

## BRIEF REPORT

# Failure to thrive among asylum-seeking children: A descriptive study from Turkey

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**Abstract**

**Objective:** The aim of the study was to determine failure to thrive among asylum-seeking children.

**Design:** The study was a descriptive study.

**Sample:** The sample of the study comprised of 187 children who were registered in an Afghan Association. The power of the study was found to be 97% at 0.5% (moderate) effect size and 95% confidence level.

**Measurements:** The data was collected between November 8, 2021 and January 10, 2022 using a sociodemographic form and the children's anthropometric measurement.

**Results:** 57.2% of children were male and 44.9% were 6–12 years old. It was determined that female and male infants less than 1 year of age were underweight ( $z$ -score =  $-2$ ) and male infants were stunting ( $z$ -score  $\leq -1$ ).

**Conclusions:** Childhood growth and development problems are significant issues among asylum-seeking families. Public health nurses need to develop their roles in organizing the healthcare service for vulnerable and underrepresented groups.

**KEYWORDS**

child health, public health nursing practice, refugees

## 1 | BACKGROUND

Due to a variety of reasons such as conflicts, natural disasters or climatic changes worldwide, the number of migrants is increasing each day. Migrants are classified as an asylum seeker, refugee or immigrant according to the laws in the country of asylum. Turkey accepts asylum seekers under international protection or temporary protection status. Asylum seekers with international protection status are referred to as refugees or conditional refugees; whereas those with temporary protection status are referred to as asylum seekers (Republic of Turkey Ministry of Interior, 2013).

In the past decade, it has been reported that Turkey is a country with the greatest increase in the number of refugees (International Organization for Migration, 2021). In 2021, 89.3 million people were displaced due to persecution, conflict, violence, human rights violations, or events seriously disturbing public order worldwide, of which 3.8 million are now living in Turkey (United Nations High Commissioner

of Refugees, 2021a). It is estimated that Afghan migrants constitute the second largest refugee group in Turkey and they usually remain unrecorded (International Blue Crescent, 2021). The United Nations has reported that the Afghans in Turkey have difficulty accessing information, information resources and basic healthcare services, usually work unrecorded and are more defenseless against social and health risks (United Nations High Commissioner of Refugees, 2021b).

Being migrant increases vulnerability to social and health risks, and increased social and health risks can increase mortality and morbidity among asylum seekers (Barata & Cassati, 2011). In addition, reports show that migration and displacement increase the risk of infant mortality, low birth weight, and decrease the frequency of breastfeeding, immunization, and medical examination in the first year of life, leading to mental health problems and nutritional deficiencies (Hildebrandt et al., 2005; UNICEF, 2022). Failure to thrive is defined as inadequate growth and development or inability to sustain growth during childhood. Failure to thrive can be assessed by examining the height and



weight values according to age, middle-upper arm, and head circumference and evaluated based on percentile and z-score (Olsen, 2006; Perrin et al., 2003). It was determined that the prevalence of wasting and shortness was nearly five times greater among refugee children than nonrefugee children (E. E. Dawson-Hahn, Pak-Gorstein, Hoopes, et al., 2016). In a study conducted on the Thailand–Myanmar border, the prevalence of wasting in immigrant children was found to be 2.2%, and the prevalence of stunting was 25.8% (Bovill et al., 2021). Also according to the World Health Organization (WHO), refugee and migrant children are prone to not only malnutrition, but also to obesity (World Health Organization, 2018). A study revealed that as the age of refugee children increased, the risk for overweight increased (E. Dawson-Hahn, Pak-Gorstein, Matheson, et al., 2016).

According to the United Nations High Commissioner for Refugees, Afghan refugees constitute the largest refugee population in the world. It has been reported that the majority of Afghan refugees are registered in Iran and Pakistan (United Nations High Commissioner of Refugees, 2022a). The numbers of Afghan asylum seekers in Australia, Canada, United Kingdom, and the United States are also increasing (United Nations High Commissioner of Refugees, 2022b). The health status of asylum seekers, whose numbers are increasing all over the world, is an important issue for public health nurses. According to the United Nations Migration Agency, protecting and promoting immigrant health and well-being are among the main objectives of nursing interventions for refugees. Accordingly, nurses should improve their knowledge and skills on immigrant health through both clinical and public health studies. It is emphasized that nursing practices combined with academic studies are strong public health initiatives contributing to immigrant health (Bampoh et al., 2020). A public health nurse should focus on inequalities and the needs of minorities, and evaluate health by developing a comprehensive and systematic approach (American Public Health Association, 2013). Public health nurses may reach vulnerable and underrepresented groups and maintain the communication. This way, the nurses can contribute to health equity or address inequalities in healthcare by conveying health data of underrepresented groups to the shareholders (Langer et al., 2021).

The aim of the present study was to determine failure to thrive among children in asylum-seeking families in Central Anatolia in Turkey.

## 2 | RESEARCH QUESTION

1. What is the level of failure to thrive among children in asylum-seeking families in Central Anatolia in Turkey?

## 3 | METHODS

### 3.1 | Design and sample

The study was a quantitative descriptive design. The target population of the study comprised all families living in the city center in Central

Anatolia, Turkey, whose contact information was kept in an Afghan Association. The Association in the city center is an organization which keeps contact information of all Afghan individuals living in the city and provides counseling to newcomers regarding housing, employment, and children's school enrollment and teaches Turkish to facilitate social adaptation. The sample of the study consisted of 62 families including 187 children and their parents who were invited to and interviewed in the Association between November 8, 2021 and January 10, 2022. At this stage, a power analysis was conducted to assess whether the sample size was sufficient. According to the post-hoc power analysis, the power of the study was found to be 97% at 0.5% (moderate) effect size and 95% confidence level.

### 3.2 | Measures

The data was collected using the sociodemographic form and the children's anthropometric measurement form. Data collection forms were prepared by the researcher in accordance with the relevant literature (de Onis et al., 2007; World Health Organization, 1995).

**Sociodemographic Data Form:** This form included questions on the characteristics of the parents related to age, gender, educational level, and occupation.

**Children's Anthropometric Measurement Form:** This form was used to record the child's age, gender, head circumference, middle-upper arm circumference, weight, and height. According to WHO and Centers for Disease Control and Prevention (CDC), in addition to height and weight measurement, head circumference of children aged 0–3 years and arm circumference of children aged 3 months–5 years also provide information about failure to thrive (Kuczumarski et al., 2002; World Health Organization, 2022). Within the scope of the study, weight and height of all children were measured. In addition to this, head circumference of the infants, head circumference of the children aged 0–3 years and middle-upper arm circumference of the children aged 3 months–5 years were also measured. The children over the age of 5 years that heights and weights were collected, and the BMI reported.

Measurement values of the children related to their weight, height, and head and arm circumference were transformed into z-score and were assessed according to the reference values specified by the WHO. The WHO recommends the use of the z-score in the assessment of malnutrition (World Health Organization, 1995). The z-score is a standardized form of percentile values and is calculated by dividing the deviation of an individual's anthropometric measurement value from the median value of the reference population by the standard deviation of the reference population (World Health Organization, 2006). In a study, growth curves of school-age children were constructed according to body mass index (BMI), height and body weight percentiles and it was determined that the z-score was consistent with WHO percentile values (de Onis et al., 2007). For weight, height, and BMI, a z-score between  $-1$  and  $1$  was assessed to be normal,  $2$  to be overweight,  $3$  to be obese, whereas a z-score between  $-1$  and  $-2$  was assessed to be stunting and  $-2$  to be severe stunting (World Health Organization, 2008). For head circumference, a z-score between  $-1$  and  $1$  related

**TABLE 1** The z-score criteria for body mass index, head circumference and middle-upper arm circumference.

Measurements	z-score				
	<-2	<-1	Between -1 and +1	>1	>2
Height for age	Severe stunting	Stunting	Normal	-	-
Weight for age	Severe underweight	Underweight	Normal	Overweight	Obes
Head circumference	Microcephaly	-	Normal	-	Macrocephaly
Middle-upper arm circumference	Severe malnourished	Moderately malnourished	Normal	Overweight	Obes
BMI for age	Severe underweight	Underweight	Normal	Overweight	Obes

was assessed to be normal, under  $-2$  to be microcephaly, and above 2 to be macrocephaly. For arm circumference, a z-score between  $-1$  and 1 was assessed to be normal and under  $-2$  to be malnutrition (World Health Organization, 2007) (Table 1).

The data was collected in six different sessions carried out in the Association. One day before each session, the Association authorities called the families and invited them to the Association. In order to exceed the language barrier in collection of the data it was assigned four scholarship students from the nursing department who were of Afghan origin and who had Turkish language proficiency. It trained the students regarding how to measure weight, height, head and middle-upper arm circumference, and complete the surveys. In addition, data collection was carried out in a single room under the supervision of the researcher to ensure consistency between measurements. The researcher checked the way the students performed the measurement and the measurement values in all sessions. By doing so, it was ensured that all measurements were made in the same way.

### 3.3 | Analytic strategy

The data was analyzed with statistical software. In analysis of the data, descriptive statistics such as number, percentage, mean, median, standard deviation, and variance were used. When the distribution of the data was examined, it was determined that the data on the height, weight, and head and middle-upper arm circumference of the children fit the normal distribution.

### 3.4 | Ethics committee approval

Prior to starting the study, it obtained institutional permit from the Governorship of Kırşehir and ethics committee approval from Kırşehir Ahi Evran University Medical Faculty Ethics Committee (Date: 19/10/2021, Decree no: 2021-17/175). Prior to starting the study, all participants were informed about the purpose and subject of the study and verbal consent was obtained. Since most of the participants included in the study were illiterate (Persian and Turkish), the subject and purpose of the study were explained, and their verbal consent was obtained.

## 4 | RESULTS

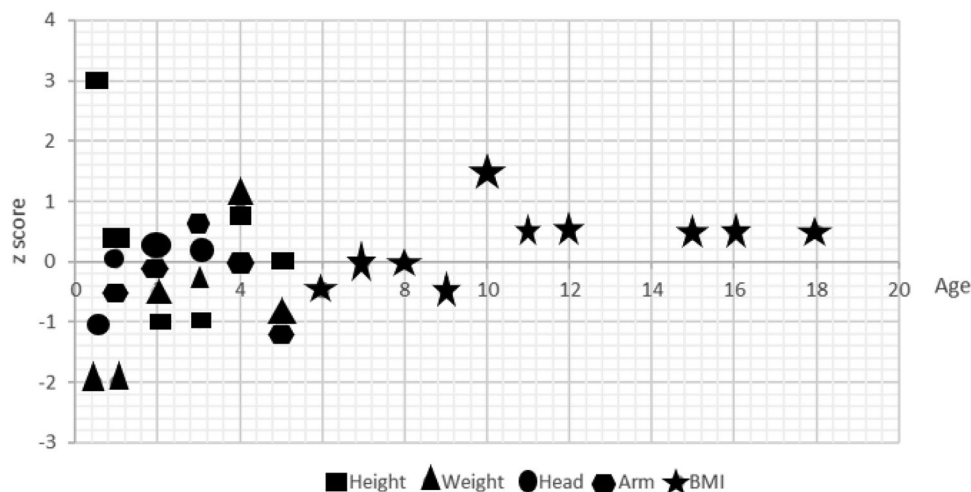
All parents were between 30 and 39 years old. Out of all the parents 69.4% were women and 69.3% had never been to school. 67.8% of the parents were housewives, 27.4% were workers, and 4.8% were unemployed. 57.2% of the children were boys and 42.8% were girls. 2.5% of the children were younger than 1 year old, 26.4% were 1–3 years old, 12.2% were 4–5 years old, 44.9% were 6–12 years old, and 14.0% were 13–18 years old. Reportedly, 89.9% of children had their childhood vaccinations completed, 6.4% had some missing vaccines, and 3.7% were not vaccinated at all.

The z scores for head circumference and body weight in 6-month-old female infants, body weight in 1-year-old female infants, height in girls aged 2–3 years old, and body weight and middle-upper arm circumference in 5-years-old girls were at lower limit ( $-1$ ) or below. Especially, in 12-month-old and younger female infants, the z-score for body weight was  $-2$ . In addition, the BMI value z-score in 10-year-old girls was  $>1$  (Figure 1).

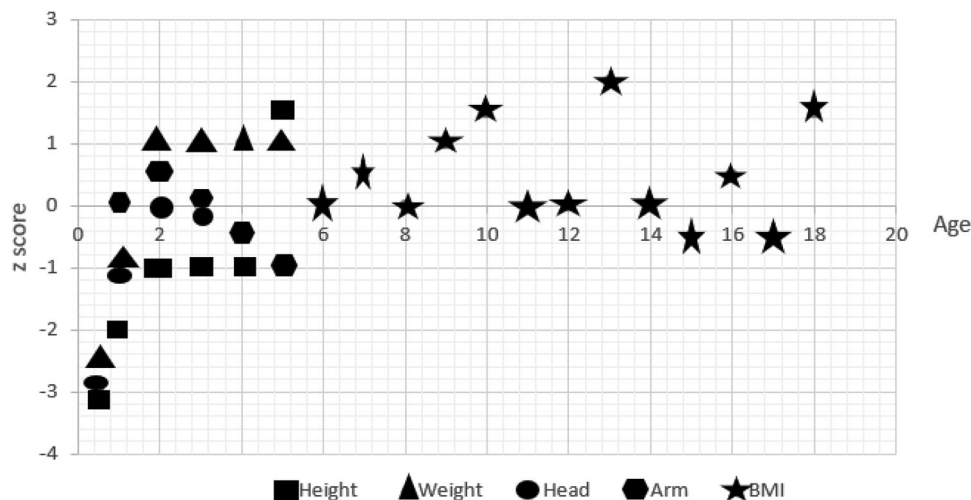
The z-score for body weight was under  $-2$  and for the height and head circumference was  $-3$  in 6-month-old male infants. The z scores for body weight and the head circumference were at lower limit ( $-1$ ) the z score for height was at  $-2$  in one-year-old male infants. The z score for height in boys aged 2–4 years and the middle-upper arm circumference z-score value in 5-years-old boys were at lower limit ( $-1$ ). Especially, in  $\leq 12$ -month-old male infants, the z-scores for body weight, height, and head circumference were  $-2$  and under. In addition, the body weight and BMI value z-score was above 1 in boys aged 10, 13, and 18 years. In the study, although the z scores for body weight and height of boys aged 2–4 years were between normal values, the z score for body weight was at the upper ( $+1$ ) limit and the z score for height was at the lower ( $-1$ ) limit. In 5-year-old boys, although the z scores for weight and height were above the limit value ( $+1$ ), the z score for middle-upper arm circumference was at the lower limit ( $-1$ ) (Figure 2).

## 5 | DISCUSSION

Both adult and children asylum seekers have increased health risks due to having migrated, poverty, stigmatization, living in a crowded household, and inability to access healthcare services (International



**FIGURE 1** Mean z-score distributions related to the weight, height, head and arm circumference and BMI measurements of the girls according to their age ( $n = 80$ ).



**FIGURE 2** Mean z-score distributions related to the weight, height, head and arm circumference and BMI measurements of the boys according to their age ( $n = 107$ ).

Organization for Migration, 2021). In this study, female and male infants aged  $\leq 12$  months faced serious stunting (Figures 1 and 2).

Studies conducted both in Turkey and in different parts of the world in various refugee groups have found that growth and development problems are common in children. In a study conducted with Syrian refugee children in Turkey, it was determined that 19.2% of the children had weight, 31.7% had height, and 1.9% had a head circumference below the third percentile, and 19.2% had chronic malnutrition (Bucak et al., 2017). Another study conducted in Washington reported that wasting and stunting were commonly encountered in refugee children, the wasting prevalence was seven times greater, and the stunting prevalence was four times greater among refugee children than non-refugee children (E. E. Dawson-Hahn, Pak-Gorstein, Hoopes, et al., 2016). Another study conducted on the Thailand–Myanmar border found that stunting and wasting were common among refugee children aged 0–2 years (Hashmi et al., 2019).

Height and weight values, which are important health indicators in children and adolescents, vary significantly from country to country. In some countries, it has been reported that weight gain exceeds height gain in childhood with increasing age (NCD Risk Factor Collaboration, 2020). Similarly, in the present study, it was found that weight was higher compared to height in boys aged 2–4 years, and although weight and height were normal in 5-year-old boys, arm circumference was thinner (Figure 2). More weight gain compared to height gain is known to be an indicator of unhealthy growth and development in children (NCD Risk Factor Collaboration, 2020). Accordingly, it can be said that there is a risk for failure to thrive in boys under 5 years of age in the study group.

According to a study, results show that growth and development problems such as obesity and malnutrition are common in Afghan refugees in European countries (Matsangos et al., 2022). In this study, it was found that boys aged 10, 13, and 18 years and 10-years-old girls

had a risk for being overweight (Figures 1 and 2). It was also determined that children were not vaccinated in their childhood. Similarly, in a systematic review, it has been determined that Afghan refugees living in Iran are frequently seen having various health risks related to nutrition and immunization (Roosbeh et al., 2018).

## 5.1 | Limitations

The findings of this study cannot be generalized to Afghan refugees living in other parts of Turkey or other countries.

## 5.2 | Strengths

This study is important in terms of providing information on the health status of Afghan asylum seekers, an underrepresented and disadvantaged group in Turkey. Furthermore, the findings contribute to the literature in which there are a limited number of studies on the growth and development characteristics of Afghan asylum-seeking children. In addition, the results can contribute to the social, economic, and cultural field in Turkey by providing valuable insights on the future health and social service needs of asylum-seeking children.

## 6 | CONCLUSION AND RECOMMENDATION

In the study, it was found that malnutrition signs were common especially among children under 5 years of age, and children aged  $\geq 10$  years had overweight and obesity signs. The results of this study are important for public health nurses in planning child health protection and promotion initiatives for Afghan refugees. Public health nurses have the authority and responsibility to identify child health problems in refugee groups, planning care and education, and follow-up and monitor health status. Public health nurses assume important roles in identifying factors that threaten child health in refugee groups, monitoring children's growth and development, academic and cognitive skills, psychological and behavioral characteristics, providing families with access to services and resources, organizing education and counseling programs for parents and caregivers, and initiatives in educational institutions. Regular monitoring of the growth and development of children in the refugee population, and planning of initiatives to ensure adequate and balanced nutrition in children, seem to be priority problems for the regions receiving immigration. Child health problems in the refugee population, both in Turkey and around the world, are an issue that should be taken seriously by public health nurses.

In line with these results, public health nurses need to develop their roles of accessing vulnerable and underrepresented groups, keeping their health records and sharing them with local institutions and organizing healthcare services. For this, it is necessary to conduct health screening and follow-up studies for all refugees in society, keep records, and plan health training and protective health interventions

related to risky situations. Public health nurses may plan a variety of social services to meet the nutrition, clothing, play, and early childhood needs of children who constitute a large group within refugee groups. In order to develop women's health, they may plan health trainings and nursing interventions related to family planning, sexual health, pregnancy, and breastfeeding. They may plan nursing services supporting healthy life behaviors for individuals who have a chronic illness or have a risk for them. It is recommended to conduct studies which specify community health priorities for refugees who are a group, whose number is gradually increasing, and whose problems diversify and also recommend to conduct studies which generate projects, programs, and policies.

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## ETHICS COMMITTEE APPROVAL

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## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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## REFERENCES

- American Public Health Association. (2013). *The definition and practice of public health nursing: A statement of the public health nursing section*. American Public Health Association; Retrieved December 05, 2022, from <https://www.apha.org/~media/files/pdf/membergroups/phn/nursingdefinition.ashx>
- Bampoh, V., Thongkhamkitcharoen, M., Dicker, S., Dalal, W., Frerich, E., Mann, E., Porta, C., Siddons, N., Stauffer, W., & Hoffman, S. J. (2020). Nursing practice and global refugee migration: Initial impressions from an Intergovernmental-Academic Partnership. *International Nursing Review*, 67, 334–340. <https://doi.org/10.1111/inr.12588>
- Barata, R. B., & Cassati, A. C. (2011). Social vulnerability and health status: A household survey in the central area of a Brazilian metropolis.



- Cad Saude Publica*, 27, (Sup) s164–s175. <https://doi.org/10.1590/s0102-311x2011001400005>
- Bovill, M., Moore, T., Praditsorn, P., Churak, P., Yone, M. K., Thongprakaidown, R., Parichatkheeree, P., Phaiphupa, S., & Wimonpeerapattna, W. (2021). Nutrition surveillance in Thailand-Myanmar border refugee camps - trends in wasting and stunting over 8 years. *Current Developments in Nutrition*, 5(Suppl 2), 626. [https://doi.org/10.1093/cdn/nzab045\\_008](https://doi.org/10.1093/cdn/nzab045_008)
- Bucak, I. H., Almiş, H., Benli, S., & Turgut, M. (2017). An overview of the health status of Syrian refugee children in a tertiary hospital in Turkey. *Avicenna Journal of Medicine*, 07, 110–114. [https://doi.org/10.4103/ajm.AJM\\_17\\_17](https://doi.org/10.4103/ajm.AJM_17_17)
- Dawson-Hahn, E., Pak-Gorstein, S., Matheson, J., Zhou, C., Yun, K., Scott, K., Payton, C., Stein, E., Holland, A., Grow, H. M., & Mendoza, J. A. (2016). Growth trajectories of refugee and nonrefugee children in the United States. *Pediatrics*, 138(6), e20160953. <https://doi.org/10.1542/peds.2016-0953>
- Dawson-Hahn, E. E., Pak-Gorstein, S., Hoopes, A. J., & Matheson, J. (2016). Comparison of the nutritional status of overseas refugee children with low-income children in Washington State. *PLoS ONE*, 11(1), e0147854. <https://doi.org/10.1371/journal.pone.0147854>
- de Onis, M., Onyango, A. W., Borghi, E., Siyam, A., Nishida, C., & Siekman, J. (2007). Development of a WHO growth reference for school-aged children and adolescents. *Bulletin of the World Health Organization*, 85, 660–667. <https://doi.org/10.2471/blt.07.043497>
- Hashmi, A. H., Nyein, P. B., Pilaseng, K., Paw, M. K., Darakamon, M. C., Min, A. M., Charunwatthana, P., Nosten, F., McGready, R., & Carrara, V. I. (2019). Feeding practices and risk factors for chronic infant undernutrition among refugees and migrants along the Thailand Myanmar border: A mixed-methods study. *BMC Public Health*, 19, 1586. <https://doi.org/10.1186/s12889-019-7825-7>
- Hildebrandt, N., McKenzie, D. J., Esquivel, G., & Schargrodsy, E. (2005). The effects of migration on child health in Mexico [with comments]. *Economía*, 6(1), 257–289. <https://doi.org/10.1353/eco.2006.0009>
- International Blue Crescent. (2021). Initial assessment of the current situation of Afghan refugees in Turkey. International Blue Crescent. Retrieved April 05, 2022, from <https://reliefweb.int/report/turkey/initial-assessment-current-situation-afghan-refugees-turkey-international-blue>
- International Organization for Migration. (2021). *World Migration Report*. McAuliffe, M., & Triandafyllidou, A., (eds.). International Organization for Migration. Retrieved April 10, 2022, from <https://worldmigrationreport.iom.int/wmr-2022-interactive/>
- Kuczarski, R. J., Ogden, C. L., Guo, S. S., Grummer-Strawn, L. M., Flegal, K. M., Mei, Z., Wei, R., Curtin, L. R., Roche, A. F., & Johnson, C. L. (2002). 2000 CDC Growth Charts for the United States: Methods and development. *Vital and Health Statistics*, 11(246), 1–190.
- Langer, S. L., Gonzalez-Castro, F., Chia-Chen, A. C., Davis, K. C., Joseph, R. P., Kim, W., Larkey, L., Lee, R. E., Petrov, M. E., Reifsnider, E., Youngstedt, S. D., & Shaibi, G. Q. (2021). Recruitment and retention of underrepresented and vulnerable populations to research. *Public Health Nursing*, 38, 1102–1115. <https://doi.org/10.1111/phn.12943>
- Matsangos, M., Ziaka, L., Exadaktulos, A. K., Klukowska-Rötzler, J., & Ziaka, M. (2022). Health status of Afghan refugees in Europe: Policy and practice implications for an optimised healthcare. *International Journal of Environmental Research and Public Health*, 19(15), 9157. <https://doi.org/10.3390/ijerph19159157>
- NCD Risk Factor Collaboration (NCD-RisC). (2020). Height and body-mass index trajectories of school-aged children and adolescents from 1985 to 2019 in 200 countries and territories: A pooled analysis of 2181 population-based studies with 65 million participants. *Lancet*, 396, 1511–1524. [https://doi.org/10.1016/S0140-6736\(20\)31859-6](https://doi.org/10.1016/S0140-6736(20)31859-6)
- Olsen, E. M. (2006). Failure to thrive: Still a problem of definition. *Clinical Pediatrics*, 45(1), 1–6. <https://doi.org/10.1177/000992280604500101>
- Perrin, E. C., Cole, C. H., Frank, D. A., Glick, S. R., Guerina, N., Petit, K., Sege, R., Volpe, M. V., Lau, J., McFadden, C. A., Chew, P., DeVine, D., & Miller, K. (2003). Criteria for determining disability in infants and children: Failure to thrive. *Evidence Report/Technology Assessment*, 72, 1–5.
- Republic of Turkey. Minister of Interior. (2013). *Law on foreigners and international protection numbered 6458*. Republic of Turkey, Minister of Interior; Retrieved December 14, 2022, from <http://www.resmigazete.gov.tr/eskiler/2013/04/20130411-2.htm>
- Roosbeh, N., Sanati, A., & Abdi, F. (2018). Afghan refugees and immigrants health status in Iran: A systematic review. *Journal of Clinical and Diagnostic Research*, 12(9), 1–4. <https://doi.org/10.7860/JCDR/2018/34869.12001>
- UNICEF. (2022). *RM Child-Health: Safeguarding the health of refugee and migrant children in Europe*. UNICEF; Retrieved March 30, 2022, from <https://www.unicef.org/eca/rm-child-health-safeguarding-health-refugee-and-migrant-children-europe>
- United Nations High Commissioner of Refugees. (2021a). *Global trends forced displacement in 2021*. United Nations High Commissioner of Refugees; Retrieved December 14, 2022, from <https://www.unhcr.org/62a9d1494/global-trends-report-2021>
- United Nations High Commissioner of Refugees. (2021b). *Inter-agency protection sector needs assessment analysis*. United Nations High Commissioner of Refugees; Retrieved March 30, 2022, from <https://reliefweb.int/report/turkey/turkey-inter-agency-protection-sector-needs-assessment-analysis-round-4-june-2021>
- United Nations High Commissioner of Refugees. (2022a). *Afghanistan*. United Nations High Commissioner of Refugees; Retrieved December 14, 2022, from <https://www.unhcr.org/afghanistan.html>
- United Nations High Commissioner of Refugees. (2022b). *Refugee statistics*. United Nations High Commissioner of Refugees; Retrieved December 14, 2022, from <https://www.unhcr.org/refugee-statistics/download/?url=EqjP14>
- World Health Organization. (1995). *Physical status: The use of and interpretation of anthropometry*. Report of a WHO Expert Committee. Retrieved December 14, 2022, from <https://apps.who.int/iris/handle/10665/37003>
- World Health Organization. (2006). *Child Growth Standards: Length/height-for-age, weight-for-age, weight-for-length, weight-for-height and body mass index-for-age: Methods and development*. World Health Organization; Retrieved March 30, 2022, from <https://www.who.int/publications/i/item/924154693X>
- World Health Organization. (2007). *Child Growth Standards: Head Circumference-For-Age, Arm Circumference-For Age, Triceps Skinfold-For-Age and Subscapular Skinfold-For-Age: Methods and Development*. World Health Organization; Retrieved March 30, 2022, from <https://apps.who.int/iris/handle/10665/43706>
- World Health Organization. (2008). *Child growth standards: Training course on child growth assessment*. World Health Organization; Retrieved March 30, 2022, from <https://apps.who.int/iris/handle/10665/43601>
- World Health Organization. (2018). *Report on the Health of Refugees and Migrants in the WHO European Region*. No Public Health without Refugee and Migrant Health; Retrieved March 30, 2022, from <https://www.euro.who.int/en/publications/abstracts/report-on-the-health-of-refugees-and-migrants-in-the-who-european-region-no-public-health-without-refugee-and-migrant-health-2018>
- World Health Organization. (2022). *Arm circumference for age*. Retrieved December 14, 2022, from <https://www.who.int/tools/child-growth-standards/standards/arm-circumference-for-age>

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