Introduction

In modern world, some life threatened activities such as terror, war or community conflict commonly occur, and mostly the victims of those activities are children. As a vulnerable population, children highly risk to suffer from trauma and violence (1). Due to the armed conflict, prosecution, economic and natural disaster, thousands children migrate and cross international borderline. The number of children who live behind their home country increases significantly during few decades (2). Unintentionally, some of the children who migrate to another country depart without family and proxy. That situation brings those children in vulnerable, besides the situation is being a big issue for professionals to offer and provide the best support to them during transition period to have a better quality of life. In 2007, The United Nations of Higher Commissioner for Refugee (UNHCR) reported that there are around 14 million children under 18 years old, and 3 million children under 5 years old. The number of children refugees all over the world was counted by UNHCR, which was nearly 18 million as a result of conflict by 2009 (2), and it was still increased to 23.1 million in 2015 (3). That data shows us if children refugees or refugee minors was being a global issue (4), and almost of the refugees are children without family or proxy which also know as unaccompanied refugee minors (URMs) (5).

Derluyn et al. (2008) conducted a study in Belgium, and surprisingly they found that around 58% out of 1249 migrant children were...
UMRs (6). The UNHCR determined the UMRs is a separation of young people under 18 years old from parents and relatives and are not caring for by an adult who is responsible for taking care and looking for (6). UMRs seem to be likely more vulnerable and to have been victim to four or more traumatic events than children with families. Furthermore, Cameron et al. (2011) investigated that UMRs who arrived in Australia seem more likely to have risk and suffer from mental illnesses (4). Moreover, those children have high risk to be victim at community as well (4). Huemer et al. (2008) found that around 36% of the UMRs have experienced sexual abuse and most of them are girls (6).

Methods
This review study makes use of secondary data by searching and selecting appropriate sources to determine therapy for posttraumatic stress disorder (PTSD) among unaccompanied refugee minors. The research draws on strategies to find the relevant articles related to cyber-therapy and PTSD among UMRs. The search strategies include “interventions”, “therapy”, “mental health interventions”, “Unaccompanied children asylum seeker”, “Unaccompanied refugee minors”. Four databases including DOAJ, Google scholar, Proquest, and Science Direct were used in this study.

PTSD on Unaccompanied Refugee Minors
One of the most incidental psychological disturbances among persons exposed to traumatic events is PTSD. The prevalence of PTSD among children and adolescence is very high, particularly among who are exposed to a variety of battle or wars (7). The investigation on the effect of these conflict events on children as young people has been conducted for many years. Some detrimental effects of violence on children have been identified such as poor emotional, behavioral, academic outcomes, and post-traumatic stress disorders (1); all of these symptoms are known as internalizing symptoms (8). Furthermore, a study conducted among Haitian children and youth refugees found that most of them have externalizing behaviors such as substance abuse, high-risk sexual behavior, and delinquency. However, the symptoms may commonly be found among refugee minors who are exposed to battle event such as somatic complaints, sleep problems, conduct disorder, social withdrawal, attention problems, generalized fear, over dependency, restlessness and irritability, and difficulties in peer relationships (9). In addition, some of them also could lose of previously acquired skills, such as bladder control, with secondary enuresis and separation anxiety. All of these trauma symptoms are classified into affective, behavioral, cognitive, and physical related domains (10). As minors refugee both children and youth have fundamental needs that must be fulfilled to support growth and development process. These basic needs related to biological/physiological, psychological, social, cultural, and spiritual such food, education housing, health care include mental health services and support program, and basic security (8). Even though, some studies on mental health problems among refugee had been done, studies on children refugees who have psychological issues especially in PTSD are still lacking (11).

PTSD Assessments
Identifying risk and protective factors that affect mental health outcome in young people should be given priority during conducting assessment. By this, professional workers will easily classify those minor refugees who really need interventions, and modify factors, which contribute to adverse or alleviate symptoms (2). Assessment is an essential step before planning and intervening strategies to manage PTSD. There are some valid and reliable instruments to use during assessing PTSD among UMRs. These instruments are Child Behavior Checklist (CBCL) (5), Child Posttraumatic Stress Reaction Index (CPTS-
The Hopkins Symptom Checklist 37 for Adolescents Stressful Life Event (HSCL-37A SLE), Reactions of Adolescents to Traumatic Stress (RATS) (7). Interestingly, based on the latest modification, the HSCL-37A SLE instrument is more likely appropriate because that tool has sensitive measurement in terms of cultural diversity. A study conducted by Bean et al. (2007), found that the instrument shows to be strongly reliable and remarkably in valid (12). It was remarkable considering the diversity of the population in which participants in that study were UMRs who came from 57 different countries. Further, another study identified some risks and protective factors among UMRs that can help professionals to better understand and arise those refugees’ issue. The risk factors are exposure to war-related traumatic events, unknown fate of missing family members, pre-existing vulnerability like previous chronic physical illness, poor parental mental health, low levels of social support, and post-migration stress such as process of asylum seeking itself (9). On the other hand, the protective factors were identified such as good temperament, positive self-esteem, belief system, and high levels of social support.

**Barriers of PTSD Assessment**

Facing barriers during conducting assessment commonly occurs especially when someone who has multi factorial background is assessed. Identifying barriers before conducting assessment will help professionals especially when doing assessment in specific groups such as UMRs. The huge barrier during assessment in children is a culture, and the assessment will be complicated when faced children who have different society, ethnic and culture background. A study conducted by Rousseau et al. (2013) found that the anxiety expression in UMRs sometimes overlap with other mental health problems (13). The expression of that symptom may predominantly be affected by children’s culture. The culture might affect the way children express their feelings when they have overwhelming, or helplessness most of them tend not to cry for helps, this condition will bring the professionals neglect those children and their issues (13). Further, the culture and religion could affect the mental health symptoms. Evidence shows that among Cambodian children refugees feel less suffering and more engagement in school activities due to manipulation effect of both culture and religion (14). Culture is a major barrier in treating children refugees with PTSD. Otherwise all professionals who work with children especially in UMRs is required multicultural competencies. The competencies will help the professionals to prepare and integrate all factors related to the patients’ culture such as culture-specific awareness, language, belief and value (15). Provision of mental health service for example trauma and crisis intervention needs cultural sensitivity among professional (10). Further, as a part of culture, languages are the most barriers among asylum seekers to access health care facilities when their mother tongue is totally differ with official language in destinations countries (8). Culture, religion, and language are to could affect the way children refugees cope and deal with stress (4). Stigmatization of depression and fear as mental health issue or crazy is still found in some of ethnic groups especially in Asian pacific, Arab, and Middle East regions (16). Further, Cameron et al (2011) pointed out that culture identity, situational concerns, and subjective meaning related to life experiences should take into consideration (4). Some studies were conducted to identify the predicting factors of PTSD among UMRs, and found that both genders especially being females, and age were predominantly influencing trauma (5). In contrast, Reed et al. (2012) found that there is no relationship amongst age and mental health issue especially anxiety in those UMRs (2). From that study, mostly the older children would take responsibilities on UMRs. This situation puts the older children at higher risk of violence. Similar finding in a survey that was conducted in the UK, showed that increasing...
the age among UMRs was followed by the increasing in symptoms of PTSD. In contrast, among accompanied refugee minors had lesser symptoms with increasing their age (17). Other barriers identified among UMRs are language barrier, limited financial resources; degree of acculturation, lack of trust of mainstreams services, accessibility issues, perception of refugee children, and caregivers’ stress (16).

Management of PTSD
Management of PTSD and other mental health issues in adult has already offered in advanced, while in children the strategy to tackle PTSD is still left behind (13). Social support was an important factor to alleviate depression. Further, primary care facilities, schools, and community organizations also have important roles in detection and providing support among UMRs, as they will build close relationship in living environment (2). There are some interventions, which have potential to cope and deal with PTSD symptoms among UMRs such as conventional and cyber-therapy interventions.

Conventional interventions
Preventing psychological distress and promoting optimal emotional, social and cognitive development should be considered as the main aim of the intervention especially for UMRs (18). The professionals who work among UMRs need to understand and carefully select a useful and suitable intervention. Some potential coping strategies for managing PTSD among UMRs are social support and seeing oneself as part of a community, suppressing and distracting oneself from traumatic memories, making meaning through story-telling and connecting experiences to beliefs, and developing hope from hopelessness (4). Further, a study found that these interventions are mentioned above show the effectiveness on relieving psychological symptoms among Sudanese UMRs who resettled in the USA. All these interventions and coping strategies which are classified into 3 categories are individual-based (ego resilience, children-centered play therapy, and trauma-focused Cognitive behavior therapy), group-based (Cognitive Behavioral Intervention for Trauma in Schools, creative art techniques such as collage, collective story-making, socio drama, and theatrical exercises, teaching recovery techniques, and group counseling), and community-based interventions (interpersonal group therapy (IPT-G), and creative play).

Cyber-therapy
Another intervention, which is recently being familiar, is using information and communication technologies such as the Internet, e-mail, and video conferencing in health care. These technologies are used to do the diagnosis, therapy, education and training, to improve health care process, and later that is known as cyber therapy (19). Another term also commonly used to describe treatment related to those technologies is “Tele Mental Health (TMH), which refers to mental healthcare provision including both assessment and treatment at distance (20, 21). During the last two decades, the cyber therapy has already been implemented to treat those persons who have psychological disorders, psychological assessment and rehabilitation (22). In addition, some clinicians have actively investigated the uses of information technology to manage some psychological treatment-related issues such as stress management and social skills training. Technologies have been involved in the field of mental health care (23). Further, Pennant et al. (2015) point out that using the internet and computer technologies increase self-help strategies and relieve some of the burden on health care services especially cost-effectiveness related issue (24). Another scholar, Carvalho (2015) notices that cybertherapy can be used by patients in various levels of information technology skills, and social constructed inaccessibility due to various factors such as political, economic and cultural factors (25). There are many varieties of cyber therapy in clinical
application that show the significant effective improvement of PTSD symptoms. These interventions are computerised cognitive behaviour therapy (24), instant messaging, telephone-administered behaviour treatment, video telehealth, virtual reality. Due to the lack of evidence among computerised cognitive behaviour therapy, instant messaging, telephone-administered behaviour treatment, and video telehealth, studies which focus on identifying application of virtual reality on persons with PTSD are also needed. Virtual reality (VR) term was introduced in 1986 by Lamier (26). At that time, the VR known as a collection of technological devices which consist of a visualisation capability computer, a head-mounted display, and data gloves equipped with position trackers. As new technologies, The VR had already been developed since past decade become augmented reality (AR), mixed reality (MR), and extended reality (ER) (27). Rizzo & Shilling (2017) explained that, in recent time, virtual reality is not only using for PTSD treatment but also for assessment and prevention (28). Further, as Riva (2005) mentioned that the common cybertherapy applied in psychotherapy was VR, and it was widely used in phobias treatment as well (26). In addition, the VR also has potential to improve clinical process efficacy and perform as a tool to break down barriers of care. The VR interventions was used to build resilience for people who were at risk of exposure to traumatic experiences (29). There are some studies showing the effectiveness of the VR in PTSD population. A study conducted by Rothbaum et al. (2005) showed that the Vietnam combat veterans who had attended the VR intervention reported that PTSD symptoms was decreased ranging from 15 % to nearly 70% (26). Another study among September-Eleven survivors also showed the effectiveness of VR to reduce PTSD symptoms where 9 out 10 of participants reported their improvement, while the control group condition stayed the same or worsened (27). Additionally, a review study concluded that VR in VR-exposure based therapy (VR-EBT) also showed significant improvement on PTSD symptoms among military personels, terrorist attacks survivors, victims of criminal violence, and victims of different traumatic events (30). Furthermore, 19 studies were included in a systematic review and meta-analysis, which were conducted in 2016, and suggested that telemental health interventions or cybertherapy can reduce PTSD symptoms (31). However, there is no UMRs as study participant in that review. All evidence above inform us that PTSD management among UMRs using cybertherapy or telemental health is still covert and unidentified. Future study to focus on the effectiveness telemental health or cybertherapy to manage PTSD among UMRs is highly needed.

Conclusion
Working with unaccompanied refugee minors or children, especially those with PTSD, is a challenging task because each child has different needs in terms of growth and developments process. Conventional management (individual-based, group-based, and community-based interventions) of PTSD among UMRs has already shown the significant improvement on PTSD symptoms, while cyber-therapy or Tele-mental health interventions is still in need of more evidence. Besides every child has difference values and culture, supporting and treating children refugees need adequate multicultural competencies.

Ethical issues
Not applicable.

Authors’ contribution
All authors equally contributed to the writing and revision of this paper.

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**References**


