Negative Impacts of the Adaptation Process Linked to Local Cultural Stress Levels in Immigrants and Development of Psychiatric Disorders: A Systematic Review and Meta-Analysis

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Abstract

Background: Current studies underline and enable the international scientific community to reflect on migrant needs to restart, mostly without fluency in the language from the country of destination, without a way of proving his/her knowledges and abilities, with an incomplete family core, without cultural references that until that moment defined him/her as belonging to a specific group, with defined and meaningful habits, full of symbolic representations.

Iams: Conduct an analysis on the implications of migration in refugees’ mental health, and the link between these implications and Post-traumatic Stress Disorder (PTSD).

Method: Indexed journals in MEDLINE and LILACS databases hosted in Biblioteca Virtual em Saúde (BVS), as well as papers hosted in Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) Periodicals Portal. Searches were carried using the following DeCS descriptors: “Stress Disorders, Post-Traumatic”, “Refugees” e “Mental Health”.

Results: The 10 studies included in the present review were carried in Australia, Denmark, Ethiopia, Turkey, Uganda, Israel, South Korea and Papua New Guinea, and were published in 2014 (2), 2015 (6), and 2017 (2). Regarding the subject, 50% of the articles concentrate information regarding PTSD and mental health problems, while the

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Introduction

Migrations have been frequent worldwide since ancient times. However, migration volume has varied depending on the historical period, as well as their motivations [1]. Europe has been experiencing the largest movement of people since World War II. In 2015, more than 1.2 million people required asylum from European Union, mostly from Syria, Afghanistan and Iraq. Many of them have endured war, shock, agitation, and hideous trips [2]. In first semester of 2017, the United Nations High Commissioner for Refugees (UNHCR) recorded a drop in number of refugees and migrants arriving in Europe, mainly due to decline of 94% in number of people using the Turkish sea route to Greece. However, a high probability of death among those seeking to reach this continent is still highlighted [3].

Refuge is ambivalent ‘par excellence’, as it allows survival while triggers an irreversible rupture with the abandoned homeland. These unplanned – and sometimes unwanted – departures are often associated with psychological distress, directly related to the trauma to which refugees were submitted in pre-migratory and migratory times [8, 9]. That is when, taking the complex history of migration into account, concerns for these people’s health began to emerge. It is known that timely access to adequate health care is essential for physical and mental well-being [10].

remaining half deals with psychosocial effects of mass conflict on refugees. Meta-analysis concludes that a considerable percentage of refugees suffer from psychiatric disorder, I-squared (variation in ES attributable to heterogeneity) = 96.46%; Estimate of between-study variance Tau^2= 0.02. Test of ES=0: z= 17.75 p= 0.00.

Conclusion: Exposure to traumatic events such as public executions and other extreme acts of violence, murder of family members, family and friends’ death due to starvation, homelessness, are closely related to PTSD prevalence in refugees. Acculturation and family’s prolonged estrangement are predictors of depressive symptoms in refugees and both exposure to a new culture and adaptation to new laws and norms of welcoming countries act as stressors and aggravators of depressive symptoms.

Keywords
Post-traumatic Stress Disorders; Refugees; Mental health; War disturbs; Violence.
Pre-migration experiences, such as physical and psychological violence in the country of origin, loss of home and loved ones, stress of forced migration and post-migration trials can cause or amplify intense psychological distress in refugees and increase their chances of developing Post-traumatic Stress Disorder (PTSD) [11]. PTSD prevalence rates among refugees are high compared to general population, ranging from 5 to 31%. PTSD strongly interferes with refugees’ ability to act and recognize themselves as individuals: in their families, communities and society as a whole [12].

This study aims at analyzing the implications of migration process and the search for asylum in mental health among refugees’ populations worldwide. Research starts from a guiding question based on the acronym PICo (P, population; I, interest; and Co, context): what is the impact of migration process on mental health and on PTSD genesis in refugee populations?

A migrant is the subject located outside the cultural geographic zone in which he/she was raised. The migrant needs to restart, mostly without fluency in the language from the country of destination, without a way of proving his/her knowledges and abilities, with an incomplete family core, without cultural references that until that moment defined him/her as belonging to a specific group, with defined and meaningful habits, full of symbolic representations. [8] Thus, the hypothesis is that despite advances and agreements aiming to protect this group signed between 1951 and the present day, negative impacts of the adaptation process linked to local cultural differences cause high stress levels in immigrants and provide fertile ground for development of psychiatric disorders.

Methods
A systematic review with meta-analysis was carried through search of original articles in electronic databases. Searches were carried using Biblioteca Virtual em Saúde (BVS), that hosts MEDLINE and LILACS electronic databases at http://bvsalud.org/, as well as using Periodicals Portal of da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), a virtual library created by Brazilian Ministry of Health, with restricted content, available for authorized users only, and that hosts national and international articles at http://www.periodicos.capes.gov.br/. Articles ranging from 2012 and 2017 were selected during August 2017, despite acknowledging the fact that migrations exist since ancient times. However, in view of recent conflicts and uproar over the disclosure of Syrian boy Aylan Kurdi’s photo, who was found dead drowned on a beach in Turkey and became a symbol of Middle East and Africa migratory crisis in 2015, more recent research has been used [13]. Taking into account attention given by media to the case, this study tried to verify if this commotion was accompanied by scientific research interest and, more specifically, if studies sought to investigate PTSD in this population.

The following descriptors were used, in Portuguese, for searching on BVS and CAPES databases:
# 1. “Stress Disorders, Post-Traumatic” (Health Science Descriptors [DeCS]);
# 2. “Refugees” (DeCS);
# 3. “Mental Health” (DeCS).

Search was carried using Boolean operators, as follows: “1 AND 2 AND 3” [BVS] and “1 AND 2” [CAPES].

Manuscripts’ selection occurred primarily through analysis of titles and abstracts. The analysis followed eligibility criteria previously determined by inclusion criteria: (1) publications written in English, Spanish or Portuguese; (2) articles that have in their title at least a combination of the terms described in the search strategy; (3) articles addressing migratory process impacts on mental health of immigrants (refugees); (4) original studies with integral text accessible through Periodicals Portal of CAPES and BVS.
The following articles were excluded: (1) non-original studies, such as letters to Editor, prefaces, brief communications, corrections/errata, comments, editorials, reviews, monographs, dissertations and theses. (2) Articles with a source of study data prior to 2012. Manuscripts repeated in more than one databases were counted only once. To ensure greater reliability of findings, the data collection was done by four researchers individually, and the divergences resolved by a third senior researcher.

Each article was fully read and the information was entered into a spreadsheet included Author and Year, Sample Study and Main Findings (PICo) (Table 1). This present study is a Literature Review; therefore, it did not involve patient recruitment. In this sense, approval of the Research Ethics Commit-

Table 1. Articles included in the study, according to Author, Publication Year, Journal and Main findings.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Journal</th>
<th>Sample</th>
<th>Main findings</th>
</tr>
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<tbody>
<tr>
<td>Slewa-Younan, S.</td>
<td>2017</td>
<td>International Journal of Mental Health Systems</td>
<td>Interviews were conducted with 225 Iraqi and 150 Afghans. Interviews were carried between April, 2013 and October, 2013; each session lasted for up to 90 min.</td>
<td>Compared to Iraqi group, Afghan group was significantly younger, had lower schooling, had longer period of displacement and was in Australia longer. Afghans were relatively more likely to believe that “family problems” and “moving to a new country” caused PTSD in detriment of “destiny” compared to Iraqi.</td>
</tr>
<tr>
<td>Nygaard, M.</td>
<td>2017</td>
<td>BMC Psychiatry</td>
<td>Inclusion criteria were an initial psychiatric evaluation at Competence Center for Transcultural Psychiatry (CTP) from June 14, 2011 to March 29, 2012 and with a diagnosis of discharge from PTSD (n=220).</td>
<td>181 patients were diagnosed with PTSD. Most of the identified symptoms were auditory hallucinations and persecutory delusions. The study highlights difficulties that distinguish psychotic features of flashback and draws attention to psychotic features in patients with PTSD, in order to improve documentation and understanding of disorder.</td>
</tr>
<tr>
<td>Feyera, F.</td>
<td>2015</td>
<td>BMC Psychiatry</td>
<td>847 adult refugees were interviewed in May, 2014 at Melkadida camp in southeastern Ethiopia.</td>
<td>More than one-third (38.3%) of the interviewed met criteria for diagnostic symptoms for depression. Sex, marital status, previous displacement as a refugee, murder of family or friends, homelessness or shelter, and exposure to a large number of cumulative traumatic events were significantly associated with depression among the sample.</td>
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<tr>
<td>Hecker, T.</td>
<td>2015</td>
<td>Journal of Traumatic Stress</td>
<td>329 civilian refugees from Eastern Democratic Republic of Congo were interviewed between March and June, 2013 at Nakivale Refugee Settlement in Western Uganda. 58.3% (n=169) of these were women.</td>
<td>Exposure to war-related trauma correlated positively with exposure to family and community violence. The relation between war-related trauma exposure and reactive aggressive behavior was mediated by PTSD symptoms and repetitive aggression. Findings were congruent with hypotheses’ cycle of violence and indicate a differential relationship between distinct subtypes of aggression and PTSD.</td>
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<tr>
<td>McGregor, L. S.</td>
<td>2015</td>
<td>The Journal of Nervous and Mental Disease</td>
<td>50 young people who identified themselves as refugees and lived in Hobart or Melbourne, Australia, participated in the study. Data were collected between April, 2012 and August, 2013.</td>
<td>Youngsters who were separated from immediate relatives showed significantly more PTSD symptoms than their counterparts, and there was a relationship between evasive coping and PTSD. Evidence for integrity of family unit was found as a correlation of PTSD in young refugees, but no evidence of a relationship between coping style and family separation was found.</td>
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<td>Main findings</td>
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<tr>
<td>Nakash, O.</td>
<td>2015</td>
<td>Cultural Diversity and Ethnic Minority Psychology</td>
<td>118 asylum seekers from Eritrea and Sudan who sought health services in Israel between April, 2012 and June, 2013. Participants included 91 Eritreans and 27 Sudanese. Most of participants were men.</td>
<td>Acculturation leads to appearance of depressive symptoms among asylum seekers. It highlights the paradox of cultural assimilations and risks to mental health among those who wish to be part of the new culture. Exposure to traumatic events was significantly associated with depression. Acculturation patterns were associated with depression rates, even after accounting for sociodemographic variables, detention and exposure to trauma.</td>
</tr>
<tr>
<td>Park, J.</td>
<td>2015</td>
<td>Journal of Psychosomatic Research</td>
<td>213 North Korea refugees who settled in South Korea between 2000 and 2012 participated in the study. Of the participants initially recruited, 14 were unable to complete the questionnaires and their data were excluded. Of the remaining 199 participants, 147 were female.</td>
<td>Most frequent psychological trauma were witnessing public executions, witnessing deaths of family members or friends of starving, starving, witnessing severe physical violence and escaping after desertion. Male participants experienced more trauma compared to women. No significant gender differences were found for results of psychiatric questionnaire. Age was positively correlated with the number of psychological traumas experienced. As individuals experience traumatic events, clearly identifying and expressing emotions become crucial to reducing PTSD symptoms.</td>
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<tr>
<td>Tay, A. K.</td>
<td>2015</td>
<td>Social Science &amp; Medicine</td>
<td>230 adults from West Papua with an average age of 37 participated in the study.</td>
<td>Symptoms that were most frequently cited by study participants were intrusive thoughts, psychological and physiological reactions, flashbacks, distressing dreams. Other reported symptoms include insomnia, post-traumatic amnesia, affective dysregulation, decreased interest and hypervigilance. Men presented higher levels of PTSD symptoms than women. It is suggested that exposure to specific traumatic events is mediated by psychosocial influence of appearance of PTSD symptoms.</td>
</tr>
<tr>
<td>Slewa-Younan, S.</td>
<td>2014</td>
<td>BMC Psychiatry</td>
<td>225 participants were interviewed during a 10-month period. All participants were resettled Iraqi refugees who attend the Adult Migrant English Program (AMEP) at several different colleges in Australia.</td>
<td>Approximately one third (31.1%) of participants reached the threshold for clinically significant PTSD symptomatology. 84.9% of respondents indicated that seeing a psychiatrist would be helpful, followed by reading the Quran, or the Bible, selected by 79.2% of respondents. There was some variation in recognition of problem and utility of the treatment, mainly influenced by resettlement period in Australia.</td>
</tr>
<tr>
<td>Alpak, G.</td>
<td>2014</td>
<td>Int J Psychiatry Clin Pract</td>
<td>352 people took part in the study between November, 1st and November, 20, 2013 in Turkey, where a group of Syrian refugees live. The only inclusion and exclusion criteria for the study was volunteering.</td>
<td>The frequency of PTSD was 33.5%; chronic type was 89%, whereas late onset type occurred in 1.7% and spontaneous remission in 11.6%. A significant relationship was detected between number of traumatic events and diagnosis of PTSD. The probability of having PTSD in sample was 71% when it had following characteristics: female gender; diagnosis of previous psychiatric disorder; have a family history of psychiatric disorder and have been experiencing 2 or more traumas.</td>
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Source: Own authorship.
Results

Initially, research strategies using descriptors only resulted in 1,442 studies at BVS and 473 at Periodicals Portal CAPES. When filters were applied, the search was narrowed to 361 studies. After reviewing titles and abstracts, 95 articles were retrieved, 10 of which were included for full text reading (Figure 1) in relation to the following aspects: main author, year of publication, periodical and main findings. Among the articles included in the review, none were in Portuguese and none have national origin; studies were carried in Australia [14, 15, 16], Denmark [17], Ethiopia [18], Turkey [19], Uganda [20],

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**Figure 1:** Flow chart of eligibility process of articles from BVS (MEDLINE/LILACS) and CAPES databases.

- **Identification**
  - BVS (MEDLINE/LILACS)
    - Index: Title, abstract and subject.
    - Period: January, 2012 to August, 2017
    - 1,442 results
  - CAPES
    - Index: Title, abstract and subject.
    - Period: January, 2012 to August, 2017
    - 473 results

- **Eligibility Criteria**
  - 1. Publications written in English, Spanish or Portuguese;
  - 2. Articles that have in their title at least a combination of the terms described in the search strategy;
  - 3. Articles addressing migratory process impacts on mental health of immigrants (refugees);
  - 4. Original studies with integral text accessible through periodicals portal of CAPES and BVS

- **First screening**
  - Studies selected after applying filters for title and abstract analysis.
    - (BVS: N = 226; Periodicals Portal of CAPES: N =135)
    - Total: n = 361

- **Excluded articles for not reaching inclusion criteria (n = 266)**

- **Eligibility**
  - Studies selected after title and abstract analysis.
    - (BVS: N = 31; Periodicals Portal of CAPES: 36)
    - Total: n = 95 studies

- **Excluded studies, according exclusion criteria (n = 85)**
  - 1. Studies published prior to 2012 (n = 46);
  - 2. Repeated studies (n=11);
  - 3. Non-original studies (n=28).

- **Inclusion**
  - Studies included in the critical analysis (n = 10)

*Source: Adapted from The PRISMA Group (2009), Flow Diagram.*
Alpak et al., [19] examined prevalence of PTSD and explored relationship with various socioeconomic variables among Syrian refugees who sought asylum in Turkey and was detected that majority of participants were female and mean age was 37 years. In contrast, Nakash et al., [21] found that majority of refugees were Eritrean men who had up to 12 years of formal education and were unemployed.

Tay et al., [23] interviewed 230 adults, 107 participants from West Papua, Papua New Guinea, half of participants were in two settlements, 51% were married and remnant were single, separated or widowed. Half of participants were unemployed. Employees worked in a governmental division, international organizations or in subsistence agriculture or fishing. Slewa-Younan et al., [15] conducted interviews with a total of 225 Iraqis and 150 Afghans. The Afghan group was significantly younger, experienced a longer time displacement and was in Australia for a longer time than the Iraqi group. Unlike the studies cited above, there were no differences in gender, arrival status or marital status between the two groups.

These divergences may be related to group origin or destination place, as well as to socio-cultural issues of different groups interviewed.

Prevalence
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Discussion
Refugees with PTSD symptoms or other mental health problems may be less likely to engage in treatment approaches based on individual as a change agent, including cognitive behavioral therapy, if they strongly believe they were destined to have these problems. Thus, metaphysical beliefs as etiology for mental health problems, which may reflect the influence of specific religious or spiritual teachings, might be considered while designing mental health promotion and early intervention programs for these communities [16].

Several selected articles dealt with PTSD in refugees; therefore, in order to make reading more comprehensible, Discussion was organized in topics regarding different subjects.

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These divergences may be related to group origin or destination place, as well as to socio-cultural issues of different groups interviewed.

Related Traumas
Slewa-Younan et al., [15] have drawn attention to the growing consensus that factors such as expo-
sure to intense or prolonged trauma, particularly at a younger age, as well as female gender, are likely to be risk factors for PTSD development. Hecker et al. [20] study was congruent with the notion that, in the context of war and conflict, a cycle of violence persists, relating exposure to organized, community and family violence, to aggressive behavior. Their findings indicate the differential relationship between distinct subtypes of aggression and severity of PTSD symptoms.

McGregor et al., [14] show a significant moderate negative correlation between family, separations and PTSD symptomatology; all other demographic variables were not significant. In addition, findings from the Alpak et al., [19] suggest that PTSD among Syrian refugees in Turkey can be a major mental health problem in refugee camps, especially among refugees who have been exposed to 2 or more traumatic events and had a personal or family history of psychiatric disorder.

Park et al., [22] observed that the 5 most frequently mentioned types of trauma were: witnessing public executions (69.8%), witnessing a family member or friend’s death for starvation (56.8%), starving (48.2%), witnessing strong physical violence (46.2%), and remotely escaping after desertion (32.2%). Accordingly, 31.3% of those interviewed by Feyera et al., [18] have already experienced 8 or more trauma events and more than half (57.4%) of interviewees already experienced a combat situation. About 45.1% witnessed murder of family members or friends and 53% of those interviewed reported witnessing the murder of family members. The majority of refugees interviewed by Tay et al., [23] also reported exposure to at least one traumatic event, including being forced to live in precarious conditions during conflict and having the house intentionally destroyed during the conflict, in addition to the same events cited by Feyera et al., [18]

Main symptoms

Tay et al., [23] state that the most widely reported symptoms were intrusive thoughts (40.8%), psychological (31.7%) and physiological reactions (24.7%), flashbacks (24.7%), distressing dreams (23.4%); internal avoidance (avoiding thoughts) (35.2%) and external evasion (34.3%) (avoiding places, people and activities). Other reported symptoms include insomnia (7.8%), post-traumatic amnesia (7.8%), affective deregulation (8.3%), decreased interest (9.1%) and hypervigilance (10.8%). Moreover, Nakash et al., [21] highlight, from interviewing 225 participants, that 39.1% had severe psychological distress, 18.7% presented moderate suffering and 37.8% had low to mild discomfort.

Nygaard et al., [17] show variable psychological symptoms from their sample, differently from other studies included in the present review. Visual hallucinations were described in 22 of 74 of the patients’ psychiatric records. These hallucinations involved family members, for example. Feyera et al., [18] found that women were twice as likely as men to exhibit depression symptoms and the likelihood of having depression symptoms, especially divorced ones. In Nakash et al., [21] study, there was a significant positive correlation between anxiety, depression and total exposure to traumatic events.

Conclusion

Refugee status is classically associated with war situation, conflict, family loss and human rights’ compromise. Seeking refuge itself can sometimes represent being subjected to a suffering and trauma environment, partly due rupture from several cultural aspects that are significant for building a sense of belonging sense, as well as for the refugee’s identity.

In this conflict perspective, PTSD is a major mental health problem in populations such as refugees. Being exposed to intense and prolonged traumas are probable risk factors for developing PTSD. Ex-
Exposure to organized, community and family violence is related to aggressive behaviors and, thus, to the severity with which symptoms of post-traumatic stress are manifested.

In addition, there are gender differences in PTSD prevalence; however, these differences vary depending on the studied sample, which represent not only groups originating from different locations, but also different destinations and socio-cultural contexts. Younger groups of refugees more frequently manifested PTSD symptoms.

The most frequent traumas are witnessing public executions, witnessing family or friends’ deaths, starving, witnessing severe physical violence, and remotely escaping after desertion. Clinical significance of these traumas is suggested when they are related to symptoms in refugees, such as intrusive thoughts, visual hallucinations, flashbacks, distressing dreams, internal evasion, external evasion, and other psychological and physiological reactions. In addition to PTSD, depressive symptoms were commonly associated with trauma and the acculturation process in refugees, so women, especially divorced women, who are more likely to show symptoms when compared to men.

Although the clinical importance of migration-related traumas is well documented in current scientific literature, the way by which this relates to PTSD, as well as other impacts in health should be better explored. In addition, physiological mechanisms that explain PTSD genesis, especially in refugee populations, may differ from conventional populations and have not yet been clarified by the available results.

Studies suggest the importance of improving existing health care models in countries receiving refugees, in order to include aspects hitherto studied, considering difficulties for refugees to engage certain therapeutic approaches and clinical aspects that are relevant to mental health and to process of health-disease in the care for this group.

**Highlights**

Exposure to traumatic events such as public executions and other extreme acts of violence, murder of family members, family and friends’ death due to starvation, homelessness, are closely related to PTSD prevalence in refugees.

Acculturation and family’s prolonged estrangement are predictors of depressive symptoms in refugees and both exposure to a new culture and adaptation to new laws and norms of welcoming countries act as stressors and aggravators of depressive symptoms.

**Conflict of interest**

The authors declare that they have no competing interests.

**References**


