0.006 | 0.060 | 0.031 | 0.088* | 0.031 | 0.167** | 0.151** | 0.117** | 0.088* | 0.175** | 0.121** | 0.104* | - |
| 15-19 | 0.059** | 0.046 | 0.069* | 0.067* | 0.072 | 0.241** | 0.216** | 0.189** | 0.173** | 0.151** | 0.088** | 0.090* | 0.315** |

*p<0.05

**p<0.01

Supplement 2 – Scientific publication 2

**THE IMPACT OF LIFE TRAUMA ON THE MENTAL HEALTH AND SUICIDAL
BEHAVIOR: A STUDY FROM PORTUGUESE LANGUAGE COUNTRIES**

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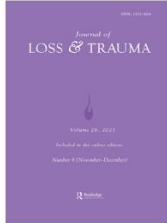
Introduction: The word “trauma” is commonly used to refer to a stressful event, however, each person’s individual adaptability and coping capacity is what defines whether an event is traumatic for them. The psychological trauma resulting from a traumatic event compromise both the mental and physical health of the traumatized individual. Several studies report the incidence of traumatic experiences in community and clinical samples and in specific populations. Suicide is still a major global public health concern and globally more than 700,000 people die from suicide every year. There is substantial research regarding the impact that exposure to a traumatic event has on mental health and suicidal behavior in various study populations, but this area remains unexplored in the Community of Portuguese Language Countries (CPLC). **Objective:** This study aims to 1) describe the traumatic experiences, mental health levels and suicidal behavior, comparing differences between country of residence; 2) assess correlations between traumatic experiences and mental health and suicidal behavior; and 3) assess the impact of exposure to a traumatic event on mental health and suicidal behavior. **Methods:** The participants of this study are 1006 individuals from Portugal, Brazil, and African Countries with Portuguese as an Official Language (ACPOP). The measurement instruments included a sociodemographic questionnaire, Brief Symptoms Inventory-18 (BSI-18), Brief Trauma Questionnaire (BTQ), and the Portuguese version of Suicidal Behaviors Questionnaire-Revised (SBQ-R). **Results:** The results indicate that the rates of anxious, depressive, and somatic symptomatology are within the average range for a community population in Portugal. The ACPPOP participants reported greater impact of war, while Portuguese participants reported greater impact of disasters and Brazilian participants reported greater impact of psychological and sexual abuse, assault, and death of a family member. Brazilian participants showed the worst levels of mental health and greater suicidal thoughts, but Portuguese participants showed greater probability of committing suicide. Although strong correlations were found between traumatic experiences and mental health levels and

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suicidal behavior, only physical and sexual abuse were positively correlated with all BSI-18 and SBQ-R subscales. A linear regression analysis revealed that traumatic experiences explain 23.4% of the variance in mental health levels and 11.6% of the variance in suicide probability. **Conclusion:** Mental health is of paramount importance for quality of life. Therefore, it is important to understand the risk factors for poor mental health outcomes including suicide risk, in this case exposure to traumatic events, for a direct and effective intervention and prevention. Our results elucidate and reinforce the impact of traumatic experiences on mental health and its role as a predictor of suicide attempts, contributing to a better understanding about these themes to assist future preventive or remedial intervention. Governments of Portuguese Language Countries should include strategies aimed at minimizing the impact of traumatic experiences when implementing mental health policies and prevention campaigns.

Keywords: Adults survivors of childhood trauma; Mental health assistance; Suicide; Suicide attempt; Community of Portuguese-Speaking Countries

Supplement 3 – Scientific publication 3



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Trauma, Mental Health, and Suicidal Tendencies: Lessons from Portuguese Language Countries


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Trauma, Mental Health, and Suicidal Tendencies: Lessons from Portuguese Language Countries

Dear Dr. Harvey,

There is a widespread body of literature on trauma, mental health, and suicidal tendencies around the world, but very few studies examine these topics among Portuguese Language Countries, which have a population of nearly 250 million and occupy an area of about 10.7 million square kilometers across four different continents. To fill this gap, we conducted a research study in the Community of Portuguese Language Countries (CPLC) with over 1000 participants. Given the importance of the results obtained, we wanted to share them with you and the readers of the *Journal of Loss and Trauma*, so that we can learn from this study and improve mental health and suicide outcomes.

It is well known that when a traumatic event or situation exceeds a person's coping abilities, it creates psychological trauma, which compromises the person's physical and mental health, including the manifestation of suicidal tendencies (World Health Organization, 2020). In fact, suicide is among the most common causes of death, and it is extremely important to understand its underlying risk factors in order to have a comprehensive and coordinated response for its prevention (World Health Organization, 2021).

Therefore, we developed a study aimed at (1) describing traumatic experiences, mental health levels, and suicidal behavior, comparing differences between countries of residence; (2) assessing correlations between traumatic experiences and mental health and suicidal behavior; and (3) assessing the impact of exposure to a traumatic event on mental health and suicidal behavior.

The participants of our study were 1006 individuals from Portugal, Brazil, and African Countries with Portuguese as an Official Language (ACPOL), namely Angola, Mozambique, Cape Verde, Guinea-Bissau, and São Tomé and Príncipe. The measurement instruments included a sociodemographic questionnaire, the Brief Symptoms Inventory-18 (BSI-18) (to measure anxiety, depression, and somatization symptoms), the Brief Trauma Questionnaire (BTQ), and the Portuguese version of the Suicidal Behaviors Questionnaire-Revised (SBQ-R).

An analysis of the results from BSI-18 subscales showed that 43.1% of participants had some type of anxious symptomatology, 51.3% of participants had some type of depressive symptomatology, and 23.1% of participants had some type of somatic symptomatology. Additionally, participants from Brazil had statistically significantly higher scores on the BSI-18 total scale and all of the subscales, indicating that Brazilian participants had the worst mental health levels.

In regards to suicidal behavior, 19% of participants reported at least one suicidal thought in the last year and about 10% of participants reported a lifetime history of suicide attempt, with about 3% of participants reporting at least one attempt in the last year. Concerningly, about 19% of the sample reported some probability of

committing suicide in the future. Statistically significant differences in suicidal behavior were found by country of residence. Participants from Brazil reported greater lifetime suicidal thoughts and suicidal intention in the last year, while participants from Portugal reported greater probability of committing suicide.

Our study assessed the impact of 10 different traumatic experiences on mental health and suicidal behavior: (1) war zone or military area with war tragedies; (2) serious accident; (3) major natural or technological disaster; (4) life-threatening illness; (5) physical maltreatment before age 18; (6) psychological/emotional maltreatment before age 18; (7) sexual maltreatment before age 18; (8) assault, abduction, or attack; (9) violent death of a family member or someone close; and (10) witnessing death or a tragic accident. Among these types of traumatic experiences, assault, psychological abuse, witnessing death or a tragic accident, and violent death of a family member were the most frequently reported by participants in this study. War was reported most frequently by ACPOL participants, disasters were reported most frequently by Portuguese participants, and psychological and sexual abuse, assault, and death of a family member were reported most frequently by Brazilian participants. Although strong correlations were found between traumatic experiences and both mental health levels and suicidal behavior, only physical and sexual abuse were positively correlated with all BSI-18 and SBQ-R subscales. A linear regression analysis revealed that traumatic experiences explained 23.4% of the variance in mental health symptoms, with the strongest contributions from war, psychological abuse, and witnessing death. Additionally, traumatic experiences explained 11.6% of the variance in suicide probability, with the strongest contributions from accidents and psychological abuse.

The results of our study showed a correlation between psychological maltreatment and all BSI-18 subscales and both suicidal thought and attempt. Thus, our results are consistent with the results of several studies. For example, the study of Van Assche et al. (2020) found correlations between exposure to a traumatic event and both anxiety and depression levels, specifically with emotional abuse/negligence. Haug et al. (2015) also found a correlation between emotional abuse/negligence and suicidal behavior.

The relevant contribution of our study is that it is a pioneer in the topic of trauma, mental health, and suicidal behavior in the Community of Portuguese Language Countries, where unfortunately conflict and violence is frequent and still increasing (OECD/SWAC, 2020). To the best of our knowledge, there are no other investigations that assessed these variables in a population with these characteristics. Our results elucidate and reinforce the impact of traumatic experiences on mental health and its role as a predictor of suicide attempts, contributing to a better understanding about these issues to assist future preventive and remedial interventions, and highlight the importance of reducing the risk of traumatic events in the first place.

The prevention of and intervention on suicidal behavior is certainly complex but an understanding of the specific risk factors of suicidal thoughts and attempts enables a specific and direct intervention on these factors. In this case, knowing that traumatic experiences increase the risk of suicidal behavior enables mental health professionals to intervene and work on the trauma caused by these experiences, reducing their impact on suicide ideation and attempt. Furthermore, governments of Portuguese Language Countries should include strategies aimed at minimizing the impact of traumatic experiences when implementing mental health policies and prevention campaigns.

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