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Vulnerabilities of Syrian refugee children in Turkey and actions taken for prevention and management in terms of health and wellbeing

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\textbf{ABSTRACT}

\textbf{Background:} The Syrian crisis, which started in March 2011, has resulted in the displacement of 6.3 million refugees predominantly to neighboring countries in addition to the internal displacement of 6.2 million people. Turkey is the country hosting the largest number of refugees in the world with 3.6 million Syrian refugees 46\% of which are under 18 years old.

\textbf{Objective:} The purpose of this article is to conduct a narrative review and analyze the vulnerabilities of refugee children in Turkey from the lens of the Sustainable Development Goals (SDG), more specifically SDG Goal 3: Good Health and Wellbeing, with a specific focus on Syrian refugee children. Moreover, this article explores the actions taken to prevent and mitigate issues that arise from these vulnerabilities.

\textbf{Method:} This narrative review article collected data from various primary and secondary sources on the Turkish refugee framework including national and international legislation, governmental and non-governmental data and reports, and scientific papers.

\textbf{Results:} Syrian refugee children in Turkey are facing a variety of risks in terms of their health and wellbeing including communicable and non-communicable diseases, post-traumatic stress disorder, depression, family violence, child labor, and child marriage. The measures taken for prevention and response by governmental and non-governmental entities are multilateral and aim to address issues from multiple perspectives including medical, psychosocial, child protection, and legal.

\textbf{Conclusions:} The interventions and restructuring of the health system in Turkey contribute to the SDG number 3 for refugee children. The existence of a legal system which enables refugee access to health, protection, and other social services is key to achieve this goal. However, the existing system could be improved especially through solidifying the legal basis and centralizing the implementation for child and refugee protection. The engagement of all stakeholders to improve the health and wellbeing of refugee children remains vital.

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1. Introduction

On the 30th anniversary of the signature of the Convention on the Rights of the Child (CRC), much has been achieved in terms of child rights whereas much is yet to be done, especially for refugee children. There are 25.4 million refugees worldwide, over half of whom are below the age of 18 (UNHCR, 2018). Protection, education, health, and access to social services remain crucial issues for displaced children in many parts of the world. Within the scope of displacement, the basic rights of children highlighted in the CRC such as right to life and development (OHCHR, 1989, Article 6), protection from physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse (OHCHR, 1989, Article 19) are often endangered while on the move, in a transit location, and in the target country.

Since the signing of the CRC by 196 countries in 1989, other international efforts which support a more equitable global society with a specific focus on children have emerged. The most recent and prominent one is the Sustainable Development Goals (SDGs), which were launched in 2016. The SDGs are a collection of 17 global goals set as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity (UNDP, 2019). Although the SDGs are characteristically more encompassing as a development plan rather than a child focused initiative, they specifically target issues which are primarily concerning child rights and wellbeing. Indeed, there are 44 child-related indicators integrated across the following SDGs: no poverty (SDG 1), zero hunger (SDG 2), good health and wellbeing (SDG 3), quality education (SDG 4), gender equality (SDG 5), clean water and sanitation (SDG 6), affordable and clean energy (SDG 7), decent work and economic growth (SDG 8), climate action (SDG 13), and peace, justice, and strong institutions (SDG 17) (UNICEF, 2019).

It is important to note that the indicators developed to measure the progress of SDGs do not specifically mention displacement and refugees (IRC, International Rescue Committee, 2019) except a recent inclusion of an indicator on refugees in the indicator framework: The number of refugees by country of origin as a proportion of the national population of that country of origin (Nahmias & Baal, 2019). Nevertheless, the SDGs framework gains an additional importance in terms of conflict and forced migration as the sustainability and stability of decent life standards are more likely to be interrupted compared to the situations where these variables are absent. Indeed, refugees show significantly lower progress on SDG targets while their disproportionate vulnerabilities remain invisible (IRC, International Rescue Committee, 2019, p.1). The Syrian civil war is an example of this gap where the application of SDG principles in governmental and non-governmental levels in Syria as well as refugee destination countries remains insufficient.

The Syrian crisis, which started in March 2011, has resulted in the displacement of 6.3 million refugees to neighboring and developed countries (UNHCR, 2018) in addition to the internal displacement of 6.2 million people (UNHCR, 2019, p.1). Turkey is the country hosting the largest number of refugees in the world with approximately 3.9 million refugees of whom 3.61 million of Syrian origin (Directorate General of Migration Management (DGMM), M. of I., Turkey, 2020) and 46 % of the Syrian refugees in Turkey are between the ages of 0 and 18 (Directorate General of Migration Management (DGMM), M. of I., Turkey, 2020). According to the latest figures announced by the Turkish Ministry of Interior, 405,521 children of Syrian origin were born in Turkey since 2011 (Özdemir, 2019).

The aim of this article will be to conduct a narrative review and analyze the vulnerabilities of Syrian refugee children in Turkey from the lens of the SDGs, more specifically SDG Goal 3: Good Health and Wellbeing, with a specific focus on Syrian refugee children. Moreover, this article will explore the actions taken to prevent and mitigate issues that arise from these vulnerabilities.

2. Vulnerabilities of refugee children in terms of health and wellbeing

In terms of health and wellbeing, several health risks and other vulnerabilities have been observed to affect Syrian refugee children significantly in the Turkish context since 2011. These vulnerabilities were analyzed in the two groups: (1) health problems, (2) psychosocial wellbeing risks.

2.1. Health problems

Refugees may face major challenges in sustaining their health due to a variety of reasons including unsuitable living conditions during or after migration, insufficient sanitation conditions, and accessing quality food and potable water (Teague, Johnston, & Graham, 2014; Cronin et al., 2008; Toole & Waldman, 1993; Yavuz, 2015; Bilukha et al., 2014).

2.1.1. Nutritional status of refugee children

In humanitarian emergencies, children are under the risk of malnutrition due to a variety of factors including lack of income, access

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1 As of April 2020, 63,549 Syrians are residing in camps (officially called Temporary Refugee Centers) and 3,521,497 Syrians are living in off-campus settings (Directorate General of Migration Management (DGMM), M. of I., Turkey, 2020).

2 The word refugee is used throughout this article in the sociological meaning in the context of Turkey. In legal terms, the Republic of Turkey holds the geographical limitation of the 1951 Geneva Convention on Refugees and therefore only recognizes peoples coming from Europe as refugees. Non-Europeans seeking asylum in Turkey are denominated as “asylum seekers”. However, Syrians hold a special status named “temporary protection” since 2014 as per the Regulation on Temporary Protection (TC Resmi Gazete [Republic of Turkey Official Gazette] 22.10.2014/ no.29153). The legal status of refugees and asylum seekers in Turkey has been explored more in depth in several other studies (İnelli-Ciger, 2015; Kiřičt, 2014, pp.1-2; Yavuz, 2015; Rygiel et al., 2016; Kiřičt, 1996).
to nutritious food, quality housing, and number of people living in the same household. Thus, children are faced with the threat of 
inadequate physical development including wasting and stunting. Wasting, assessed via weight for height, indicates a severe weight 
loss associated with an acute situation such as lack of food or a severe disease. Stunting which means low height for age, on the other 
hand, indicates prolonged and chronic malnutrition (Pernitez-Agan et al., 2019).

According to Syrian Family Health Survey of 2009, overall nutritional situation in Syria was poor even before the crisis has started 
in 2011. In this report, the prevalence of wasting was 9.3 % and stunting was estimated as 23 % (Kingori, Nasser, Abdullahi, & 
Al-Asaad, 2015).

To evaluate the nutritional status of Syrian refugee children, a study performed in 6 different countries retrospectively reviewed 
data of the years 2015 and 2016 of routine health assessments of refugee children aged 6–59 months. Wasting and stunting prevalences 
significantly differed among the six countries. The overall prevalence of wasting and stunting were 5.7 % and 9.1 % respectively. In this 
study, these prevalence rates for the refugee children settled in Turkey was 5.1 % and 14.8 % respectively. (Pernitez-Agan et al., 2019)

According to the 2018 Report of Demographic and Health Survey - Syrian Migrant Sample conducted by Hacettepe University 
Institute of Population Studies, 17 % of Syrian refugee children under 5 years old, in Turkey were stunted and 2% were wasted (HIPS, 
2019a). Another study conducted by the same institute in 2018 found that only 6% of Turkish children under the age of 5 are stunted. 
The trend in stunting shows that there is a decrease in stunting of Turkish children under 5 years of age, from 12 % in 2008 to 10 % in 
2013 and 6% in 2018 (HIPS, 2019b).

The comparison of hospital admission studies from different provinces in Turkey also facilitates the visualization of the nutritional 
problems in refugee child health in Turkey. In a study which examines the hospital admissions in a tertiary hospital in Adıyaman, a 
northeastern province in Turkey with relatively high refugee population (24,766 Syrians comprising of 3.97 % of the total population 
as of June 2019 (Directorate General of Migration Management (DGMM), M. of I., Turkey, 2020), 104 babies who were treated in 2015 
were examined. The study found that the weight of 19.2 %, of the patients were below third percentile, which is the lower end of the 
acceptable range in terms of growth. (Bucak, Almis, Benli, & Turgut, 2017). In another study which was conducted between the years 
2012 and 2017 in one of the cities with the highest refugee population in the country, Gaziantep (437,844 Syrians comprising of 21.58 
% of the total population as of June 2019 (Directorate General of Migration Management (DGMM), M. of I., Turkey, 2020), prevalence 
of underweight in the patients with a mean age of 4.6 ± 4.15 years was found as 29.1 % (User & Ozokutan, 2019).

While the studies differ in their estimations in prevalence of malnutrition in Syrian refugee children in Turkey, the results indicate 
that malnutrition is a key issue for Syrian refugee children and it is more prevalent in Syrian refugee children compared to Turkish 
children.

2.1.2. Immunization coverage

Considering the conditions of migration and post-migration, infectious diseases are one of the most prevailing health risks for 
refugee children. Especially children who have not completed their vaccinations and who have not received preventive healthcare 
services in the host country after migrating may present substantial health risks to both themselves and to the non-vaccinated pop-
ulation in the host country (Mipatrini, Stefanelli, Severoni, & Rezza, 2017).

The Extended Immunization Program, which has been in practice throughout Turkey since 1981 and provides free of charge 
vaccination to all children, has achieved a success rate of 96 % vaccine coverage throughout the country (HIPS, 2019b). Meanwhile in 
Syria, the vaccine coverage, which was close to 100 % prior to 2011, has decreased to 66 % in 2018 (WHO - Syria, 2019).

The shortcomings of vaccination in the context of conflict and war might become an important health problem leading to increased 
prevalence of infectious diseases. Country-wide data suggests that among Syrian refugees living in camps in Turkey, 25 % and 33 % 
were not vaccinated for polio and measles respectively. The percentage of unvaccinated refugees living outside the camps were even 
higher for these viruses (45 % for polio and 41 % for measles). This poses a public health threat for the population where refugees 
reside (Tayfur et al., 2019).

In addition to problems in decreased coverage for individual vaccines, not completing all age appropriate vaccines is another 
threat. According to the 2018 Demographic and Health Survey, the rate of children aged between 12–23 months who have completed 
all age appropriate vaccinations in refugee and non-refugee children were 60 % and 67 % respectively (HIPS, 2019a).

There have not been any reported outbreaks of infectious diseases associated with the lack of vaccination of Syrian refugees and the 
Extended Immunization Program is working towards the immunization of Syrian refugee children as well as Turkish children. 
However, the decrease in vaccination rate of children in Syria since the start of the conflict and recent low rates of vaccination among 
refugee children pose a public health risk.

2.1.3. Vaccine-preventable diseases

2.1.3.1. Poliomyelitis. Polio, which was one of the most feared diseases in the early 20th century, was taken under control with 
discovery of two effective vaccines in 1950s. With Global Polio Eradication Initiative, which started in 1988, global incidence of polio 
cases has decreased by 99 % (Polio Global Eradication Initiative, 2019). In 2012, only 223 confirmed cases of polio were reported 
globally (Hamborsky et al., 2015). Turkish Health System has worked very hard with vaccination campaigns for polio eradication. Last 
reported case in Turkey was in 1998 and no new cases have been reported since then (WHO - Turkey, 2019). Eradication program was 
also effective in Syria as vaccination coverage was very high and no cases were present until 2017 when 74 new cases were reported 
(WHO - Syria, 2019). Fortunately, no disease with polio virus has been reported after refugee influx in Turkey although as stated above 
vaccination might have been missed during migration and entering the host country. In the context of conflict and migration, it
requires utmost attention to avoid the reemergence of an eradicated disease.

2.1.3.2. Measles. Measles is a highly communicable disease with complications in approximately 30 % of cases. The complications of measles are most common among children younger than 5 years of age (Hamborsky et al., 2015). The measles vaccine has been in use since the 1960s and vaccination has drastically reduced global measles deaths. Although a 73 % drop was observed between 2000–2018 worldwide, measles is still common in many developing countries. The overwhelming majority (more than 95 %) of measles deaths occur in countries with low per capita incomes and weak health infrastructures (WHO, 2020).

In Turkey, measles was a common disease in 2000, with 16,244 cases reported. With successful elimination program, incidence of cases decreased to less than 10 cases/year between 2007 – 2010. Parallel to increased incidence in European countries after 2012, measles cases started to increase in Turkey too. In 2013, 7,405 cases of measles were detected (WHO Turkey Statistics, 2019). As a response, catch-up and mop-up measles vaccination campaigns were conducted for Turkish citizens and Syrian refugees in cities with high refugee population and consequently the number of measles cases decreased to 565 in 2014 (Ergonüll et al., 2020). According to Turkish Ministry of Health, intensive immunization efforts have successfully controlled the disease, but virus is known to circulate in the country. (Ministry of Health, 2019). In Turkey, only 9 cases were reported in 2016 and 84 cases were reported in 2017 (WHO - Turkey, 2019).

Measles can be controlled through vaccination. As immunization protects 95 % of vaccinated individuals and prevents disease transmission if vaccination coverage is over 83–94 % (Doherty, Buchy, Standaert, Giaquinto, & Prado-Cohrs, 2016). When coverage is reduced as it was in Turkey in 2011, number of cases sharply increased. While the sudden increase in the number of cases in 2013 was not related to Syrian refugees, it is likely that the vaccination was not conducted in Syria properly. That is why it is important to vaccinate newly arrived refugees to Turkey since a susceptible population increases the likelihood for the spread of infection both for immunized individuals as vaccine protection is not 100 % but especially for unvaccinated citizens in the country.

2.1.3.3. Hepatitis A. Hepatitis A is an infection acquired through contaminated food or water and in areas with low socioeconomic levels disease is highly endemic. With increasing hygienic conditions disease prevalence rates show an age shift towards older ages. In Turkey, Hepatitis A vaccine (HAV) was added to childhood vaccination scheme by the end of 2012 with two doses of vaccine per levels disease is highly endemic. With increasing hygienic conditions disease prevalence rates show an age shift towards older ages. In Turkey, only 9 cases were reported in 2016 and 84 cases were reported in 2017 (WHO - Turkey, 2019).

Hepatitis A outbreak is likely in situations with poor hygiene conditions. Since Syrian refugee children are not vaccinated against Hepatitis A, their protective antibody levels are low. While the incidence in Turkish children is low, it is important to vaccinate Syrian children to prevent potential outbreaks.

2.1.3.4. Tuberculosis (TB). TB is a communicable disease affecting mainly lungs but other organs as well. Only a small percentage of people who are infected with Mycobacterium tuberculosis develop the disease and for most of the infected people, the infection remains dormant. Even so, tuberculosis is still one of the top 10 causes of death (WHO, 2019). Incidence of disease is higher among children with risk factors such as undernutrition. Bacille-Calmette-Guérin (BCG) vaccine which was developed almost 100 years ago, is still the only vaccine against this disease. Tuberculin skin testing with purified protein derivates (PPD) is used for diagnosis and it determines exposure to TB bacilli and infection in a person.

In Turkey, children are vaccinated with BCG vaccine for prevention of tuberculosis with 96 % coverage rate and incidence of disease is 18 per 100,000 population (WHO Turkey Statistics, 2019). In Syria TB incidence is 20 per 100,000 population. BCG vaccination is available but coverage rates decreased to 81 % from 100 % from 2010 to 2018 (WHO Syria Statistics, 2019).

Refugee children might have a higher risk for TB infection due to this decrease in coverage of BCG vaccine in their countries and they may have disease especially if they have nutritional problems as discussed previously.

In a study to evaluate results of PPD test applied at the Tuberculosis Dispensary between 2012–2015, performed in Hatay, one of the border provinces (427,500 Syrians comprising of 26.56 % of the refugee population as of June 2019 (Directorate General of Migration Management (DGMM), M. of I., Turkey, 2020)), positive PPD reactions and Annual Risk of Tuberculosis infection were found to be more common among Syrian refugees compared to local population, more specifically in the 6–18 age group (Savaş, Baruteu, & Yeniçeri, 2018). Another study revealed that in temporary shelters for refugees in Turkey, 108 active tuberculosis cases were detected and treated (Ergonüll et al., 2020). The presence of active TB cases related to Syrian refugees indicate that preventive strategies for TB should be emphasized.

2.1.3.5. Other infectious diseases. Refugees are susceptible to other infectious diseases that are not vaccine preventable. Between 2012 and 2016, high numbers of incidences were reported in Syrian refugees residing in temporary shelters in Turkey such as respiratory tract infection (1,299,209 cases), diarrhea (158,058 cases), and bloody diarrhea (59 cases) (Ergonüll et al., 2020).

A study conducted between 2016 and 2017 examined the hospital admissions of 623 Syrian patients in a tertiary pediatric hospital in Turkey’s capital city Ankara (92,073 Syrians comprising of 1.67 % of the total population as of June 2019 (Directorate General of Migration Management (DGMM), M. of I., Turkey, 2020)). The most common admission reasons were found to be respiratory tract
diseases and diarrhea (Güngör et al., 2018). These diseases are likely to have serious consequences in children as they are still among the most common causes of infant mortality (WHO, 2017).

Cutaneous Leishmaniasis (CL): CL is a disease caused by a protozoan parasite transmitted from human to human by sandfly bites and characterized by chronic skin lesions, leaving permanent scars with deformation of the infected area. Outbreaks of CL have been reported in different areas in Turkey in the past 3 years, correlated with the influx of Syrian refugees. In an analytical cross-sectional epidemiological study of CL cases diagnosed in the Gaziantep Leishmaniasis Diagnosis and Treatment Center, out of 900 CL patients, 93.8 % (845/900) were Syrian citizens and 6.2 % (55/900) were Turkish citizens. The disease was more frequent in women with 53.5 % (482/900) and in the age group between 0–20 years with 68.3 % (615/900). The increase in CL frequency is alarming and requires control and prevention measures in highly infected areas (Eroglu & Ozgozta, 2019; Zencir & Davas, 2014). Early recognition, treatment of cases and vector control measures are essential for prevention.

COVID-19: During the preparation of this manuscript, a new highly infectious disease “2019 novel coronavirus (COVID-19)” has emerged. The “COVID-19” outbreak was first identified in December 2019 in Wuhan, China and was recognized as a pandemic by the World Health Organization (WHO) on 11 March 2020. The Government of Turkey has reported its first case on the same day and as of June 2020, almost 200,000 confirmed cases were reported. Since the specifics of the cases have not been shared publicly and prevalence studies have not been completed at the time of writing this article, it is not clear how many of the reported cases correspond to refugees.

However, refugee populations are potentially more susceptible to contracting infectious diseases such as COVID-19 as they are more likely to live in overcrowded shelters and substandard conditions (Kluge, Jakab, Bartovic, D’Anna, & Severoni, 2020). While the morbidity and mortality of COVID-19 cases in children are significantly lower compared to other age groups, the social effects of the outbreak has had negative impacts on the living conditions of Syrian families in Turkey. Although the literature on the impacts of COVID-19 on Syrian families in Turkey is limited at the moment, studies conducted by NGOs thus far confirm that Syrian refugee families are facing significant challenges including someone in the household losing their job, issues with accessing health services, and having unmet urgent needs (Relief International, 2020). Vulnerable groups such as large families or people with disabilities are likely to be disproportionately affected from the disease (Danish Refugee Council, 2020). Moreover, unregistered refugees reported fear of arrest or deportation should they approach a hospital (Danish Refugee Council, 2020). As such, COVID-19 outbreak presents lower risk for Syrian refugee children in terms of direct impact from the disease. However, the general decline in the quality of life due to the outbreak remains to be a significant risk.

2.2. Psychosocial wellbeing risks

2.2.1. Traumatic experiences

Refugee children and adolescents are exposed to a number of traumatic experiences during war and flight (Levy & Sidel, 2009). Related to exposure to traumatic events and post-migration living difficulties refugee children are at higher risk to develop mental health disorders (Fazel, Reed, Panten-Brick, & Stein, 2012). While examining the mental health of refugees, risk factors during pre-flight, flight and post-flight periods have been shown to be related to mainly post-traumatic stress disorder (PTSD), depression, and anxiety disorders. Loss of a parent appeared as a risk factor both for PTSD and depression (Hasanovic, Sinanovic, Selimbasic, Pajevic, & Avdicovic, 2006). Moreover, among the refugee children, the risk for mental health problems is found to be highest for the unaccompanied minors (Hodes, Jagdev, Chandra, & Cunniff, 2008). There is also a dose-response relationship with increasing number of adverse events, the risk for mental health problems is increasing (Montgomery, 2008). Moreover, parental psychopathology, such as depression is related to emotional problems among refugee children (Kovess-Masfety et al., 2016).

The risks related to traumatic events, flight, and post-flight appear quite prominent for the case of Syrian refugee children. A study conducted by UNHCR in 2015 found that the highest risk for Syrian refugee children was psychological concern (51 %) followed by children dropped out of school (25 %) and child labor (11 %) (UNHCR, 2015. p. 19). It is also important to mention that the risks identified in this study, including child labour (Habib et al., 2019), child marriages (El Arab & Sagbakken, 2019; Wringe et al., 2019) and domestic violence (Falb, Blackwell, Stennes, Hussein, & Annan, 2019; Usta, Masterson, & Farver, 2019) in addition to the aforementioned higher risks, are factors which are likely to influence psychological wellbeing negatively.

A study on mental health problems and related risk factors in Turkey reported that Syrian refugee children have been exposed to a number of traumatic events during war in Syria prior to arrival to Turkey such as witnessing explosions or gun battles (70 %), to lose someone important to them (56 %), to see dead or wounded people (55 %), or witnessing people being tortured (43 %) (Gormez et al., 2018). Consistent with these findings, studies suggest that the prevalence of PTSD symptoms ranges from 18.3 % (Gormez et al., 2018) to 50 % (Eruyar, Malby, & Vostanis, 2018), and of depression from 19.7 % (Ceri, Nasiroglu, Ceri, & Cetin, 2018) to 48 % (Kandemir et al., 2018) amongst Syrian refugee children in Turkey.

Post-traumatic stress disorder among refugee parents was found to be related to harsh parenting and higher psychological problems among refugee children (Bryant et al., 2018). Considering the high estimates of PTSD (Alpak et al., 2015;Acarturk et al., 2018), depression (Fuhr et al., 2020), anxiety (Fuhr et al., 2020) and somatic distress (McGrath et al., 2020) among Syrian refugee adults, and its possible impact on refugee children’s mental health, provision of psychosocial interventions to adult refugees becomes an important way to contribute to wellbeing of refugee children.

Studies also examine the relationship between parenting styles, attachment styles and mental health of refugee children. A previous study with Syrian refugee children aged 8–17 living in Istanbul showed that perceived secure attachment was positively associated with warmth parenting while negatively associated with rejection parenting. Moreover, parental emotional warmth, lower overprotecting and rejecting behaviors were found to be associated with lower levels of emotional and behavioral problems among Syrian
children (Eruyar, Maltby, & Vostanis, 2020).

Associated with the trauma experienced by Syrian refugee children due to experiences with conflict and flight as well as parental experiences with trauma, Syrian refugee children are at higher risk of mental health problems.

2.2.2. Social factors

2.2.2.1. Child labor. In addition to post-war trauma, child labor is also a significant risk factor for refugee children’s psychosocial wellbeing (Sirin & Rogers-Sirin, 2015, p.6). Child workers are preferred by employers as cheap workforce (Harunogullari, 2016). Children also learn foreign languages faster than adults which often makes it easier for children to find jobs compared to their parents (Hilado & Lundy, 2017). In turn, child workers are unable to attend school and play as well as often being subjected to physical, emotional, sexual, or economic abuse (Ozdemir & Budak, 2017, p.216; Harunogullari, 2016).

A study on refugee child labor interviewed 62 refugee children living in one of the border cities with high density of refugee population, Kilis (111,608 Syrians comprising of 78.3 % of the total population as of April 2020 (Directorate General of Migration Management (DGMM), M. of I., Turkey, 2020)). The results of the study suggest that child labor is an important indicator for psychosocial problems in refugee children along with physical and social problems. Several factors such as high number of siblings in the household, difficulties in affording rent, and issues with affording basic food needs increase psychological pressure in refugee child workers (Harunogullari, 2016).

2.2.2.2. Domestic violence. Refugee children and women are at higher risk for domestic violence which in turn have an effect on their psychosocial wellbeing (Rees and Pease, 2006). In a recent systematic review of domestic violence in the refugee families, the ecological model of Bronfenbrenner (1977) was used to examine the risk factors for family violence in individual, family, societal and cultural level (Timshel, Montgomery, & Dalgaard, 2017). Parental trauma and mental illness such as PTSD and depression appeared to be significantly related to family violence in the individual level. Family level risk factors included interaction between the parent and child, family structure and family acculturation stress (Timshel et al., 2017). The main societal level factor was low socioeconomic level of the household. Finally, at the cultural level, patriarchal beliefs were identified as risk factors for family violence in refugee families (Timshel et al., 2017). In a recent study with Syrian women in northern Syria, emotional, physical, and sexual intimate partner violence were found as predictors of depressive symptoms among women (Fälbl et al., 2019). Moreover, intimate partner violence in Syrian families found to be increasing the violence towards children by their mothers (Usta et al., 2019).

2.2.2.3. Child marriage. Child marriage stands out as another risk factor for Syrian refugee children’s mental and physical wellbeing. Even though child marriage has been prevalent in Syria before the war (Save the Children, 2014), the occurrence has increased from 13 % to 35 % since the start of the war (UNFPA, 2017). Child marriage is an issue primarily for girls in both Syria and Turkey. However, the statistics show that Syrian refugee girls are more likely to be married before the age of 18 compared to Turkish girls. In a representative study of Syrian refugee women aged between 25–49, it was found that 21 % of women were married before the age of 18 and 4 % were married before the age of 15 (HIPS, 2019b). For Syrian refugee women, 38 % of the interviewed women were married before the age of 18 and 12 % before the age of 15 (HIPS, 2019a). Since marriage prior to the age of 18 is illegal in Turkey, it is difficult to reach accurate statistics of child marriage in Turkey. However, academic studies and media forums have consistently flagged child marriage of Syrian refugees as a serious issue.

In the emergency context, refugee child marriage in Turkey is often used as an economic survival mechanism for low-income families by receiving bride wealth in exchange for marrying young girls of the household but also with the perception of providing a better life for their daughters with higher economic prospects (Suleymanov, Sonmez, Unver, & Akbaba, 2017, p.243; Cetin, 2016, p.209). Child marriage is a multilateral risk factor for wellbeing such as interruption of personal development stemming from leaving school, psychosocial effects of early parenthood, forced sexuality, and premature pregnancies which often lead to unfavorable circumstances including tendency to violence, escaping home, and suicide (Suleymanov et al., 2017, pp.237, 243). About the main reasons of child marriages, a study with Syrian refugees in Lebanon indicated gender differences. While according to men the main reason was poverty, Syrian women accept it as a protection mechanism against sexual violence and harassment (Bartels et al., 2018). Same motives for early marriages in Syrian refugees were also reported in studies from Turkey and Jordan (El Arab & Sagbakken, 2019; Wringe et al., 2019).

3. Steps taken for refugee child health and wellbeing by governmental and civil society actors

The vulnerabilities of Syrian refugee children detailed in the previous sections are closely related to the targets set under SDG 3: Good Health and Wellbeing. Namely, provision of universal healthcare, reduction of premature mortality from communicable and non-communicable diseases, and promotion of mental health and well-being are included in the official list of SDG indicators (UN Statistical Commission, 2016). This section will focus on the actions and measures taken by governmental and non-governmental actors in Turkey to improve the health and wellbeing of refugee children on these indicators while also highlighting the challenges and barriers that refugees face.

The provision of organized healthcare services specifically for Syrian refugees started on April 29, 2011 in Yayladagi, Hatay which was the first entry point of refugees at the time (Tayfur, Günaydin, & Suner, 2019). The provision of healthcare services was reported to be accessible in camp settings as the camp residents had direct access to health centers from the earlier years of the crisis whereas urban
refugees experienced difficulties in access especially prior to 2014 (Zencir & Davas, 2014).

The legal basis for the provision of healthcare services to refugees was established with the 2014 Regulation on Temporary Protection and the subsequent 2015 Directive on the Guidelines for the Healthcare Service Provided to Individuals under Temporary Protection. The prior established the essentials of provision of healthcare services to individuals under temporary protection whereas the latter described the specifics of healthcare provision for individuals under temporary protection including who is eligible to receive and provide healthcare services, remuneration of services, and principles of service provision.

Healthcare services are highly accessible for refugees and refugee children since the Ministry of Health ensures their provision to all Syrians who are registered with the Turkish authorities. The provision of services does not extend to Syrians who are not registered. However, emergency care and essential public services are provided in urgent cases and the beneficiaries are referred for registration after their treatment (3RP, 2019, p.60).

The public hospitals have been experiencing issues of capacity due to the high volume of consults from refugees, especially in border cities with a large refugee population, and this issue is causing negative perceptions and reactions from the host community (Demir, Ergin, Kurt, border cities with a large refugee population, and this issue is causing negative perceptions and reactions from the host community (Demir, Ergin, Kurt, & Etiler, 2016, p.91). To ease the burden on public hospitals, the Ministry of Health, supported by humanitarian actors, has established Migrant Health Centers (MHC) throughout the country to reach the increased demand. This initiative established a network of MHCs throughout Turkey where Syrian doctors and nurses offer linguistic- and culturally-sensitive primary healthcare services for the Syrian population (3RP, 2018, p.5). In 2018, over 580,000 primary health care consultations were provided in the seven Refugee Health Training Centers, relating to immunization, maternal care and child health care. 234 Syrian doctors, 308 Syrian nurses and 629 translators/patient guides were trained and 1,357 Syrian health professionals have been employed by Ministry of Health and serving in Migration Health Centers across the country (3RP, 2018, p.5).

The Extended Immunization Program (detailed under Section 2.1) has been expanded to Syrian refugee children as well as refugee children of other nationalities since 2017 with the collaboration of Ministry of Health and UNICEF (Gultac & Balcı, 2018; UNICEF, 2017, p.194). The immunization campaigns aim to protect children against a variety of communicable diseases such as polio, haemophilus influenza, diphtheria, pertussis, tetanus, measles, mumps and rubella (MMR) and Hepatitis B (UNICEF, 2017). Children are screened and registered to the Health Information System in all provinces, with a focus on the most refugee populated provinces (UNICEF, 2017). The immunization campaign has thus far proven successful as there have not been any reported outbreaks of communicable diseases in Turkey in connection with lack of immunization of refugee children.

While legislation and a formal system for refugee access to healthcare services has been present since 2014, similar efforts have been present for psychosocial services and child protection. The Social Services under the Ministry of Family, Labor, and Social Services is the main responsible institution to ensure child protection in Turkey. However, since their scope of responsibility is quite wide, there have been more specific initiatives of public-private partnerships for improving the child protection services for the host community as well as the refugee population.

Even though there is no refugee-specific law on child protection in Turkey, Syrian refugee children are under the jurisdiction of the Child Protection Law, which aims to regulate the provisions on protection and rights of children with protection needs or children in conflict with the law (Republic of Turkey, 2005). The Child Protection Law puts forth a series of measures to be taken for children who are in need of protection on counselling, education, childcare, health, and shelter (Article 5).

In terms of implementation, Child Advocacy Centers (CACs) are established under the Ministry of Health in Turkey. The CACs aim to effectively respond to child sexual abuse cases and minimize the re-traumatization of sexually abused children by completing the judiciary and medical interventions of them in one round and location by trained professionals (Bayun & Dincer, 2013; Republic of Turkey, 2012). The first CAC was established in Ankara in 2010 as a pilot project and has spread to 42 out of 81 provinces as of April 2020 (Ministry of Health, 2020). The Turkish Prime Ministry issued a circular letter in 2012 on the implementation and strengthening of CACs in order to protect vulnerable children with effective implementation of CACs. While CACs are not a refugee-specific project, the number of refugee applications has increased in the last few years.

Another important child protection project is the establishment of University Based Child Protection Centers (UBPCCs). The UBPC project was kick-started in 2008 by a project technically supported by UNICEF and since then, 12 UBPCCs were established in universities in different provinces of Turkey. The UBPCCs are entities established under public universities in Turkey and they consist of an environment to provide education, implementation, and research on diagnosis, treatment, protection, and monitoring of children in need of protection. Similar to the CACs, the UBPCCs are also a non-centralized initiative and they are not refugee-specific (Akco et al., 2013).

Another project on child protection implemented with the contributions of governmental and non-governmental actors is tackling the issues in the court processing of children who have been the subject of violence. In order to avoid further victimization of children against whom a crime was committed or who witnessed a crime, Judiciary Interview Rooms (JIRs) were established in 56 courthouses in 49 provinces in Turkey since 2017 in partnership with Ministry of Justice, UNICEF, and Child Protection Centers Support Society (COKMED). The JIRs provide a safe environment for interrogating the children to give testimony in a criminal court. The interviews are conducted by an expert (with the presence of a translator if needed) in one room while the judges and public prosecutors in charge of the case follow the interview from a separate room. The judges and public prosecutors provide their inputs and questions via an ear microphone to the expert who in turn asks the question to the child in a trauma-sensitive manner. To this end, in addition to the establishment of the JIRs, trainings and supplementary materials are provided to all professionals included in the process to ensure effective child-sensitive implementation (Dagli, 2018).

Complementary to the above explained JIRs project, another project was implemented in 2019 on training Arabic-Turkish translators on child-sensitive translation in JIRs by Ministry of Justice, UNICEF, and Child Protection Centers Support Society (COKMED). The “Child-friendly Translation Project in Judicial Processes” trained 142 Arabic-Turkish translators, who are working...
with refugee children in JIRs, in increasing their capacity in terms of their professional roles, responsibilities and limitations about interviewing techniques, special situations, as well as in terms of child friendly terminology and child sensitive approach (Dagli & Sahin Dagli, 2019).

In addition to the projects detailed above, UN agencies and other non-governmental organizations support the Turkish government in the implementation of healthcare service provision as well as covering the gap for child protection and psychosocial services. The Regional Refugee and Resilience Plan (3RP) is the strategic, coordination, planning, advocacy, and programming platform for humanitarian and development agencies to respond to the Syria crisis at the regional level and in host countries, namely Turkey, Jordan, Iraq, Egypt, and Lebanon (3RP, 2020). In 2018, health and protection actors in 3RP sectors reported their achievements related to child health and protection, as detailed below:

The non-governmental health sector actors reported in the 3RP Health Sector Quarterly Report 4 for 2018 that as of end of December 2018, the number of refugee children under five years reached through the vaccination programs is around 103,040 (3RP Health Sector, 2019). Furthermore, more than 72,065 doses of DPT3 vaccines have been administered to refugee children under-one-year (which amounts to 75 % immunization coverage) and 83,733 doses to the age group of under-five-years (3RP Health Sector, 2019). The services provided to refugees by non-governmental organizations include basic health counseling, sexual and reproductive health services, psychiatrist referrals, psychosocial support services, training of medical personnel, and organizing awareness raising activities about hygiene, healthy nutrition, basic health rights, and sexually transmitted illnesses (3RP Health Sector, 2019).

The non-governmental protection sector actors reported in the 3RP Protection Sector Quarterly Report 4 for 2018 that protection services were provided in 56 out of 81 provinces of Turkey (3RP Protection Sector, 2019). Specifically in child protection, 88,387 children with protection needs were identified and referred to child protection services, 53,657 children participated in structured, sustained child protection or psychosocial support programs (3RP Protection Sector, 2019). Moreover, non-governmental actors focused on strengthening national systems with the aim to increase refugees’ access to protection services by facilitating capacity development activities for staff and establishing social protection desks in peripheral areas (3RP Protection Sector, 2019).

As an example of public-NGO partnership, a project called ‘Trauma Informed Schools’ was implemented in 20 schools in two cities of Turkey (Istanbul and Sanlıurfa) by Maya Foundation in collaboration with the Ministry of Health. The aim of this project was to increase the knowledge of teachers on psychological trauma related to refugees and its impact on Syrian children’s mental health (Maya Foundation, 2019). Furthermore, as part of the same project, refugee children with mental health problems were identified and provided psychosocial intervention.

Another important example of public-NGO partnership is the Conditional Cash Transfer for Education Program under the partnership of the Ministry of Family, Labor and Social Services, the Ministry of National Education, Turkish Red Crescent and UNICEF. This project, which was implemented in Turkey since 2003, was expanded to Syrian refugees in 2017 (UNICEF, 2020). While this is an education project, it contributes directly to avoid social risks faced by Syrian refugee children including child labor and child marriage.

The presence of an established system for Syrian refugees’ access to health and wellbeing and efforts from non-governmental organizations to increase access to these services were detailed in this section. However, it is also important to question to which extent the provided services are inclusive of Syrian refugees. Syrian refugees reportedly continue to experience difficulties in accessing the healthcare and psychosocial services. One of the main challenges cited by authors is the Arabic-Turkish language barrier. To tackle the language barrier between Arabic-speaker refugees and Turkish-speaker host communities, translators are employed in many public hospitals. However, the number of translators remain insufficient in most places (Assi, Özger-Ilhan, & Ilhan, 2019; Ekmekci, 2017).

The lack of legal registration of refugees in Turkey or registration in a province different than the province of residence is also a prominent issue. As mentioned, Syrians are only entitled to healthcare services in the provinces they are registered in. Thus, refugees who reside in a different province or has not been able to register with the authorities cannot access healthcare services (Assi et al., 2019; Ekmekci, 2017). Furthermore, even though the healthcare services are legally free of charge for refugees, Syrian refugees living in outside of the camps stated that in practice, not all services are always covered and they may need to pay for prescribed medications and other healthcare related costs (Kargin, 2018).

Finally, the stigma against Syrian refugees by local communities, including healthcare workers, is negatively impacting the Syrian refugees’ access to healthcare. Refugees stated that they were exposed to negative attitudes of healthcare staff and even received poor treatment due to the stigma associated with being a refugee (Kargin, 2018).

4. Discussion

This article aimed to look into the health and wellbeing of Syrian refugee children from the perspective of SDG Goal 3 Good Health and Wellbeing. The main commonality of the studies reviewed for this article is that Syrian refugee children in Turkey are faced with higher risks in terms of a variety of health and wellbeing indicators despite the efforts by governmental and non-governmental entities.

The studies from pre-conflict Syria confirm that the overall child nutrition situation in Syria before the start of the war in 2011 was already poor (Kingori et al., 2015). In the current situation, Syrian children are more vulnerable to nutritional problems than Turkish

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3 52% achievement rate of the 2018 target: 168,400.
4 108% achievement rate of the 2018 target: 49,700.
5 99% achievement rate of the 2018 target: 122,000.
Children (HIPS, 2019a, 2019b). This discrepancy may stem from a variety of factors including lack of income, access to nutritious food, quality housing, and number of people living in the same household. Increasing the general life quality of Syrian refugees, ideally to the level of Turkish nationals, is the way to tackle this issue.

The improvement of living conditions is also crucial to the reduction of non-vaccine preventable diseases such as respiratory tract infection and diarrhea, which can become deadly for malnourished children (Ergönül et al., 2020). Establishing decent living conditions with adequate shelter and sufficient income to alleviate basic food and hygiene requirements should be the main goal to protect the health status of Syrian refugee children in Turkey.

Immunization coverage of Syrian refugee children and their susceptibility to vaccine-preventable diseases is a particular situation. Vaccination rates in Syria prior to the war were high whereas the rates have fallen significantly in Syria since then (HIPS, 2019a; WHO-Syria, 2019). When Syrian children arrived to Turkey, their vaccinations were mostly incomplete due to disruptions of the vaccinations during the war. Vaccination rates have also been high in Turkey in this period and Turkey includes Syrian refugee children in its vaccination program (HIPS, 2019b). In the last years, the vaccination rates of Syrian children approach those of Turkish children.

While some vaccine-preventable diseases have seen an increase in numbers with the arrival of Syrian refugees in Turkey due to the delays in vaccination in Syria since the start of the war, it is also important to note that none of them has reached the level of a serious outbreak thus far (WHO - Turkey, 2019; Ergönül et al., 2020). Regardless, it is important to pay close attention to the vaccination of Syrian refugee children to avoid potential outbreaks.

In light of the aforementioned vulnerabilities, the integration of refugees in the national health system is extremely important for individual and public safety. The Turkish national health system is largely extended to Syrian refugees free of charge and additional measures have been taken to mitigate issues of overcrowding in the public healthcare services (Demir et al., 2016). The extension of the national immunization campaigns to refugee children is a crucial step towards public health. In this sense, the registration of Syrian children with Turkish authorities should be the first priority to ensure full vaccination in order to prevent outbreaks. Most importantly, the access of refugees to public healthcare services was ensured by its incorporation into legislation, which provides a sound legal basis for the provided services with the 2014 Regulation on Temporary Protection and the subsequent 2015 Directive on the Guidelines for the Healthcare Service Provided to Individuals under Temporary Protection.

Syrian refugee children are exposed to various traumatic events such as loss of a loved one, witnessing combat or life threat during war and flight (Gormez et al., 2018). Other social risk factors during post-migration period such as child labor, family violence, and child marriage also negatively affect the psychosocial wellbeing of Syrian refugee children in Turkey (El Arab & Sagbakken, 2019; Falb et al., 2019; Habib et al., 2019; Usta et al., 2019; Wringe et al., 2019). Associated with these risk factors, studies indicate higher estimates of PTSD, depression, and anxiety among Syrian refugee children compared to Turkish children. However, due to language barrier, lack of mental health professionals and stigma on mental health issues, mental health service utilization is low among Syrians (Fuhr et al., 2020). Most of the psychosocial interventions are directed to school age Syrian children due to feasibility reasons such as accessibility (Yaylaci, 2018). A study of school-based, teacher delivered psychosocial intervention indicated reduction in symptoms of anxiety and PTSD among Syrian refugee children (Gormez et al., 2017). However, there is also a need to develop and deliver psychosocial interventions to younger children and those children who are not going to school especially due to child labor or child marriage.

Social factors such as child labor, domestic violence and child marriage are also risks for refugee children’s wellbeing. Child labor and child marriage are commonly used as coping mechanisms for the household’s economic survival (Ozdemir & Budak, 2017, p.216; Harunogullari, 2016; Suleymanov et al., 2017, p.243; Cetin, 2016, p.209). Domestic violence is an increased risk for refugee children due to traumatic experiences affecting parental psychopathology (Timshel et al., 2017). This shows that wellbeing is not a one-way street and mental health support to parents as well as children is necessary for child wellbeing and economic sufficiency might have secondary serious effects on refugee children’s wellbeing. While the national and local governmental and non-governmental entities have taken steps in addressing these issues, the legal basis for addressing them are not as established in comparison to the access to healthcare services.

As a direct consequence of the presence or non-presence of national legislation on the mentioned issues, the provision of services differs in terms of modality. The provision of healthcare services is highly centralized, led by the Ministry of Health, which facilitates the harmonization of services throughout the country. However, the issues with registration with the authorities (in a different province or lack of registration) is a significant barrier for Syrian refugees’ access to the services provided (Assi et al., 2019; Ekmekci, 2017; Kargin, 2018). Moreover, the lack of refugee-specific legislation and the narrow scope of national legislation on child protection have steered the actors to organize in a non-centralized manner.

In addition to the governmental policies, the role of the civil society and its cooperation with governmental entities also presents an added value for the improvement of Syrian refugee children’s wellbeing. The child protection efforts are joint efforts of the Turkish government and non-governmental actors in effectively addressing child protection issues (3RP Health Sector, 2019; 3RP Protection Sector, 2019; UNICEF, 2020; Maya Foundation, 2019). However, at this stage, these activities are not widespread throughout the country and refugee integration is not optimal due to Arabic-Turkish language barrier. The expansion of the services countrywide and the integration of refugees into these systems by solidifying the capacities of Arabic-Turkish translators remain vital for enhancing the health and wellbeing of refugee children.

The goals established in the 2030 Agenda for Sustainable Development under Paragraph 26 include promoting physical and mental health and wellbeing, extending life expectancy, achieving universal health coverage, reducing newborn and maternal mortality, ending preventable diseases, fighting communicable diseases, and preventing and treating non-communicable diseases (United Nations, 2015). It is clear that the interventions and restructuring of the health system as discussed in this article are very much in line with the cited goals and contribute to the SDG number 3: Good Health and Wellbeing for refugee children in the context of Turkey. The
provision of universal healthcare rights for Syrian refugees is the main parallel with the SDG targets, which also contributes to other SDG targets including reduction of mortality from communicable and non-communicable diseases.

UN agencies and other non-governmental entities have also been active in the refugee response since the beginning of the crisis and have filled gaps in access to services where possible including but not limited to protection services and referrals, psychosocial services, and nutrition and food security assistance. On the other hand, significant gaps remain in terms of access to social services and the legal system.

The existence of a legal system which enables refugee access to health, protection, and other social services is key to achieve this goal. However, the results of this narrative review confirm that the existing system could be improved especially through solidifying the legal basis and centralizing the implementation of child and refugee protection. Considering the high number of refugee children and the demand on the health systems of Turkey, engagement and capacity building of all stakeholders is essential to provide effective services to improve the health and wellbeing of refugee children. Evaluation of these services in terms of impact and cost-effectiveness is also important. After evaluation, evidence based services should be scaled up. To increase the delivery and reuptake of health services, barriers such as lack of awareness about available services, lack of translators, and issues with registration of Syrian refugees in their provinces of residence should also be addressed.

Turkey is amongst the 17 countries to distinguish the particular needs of refugees as part of its SDG Voluntary National Review (out of the 45 countries, each country hosting over 20,000 refugees) (VNR, 2019; IRC, International Rescue Committee, 2019, pp. 4-5). While the SDG framework aims to “leave no one behind”, it is important to remember that Syrian refugee children remain more vulnerable to health and wellbeing risks. The SDGs as a national response plan should not leave marginalized groups behind and particular needs of Syrian refugee children should be effectively incorporated into the SDG framework.

Considering that Turkey is currently hosting the largest Syrian refugee population in the world, we can say that the steps taken in the integration of refugees in Turkey in terms of SDG 3 goals of health and wellbeing are significant. The good practices examined in this review article are as follows:

- Extension of universal healthcare to Syrian refugees
- Extension of universal immunization to Syrian refugee children
- Establishing Migrant Health Centers to ease burden on public hospitals due to the sharp increase in demand
- Public, civil society, and joint initiatives for the provision of healthcare and child protection services for Syrian refugee children

However, parallel to the magnitude of the refugee population, there are remaining gaps to be filled and potential improvements to consider as identified in this review article:

- Poor living conditions (i.e. hygiene, shelter, nutrition)
- Issues with the registration of Syrian refugees in Turkey presenting challenges with access to healthcare services
- Shortcomings in addressing the Arabic-Turkish language barrier to access to services (e.g.: lack of translators in health facilities)
- Lack of refugee-specific legislation on child protection
- Narrow scope of national legislation on child protection
- Efforts to address the stigma experienced by Syrian refugees from the local population in general including healthcare and well-being related service providers
- Limited accessibility for mental health support for Syrian refugee children and their parents

As such, Turkey can significantly improve the current health and wellbeing situation of Syrian refugee children and minimize the associated risks by addressing these points.

A final point to be made while concluding this article is that in the areas which the national systems are already strong, the system is better able to absorb newly emerging urgent and heightened needs. Some examples of this in the context of Turkey are immunization coverage extension to Syrian children or the extension of universal healthcare to Syrian refugees. On the other hand, where national systems are not well established, additional shocks bring extra burden and the vulnerabilities may become intensified. Within the context of Turkey, this can be observed in addressing social issues such as child marriage, child labor, and domestic violence. In the case of Turkey, NGOs are working to cover the gaps in these areas. However, a unified response with deeper involvement from the government side is needed in the current context to better address these issues. As such, countries that provide healthcare and protection services widely to its citizens would be better able to cope with such migration crises that require the extension of services to non-citizens.

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