

# Child Maltreatment in Lebanon: Prevalence, Screening and Upgrade of ESCAPE

Jules Joel Bakhos<sup>1,\*</sup>, Ghassan Sleilaty<sup>1</sup>, Bernard Gerbaka<sup>1</sup>, Carole Nehme<sup>1</sup>, Rouba Hamzeh<sup>1</sup>, Charles Chammas<sup>2</sup>, Walid Kheireddine<sup>3</sup>, Gerard Elie Bakhos<sup>1</sup>, Elie Saliba<sup>1</sup>

<sup>1</sup>Hôtel-Dieu de France Hospital, Saint Joseph University, Beirut, Lebanon

<sup>2</sup>Bellevue Medical Center, Beirut, Lebanon

<sup>3</sup>Saint-Georges Hospital, Beirut, Lebanon

## Email address:

jules-j.bakhos@live.co.uk (J. J. Bakhos)

\*Corresponding author

## To cite this article:

Jules Joel Bakhos, Ghassan Sleilaty, Bernard Gerbaka, Carole Nehme, Rouba Hamzeh, Charles Chammas, Walid Kheireddine, Gerard Elie Bakhos, Elie Saliba. Child Maltreatment in Lebanon: Prevalence, Screening and Upgrade of ESCAPE. *World Journal of Public Health*. Vol. 7, No. 1, 2022, pp. 14-21. doi: 10.11648/j.wjph.20220701.13

Received: January 25, 2021; Accepted: February 2, 2021; Published: February 25, 2022

**Abstract:** Child maltreatment is a violation of human rights and includes all forms of abuse against children under 18 years of age. It is the second cause of death in children after accidental trauma and remains an active problem worldwide. In Lebanon, little work is being done nationwide to provide and explain the available screening and reporting tools for child maltreatment. In this study, we assess the diagnostic accuracy of the ESCAPE instrument and its modified version (including one additional question “*Did parents/caregivers take adequate measures?*”) in screening child maltreatment in emergency departments, and calculate the prevalence of child abuse in Lebanon. The present diagnostic accuracy study is performed over 16 months using a convenience sampling on children under the age of 18 who presented to Lebanese emergency departments. Confirmation of maltreatment by the child protection team was considered as the cornerstone to diagnosis. Screening performance characteristics of ESCAPE and ESCAPE-modified were calculated using GPower v3.1 and SPSS v22 soft wares. 411 children with the mean age of 5.7 years were screened (38% girls). 47 children were suspected victims of child abuse (11.4%). 13 children (3.2%) were confirmed victims of child maltreatment. Sensitivity, specificity, positive and negative predictive values of this test, with 95% confidence intervals, were 100% (82.7 – 100), 91.5% (88.4 – 93.9), 27.7% (16.5 – 41.5), and 100% (99.3 – 100) respectively. The additional question added to ESCAPE did not alter the diagnostic performance of the test but was superior in terms of positive predictive value without losing in terms of negative predictive value. In this study, ESCAPE was proven to be an appropriate screening instrument for identifying children at high risk of child abuse, with excellent accuracy. The additional question of “*Did parents/caregivers take adequate measures?*” represents a simpler tool with a higher positive predictive value, to be used after a positive ESCAPE screening to help confirm or reject the diagnosis of child maltreatment in case of doubt.

**Keywords:** Child Maltreatment, Child Abuse Screening, Lebanon, Middle East, ESCAPE Questionnaire

## 1. Introduction

Child maltreatment is the abuse and neglect of children under 18 years of age. It is a violation of human rights [1] and includes all forms of abuse resulting in actual or potential harm to the health, survival, development or dignity of the child in the context of a relationship of kinship, responsibility, trust or power [2, 3]. There are four

common types of child abuse collectively referred to as child maltreatment [4]: physical abuse, sexual abuse, emotional abuse, and neglect.

Scientific evidence from the past 30 years shows that violence against children can lead to social, emotional, physical, cognitive, and behavioral deficiencies, leading to illness, sexually transmitted infections, reproductive, learning, attention and memory disorders, chronic diseases, disability,

social problems and early death [1, 2, 4].

Globally, the problem is immense. In fact, according to the World Health Organization (WHO), 1 in 4 adults has been physically assaulted as a child [5]. In addition, an analysis of survey data on the prevalence of violence against children in 96 countries estimated that one billion children worldwide suffered from psychological, physical or sexual violence in 2016 [3], with only 33% of the studied countries having a child protection system established against maltreatment [6]. In the United States, more than one million children are abused or neglected every year, resulting in approximately 1750 deaths in 2016; placing child abuse at the second rank of death in children after accidental trauma [7].

Furthermore, and according to the Centers for Disease Control and Prevention, child maltreatment is costly [8]. In the United States alone, the economic burden of child abuse was about \$124 billion in 2008 [4], a burden that may slow down the economic and social development of a country [5].

Failure to identify harm caused by child maltreatment and to respond appropriately may expose the child to the risk of further abuse (30%), with potential permanent consequences such as death in 5 to 10% of the cases [9].

Despite considerable efforts by WHO to reduce the prevalence of child abuse, it remains an active problem worldwide [10].

In Lebanon, weak structural capacity and political instability continue to limit full compliance with the Convention on the Rights of the Child (CRC) ratified in 1991 [11-13]. In fact, in 2017, the Lebanese child protection sector reported 10825 cases of child abuse, of which about 90% were assessed as medium to high risk [14].

However, despite the scale of the problem and the apparent high prevalence of child abuse in Lebanon, little work is being done nationwide to provide and explain the available screening and reporting tools for child maltreatment [13], allowing many cases to go undetected with no management nor follow-up [14].

Although such tools have been used sporadically in recent years, their diagnostic accuracy remained debatable [15]. In 2014, ESCAPE was designed as a useful tool for identifying children at high risk of child abuse in emergency departments (EDs) [16], and was proven to be an excellent screening instrument when validated in Iran in 2017 [17].

In this study, we put ESCAPE to the test to assess its diagnostic accuracy in screening child maltreatment in Lebanese EDs. We deliberately add one additional variable (one more question) willing to improve the diagnostic performance of ESCAPE, then called ESCAPE-modified. As secondary objectives, we will try to assess the prevalence of child maltreatment in Lebanon and establish relative characteristics, provide recommendations to spread awareness about the subject, and finally propose ESCAPE or possibly its modified version as a mandatory screening tool to be completed for every pediatric presentation or admission.

## 2. Methods

### 2.1. Study Design

The present study is a cross-sectional diagnostic accuracy validation study of the screening tool ESCAPE (Annex 1), performed on children presenting to Lebanese EDs. ESCAPE-modified (Annex 2) includes a supplementary question (question 3) "*Did parents/caregivers take adequate measures?*". It was implemented in six hospitals covering four of Lebanon's eight governorates: *Hôtel-Dieu de France* (HDF) university hospital in Beirut, *Saint Joseph* (SJ) university hospital in Mount Lebanon, *Bellevue Medical Center* (BMC) university hospital in Mount Lebanon, *Dar El Amal* (DEA) university hospital in the governorate of Beqaa, *Saint George* (SG) hospital in Mount Lebanon, and *Dr. Mounzer El Hajj* (DMEH) hospital in South Lebanon. A greater number of hospitals were targeted to increase the territorial representativeness and sample size, but our iterative attempts were rather unsuccessful to rally them to the study.

Data from ESCAPE questionnaires, gathered between October 2017 and January 2019 (16 months), was used to measure the accuracy of the instrument.

The study was approved by the Medical Ethics Committee of the Saint Joseph University of Beirut: tfem/2018/12.

Researchers adhered to the principles of the Helsinki Declaration and kept patient information confidential during all stages of the study.

### 2.2. Participants

Children under the age of 18 who presented to EDs were enrolled using convenience sampling. The questionnaires were completed for every child presentation, after the visit and physical examination of the patient, with no inclusion or exclusion criteria limiting the sampling.

### 2.3. Data Collection

Upon presentation to the ED, demographic information and admission complaints were recorded, and the ESCAPE-modified questionnaire was filled by the resident/physician after every patient visit and physical examination, with no contact with the children nor their families.

When one or more aberrant ESCAPE answers were noted, the result of the screening was considered positive. In such cases of potential maltreatment, the child was re-examined by the child protection team (when present at the hospital) including a pediatrician and a social worker, being the diagnostic cornerstone to confirm or refute maltreatment.

Two-hour training sessions on child abuse and the completion of ESCAPE were organized in each hospital prior to study enrollment.

### 2.4. Statistical Analysis

The sample size was calculated taking into account the prevalence of maltreatment (2.24% [17]), with a power of 75%, an alpha risk of 5% and a precision around the

prevalence of 2.24%. Using these elements and the exact Fischer test (exact binomial calculation), 400 subjects are needed for the study (GPower v3.1 software).

Data were analyzed using the SPSS v22 software. Quantitative data whose distribution was significantly different from the normal distribution (significant Kolmogorov-Smirnov test) were expressed as median with interquartile range.

Qualitative variables were expressed as percentages whose 95% confidence intervals (CI) were calculated by the exact binomial method based on Jeffrey distributions.

The original ESCAPE test, ESCAPE- modified and question 3 were cross-checked using the exact Fischer test.

Diagnostic performance evaluation included the calculation of the sensitivity, specificity, positive and negative predictive values.

### 3. Results

411 patients were screened for potential child maltreatment. These children were on average 5.7 years old with a median age of 5 (2 – 9), and 38% were girls.

**Table 1.** Frequency of aberrant answers to ESCAPE-modified questions.

Questions	Answers	Count	Percentage
Question 1	Yes	392	95%
	No	19	5%
Question 2	No	389	95%
	Yes	22	5%
Question 3	Yes	395	96%
	No	16	4%
Question 4	Yes	400	97%
	No	11	3%
Question 5	Yes	398	97%
	No	13	3%
Question 6	Yes	403	98%
	No	8	2%
Question 7	No	383	93%
	Yes	28	7%

**Table 2.** Distribution characteristics and screening for maltreatment.

Governorate	Hospital	Count	Percentage	Suspected maltreatment	Confirmed maltreatment
Beirut	HDF	181	44%	25	5
	BMC	86	21%	2	1
Mount-Lebanon	SJ	81	20%	7	0
	SG	17	4%	6	1
Beqaa	DEA	35	9%	3	3
South-Lebanon	DMEH	11	2%	4	3
TOTAL		411	100%	47	13

**Table 3.** Chief complaints upon presentation to emergency departments.

			Percentage	
CHIEF COMPLAINT	Cutaneous rash		7.4%	
	Drug intoxication		2.1%	
	Epilepsy		1.7%	
	Fever		23.2%	
	Firearm wound		1.6%	
	Foreign body aspiration		2.5%	
		gastro-intestinal	13.3%	
	Infection	upper respiratory	5.8%	20.7%
		urinary	1.6%	
	Otalgia		2.9%	
	Other		6.2%	
		physical	48.5%	
	Trauma	road accidents	5%	53.5%

Table 1 shows the frequency of the positive (aberrant) answers to each of the seven ESCAPE-modified questions.

According to our results, 47 children (11.4%) were suspected of abuse, of which 20 (4.9%) had one positive answer, 10 (2.4%) had two positive answers, 10 (2.4%) had three, 2 (0.5%) had four, 2 (0.5%) had five, 2 (0.5%) had six, and only one (0.2%) had seven positive answers.

Based on the multidisciplinary opinion of the team in charge of child protection in each hospital, 13 children (3.16%) in total were confirmed to be victims of abuse (Table 2). Distribution characteristics of the study population are shown in Table 2. In the governorate of Beirut (HDF), 25 cases of maltreatment were suspected with 5 confirmed cases; in Mount Lebanon (BMC, SJ, SG), 15 cases were suspected and 2 confirmed; in the governorate of Beqaa, 3 cases were suspected and confirmed; and finally, in the governorate of South Lebanon, 4 cases were suspected and 3 confirmed (Table 2).

Patients presented to EDs for a wide variety of reasons, often confluent, grouped under 9 main complaints (Table 3). The three most common chief complaints were: trauma (53.5%), fever (23.2%), and infection (20.7%).

Among the 34 positive ESCAPE-modified questionnaires that were not confirmed for child abuse, 16 cases were linked to causes for suspicion of maltreatment: “neglect” in 9 cases

out of 16 (56.2%), “inconsistent lesions with chief complaint” in 4 cases (25%), and “incoherent history” in 3 cases (18.7%). As for the 13 confirmed victims, types of abuse were diagnosed by the team in charge: neglect in 69.2% of the cases and physical abuse in 38.5%.

For those confirmed cases, the second part of Appendix 2 was unequally filled with the following answers: confirmed abuse taking place at home in 100% of the cases (13/13), the child being alone in 23% of cases (reflecting neglect and unsupervised risk behaviors such as firearms handling and balcony exits), and being attended by the biological parents in 60% of cases. As for the time elapsed between the occurrence of the incident and ED presentation, the consultation appears to be rapid in the cases of physical abuse (30 minutes to 2 hours), and delayed in cases of neglect (2 at 10 days). Other characteristics, complaint management, diagnoses, and personal and family history have not been studied.

Sensitivity, specificity, positive and negative predictive values of ESCAPE and ESCAPE-modified tests, with a 95% CI, were respectively: 100% (82.7 - 100), 91.5% (88.4 - 93.9), 27.7% (16.5 - 41.5), 100% (99.3 - 100) (Table 4); identical for both tests.

**Table 4.** Performance characteristics of ESCAPE and ESCAPE-modified tests.

	Sensitivity (95% CI)	Specificity (95% CI)	Positive predictive value (PPV)	Negative predictive value (NPV)
ESCAPE	100% (82.7 – 100)	91.5% (88.4 – 93.9)	27.7% (16.5 – 41.5)	100% (99.3 – 100)
ESCAPE-modified	100% (82.7 – 100)	91.5% (88.4 – 93.9)	27.7% (16.5 – 41.5)	100% (99.3 – 100)
Question 3	53.8% (28.3 – 77.9)	97.7% (95.9 – 98.9)	43.8% (22.2 – 67.4)	98.5% (96.9 – 99.4)

Question 3 added to the original ESCAPE instrument (thus creating ESCAPE-modified) does not alter the diagnostic performance of the test. However, isolated separately, it is superior to ESCAPE in terms of positive predictive value (PPV) without losing in terms of negative predictive value (NPV).

In comparison with the original study of the Netherlands [16] and its validation in Iran [17], our study is comparable in

terms of population fraction, age, specificity (no significant difference) and NPV (Table 5).

Sensitivity and PPV found in our validation are superior to those of the Netherlands [16] and comparable to those of Iran. As for the percentage of confirmed abuses (prevalence of child maltreatment in our study), the number of 3.16% is higher than that of both studies (Table 5).

**Table 5.** Comparison between the three validation studies of ESCAPE.

	Netherlands	Iran	Lebanon
Year	2014	2017	2018
Population	17'283'008	81'160'000	6'093'509
Sample size	18'275	6'120	411
Fraction	0.1%	0.008%	0.007%
Age	5.5	2.19 ± 1.12	5.7 ± 4.2
Female gender	43.0%	52.7%	38.0%
Confirmed abuses	55	137	13
Percentage of abuses	0.30%	2.24%	3.16%
ESCAPE sensitivity	80%	100%	100%
ESCAPE specificity	98%	98.3%	91.5%
ESCAPE PPV	10.4%	25.5%	27.7%
ESCAPE NPV	99.9%	100%	100%
			Question 3
			53.85%
			97.74%
			43.8%
			98.48%

## 4. Discussion

In Lebanon, there is still no data available on the

prevalence of child abuse. Reporting of child abuse remains a fragile system, suffering from multiple shortcomings that require work mobilizing all sectors of the country. The limited availability of preventive

interventions against child maltreatment, its insufficient early identification and reporting by healthcare facilities, and the lack of management coordination between the relevant sectors undermine child protection practices in Lebanon.

In this study, ESCAPE was proven to be an appropriate screening instrument for identifying children at high risk of child abuse, with a PPV and NPV of 27.7% and 100%, excellent figures when compared to the current literature [15-17]. It is therefore an instrument that must be available in all hospitals in Lebanon, to be completed imperatively after every pediatric presentation (given the multiplicity of chief complaints masking maltreatment), for the ultimate detection of cases of abuse.

The additional question of "Did parents/caregivers take adequate measures?" presents a simpler tool than ESCAPE with a higher PPV (43.8% > 10.4% [16]), which is an improvement over previous studies as much by the simplicity and uniqueness of the question as by the optimization of diagnostic performance. It can then be used as a diagnostic tool after a positive ESCAPE screening to help confirm or refute the diagnosis of abuse.

In Lebanon, the prevalence of child maltreatment established in this study (3.2%), is probably underreported [18, 19, 20] and reflects Lebanese territorial urban, financial, social and cultural disparities. This could be related to the fact that most cases detected in emergency settings are generally of physical abuse, while the true rate for other types of abuse is higher, with complaints not always leading to ED consultations. This was the case in our study, where the maltreatments were tagged by neglect and physical abuse, with the cases of sexual and psychological abuses not being diagnosed. Also, this effect can be explained by the Lebanese socio-cultural atmosphere governing the problem of maltreatment in terms of practice tolerance and its non-declaration.

Although the Lebanese territory was not fully covered, with governorates and hospitals not evenly represented, the number of 3.2% remains alarming and suggests a high rate of child maltreatment when compared to other countries [16, 17]. This rate appears to be higher in areas outside Beirut (the capital) and Mount Lebanon. In fact, and according to our study, 100% of the children suspected of maltreatment were victims of abuse at the DEA hospital (3 out of 3 cases) and 75% at the DMEH hospital (3 cases out of 4).

In our study, neglect was found to be the most common form of child maltreatment, as suggested by the international reports [4]. In addition, the characteristics found in the cases of confirmed abuse [presence at home (100%), under parental supervision (60%)], reflect the subject of corporal punishment and violent discipline that is still common in Lebanon. According to the results of a survey conducted by the United Nations Children's Fund (UNICEF) in 2016, 57% of Lebanese children aged 1 to 14 admit to at least some form of psychological, humiliating or physical abuse by a parent [13], with only 5% of the cases

being referred to reception centers, the police or other public institutions.

Other child presentation characteristics, management, diagnoses, personal and family medical history have not been investigated. This can be explained by the non-cooperation of the ED staff, and the time unavailability and pressure that reign in ED settings.

Throughout the study, many limiting factors were encountered: not all Lebanese governorates were covered and those studied were not fairly represented, the convenience sampling (ideally to be random), the cross-sectional nature of the study not allowing the longitudinal monitoring of children, and the lack of socio-medico-cultural data collection of the studied children and their parents (medical/psychological history, socio-economic characteristics, civil status, etc.).

These limiting factors reveal, in fact, an even greater problem, that of the taboo and ignorance of the subject of child maltreatment. A problem that can also be explained by the inequality of participation between the enrolled hospitals and the non-cooperation of many other hospitals and physicians - not mentioned, primarily targeted for study enrollment.

Strengths of the study: this is the first study on ED screening for child abuse in Lebanon, the Middle East and the Arab world, conducted in a multi-centric setting. A large number of ESCAPE instruments were filled, with no inclusion or exclusion criteria (thus increasing the power of the test), with many potential cases identified, and numerous cases confirmed (Table 5). Question 3 alone presents an even simpler tool than ESCAPE with a higher PPV and the same level of NPV, which is an improvement over the previous studies as much by the simplicity and uniqueness of the question than by optimizing the diagnostic performance.

Nevertheless, child maltreatment is a multi-faceted problem that cannot be solved by simple implementation of screening tools. A deeper analysis of the problem is necessary. Therefore, an assessment of the potential etiologies, safety, screening and prevention measures present in the country must be developed in order to generate recommendations for Lebanon and push the country and the region towards a better understanding of the subject of child maltreatment and its management. Adequate collaboration between the private and public sectors is needed for an effective abuse reporting process nationwide.

Furthermore, preventing child abuse can also prevent other forms of violence, as different types of violence are interdependent and share many common risk and protective factors, consequences and prevention tactics.

Recognizing the severity of the problem of child maltreatment and tackling it with a public health approach can prevent child abuse before it starts.

Finally, the equation of child protection cannot stand without the child mobilization; children must be involved, informed and empowered to start the chain of action.

## 5. Conclusion

In this study, ESCAPE was proven to be an appropriate screening instrument for identifying children at high risk of child abuse, with excellent accuracy when compared to the current literature [15-17].

The additional question of “*Did parents/caregivers take adequate measures?*” represents a simpler tool than ESCAPE with a higher PPV (43.8% > 27.7% > 10.4% [16]), which is an improvement over previous studies, suggesting it as a diagnostic tool to be used after a positive ESCAPE screening to help confirm or reject the diagnosis of child maltreatment in case of doubt.

## Abbreviations

BMC: Bellevue Medical Center  
 CI: Confidence Interval  
 CRC: Convention on the Rights of the Child  
 DEA: Dar El Amal hospital  
 DMEH: Dr. Mounzer El Hajj hospital  
 ED: Emergency Department  
 HDF: Hôtel-Dieu de France hospital  
 NPV: Negative Predictive Value

PPV: Positive Predictive Value  
 SG: Saint George hospital  
 SJ: Saint Joseph hospital  
 WHO: World Health Organization

## Ethics Approval and Consent to Participate

The study was approved by the Medical Ethics Committee of the Saint Joseph University of Beirut: tfem/2018/12.

## Competing Interest

We have no conflicts of interest.

## Acknowledgements

We thank the emergency department staff of the following hospitals for their interest and professional cooperation: Hôtel-Dieu de France, Saint Joseph, Bellevue Medical Center, Saint-Georges, Dar Al Amal, and Dr. Mounzer Al Hajj hospitals.

## Appendix

	Yes	No
1. Is the history consistent?		
2. Was seeking medical help delayed?		
3. Does the injury fit with the developmental level of the child?		
4. Is the behavior of the child, his or her caregivers and their interaction appropriate?		
5. Are findings of the head-to-toe examination in accordance with the history?		
6. Are there other signals that make you doubt the safety of the child or other family members? * If Yes, describe the signals in the box “Other comments” below.	*	
<u>Other comments</u>		

Figure 1. Original ESCAPE.

ESCAPE-modified		Yes	No
1. Is the history consistent?			
2. Was seeking medical help delayed?			
3. Did parents/caregivers take adequate measures?			
4. Does the injury fit with the developmental level of the child?			
5. Is the behavior of the child, his or her caregivers and their interaction appropriate?			
6. Are findings of the head-to-toe examination in accordance with the history?			
7. Are there other signs that make you doubt the safety of the child or other family members? * If Yes, describe the signals in the box "Other comments" below		*	
Other comments			
Child abuse situation substantiated?			
If the answer was <b>Yes</b> , please state the type of abuse:			

#### Maltreatment characteristics (if confirmed)

Age of child: \_\_\_\_\_

Nature of injury/maltreatment: Physical | Sexual | Psychological | Neglect | Other: \_\_\_\_\_

Time of injury/maltreatment: \_\_\_\_\_

Location of incident: Home | Relative house | Friend's house | School | Kindergarten | Other: \_\_\_\_\_

Child was attended or alone? Attended | Alone  
If the **child was not alone**, state the relationship of the attending person: Mother | Father | Sister | Brother | Grandfather | Grandmother | Aunt | Uncle | Family friend | Friend | Teacher | Maid | Other: \_\_\_\_\_

Reaction of the caregiver after the injury?  
Neglect | Homecare | Pharmacy consultation | Delayed medical care | Other: \_\_\_\_\_

When was medical care sought (elapsed time after the injury)? \_\_\_\_\_

Figure 2. ESCAPE-modified.

## References

- [1] Raman, S., Muhammad, T., Goldhagen, J., Gerbaka, B., Spencer, N. J., Bhutta, Z. A., Danielle, D. (2018). Ending violence against children: a call to action. *The Lancet Child & Adolescent Health*, 2 (5), 312–313.
- [2] WHO. Global status report on violence prevention 2014. Geneva: World Health Organization; 2014.
- [3] Hillis S, Mercy J, Amobi A, et al. Global prevalence of past-year violence against children: a systematic review and minimum estimates. *Pediatrics*. 2016; 137 (3): e20154079.
- [4] Fortson B, Klevens J, Merrick M, Gilbert L, Alexander S. (2016). Preventing Child Abuse and Neglect: A Technical Package for Policy, Norm, and Programmatic Activities. Atlanta, GA: National Center for Injury Prevention and Control.
- [5] Preventing child maltreatment: a guide to taking action and generating evidence. [http://apps.who.int/iris/bitstream/10665/43499/1/9241594365\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/43499/1/9241594365_eng.pdf).

- [6] Svevo-cianci, K. A., Hart, S. N., & Robinson, C. (2010). Child Abuse & Neglect: protecting children from violence and maltreatment: a qualitative comparative analysis assessing the implementation of U. N. CRC Article 19. *Child Abuse & Neglect*, 34 (1), 45-56.
- [7] Child abuse and neglect: Risk and protective factors. Centers for Disease Control and Prevention. <https://www.cdc.gov/violenceprevention/childabuseandneglect/riskprotectivefactors.html>. Accessed Aug. 7, 2018.
- [8] Preventing Multiple Forms of Violence: A Strategic Vision for Connecting the Dots. (2016). Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- [9] Skellern C, Donald T. Suspicious childhood injury: formulation of forensic opinion. *J Paediatr Child Health*. 2011; 47 (11): 771–775 pmid: 20598073.
- [10] Krug EG., Mercy JA, Dahlberg LL, Zwi AB. World report on violence and health. *Lancet*. 2002 Oct 5; 360 (9339): 1083-8.
- [11] SCS, ALEF, Nabaa, Soul, Bayti, IBCR "Violence Against Children in Schools: A Regional Analysis of Lebanon, Morocco, and Yemen" 2011.
- [12] Samad, ZA (2003). "Millennium Development Goals: Lebanon Report." UNDP. p. 16.
- [13] Child Rights Situation Analysis, Lebanon. Report commissioned by Save the Children Sweden. November 2011.
- [14] El-Jardali F., Abou Samra C., Hilal N. K2P Briefing Note: Strengthening Child Protection Practices in Healthcare Institutions in Lebanon. Knowledge to Policy (K2P) Center. Beirut, Lebanon; April 2018.
- [15] Louwers EC, Affourtit MJ, Moll HA, de Koning HJ, Korfage IJ. Screening for child abuse at emergency departments: a systematic review. *Archives of disease in childhood*. 2010; 95 (3): 214–8.
- [16] Louwers EC, Korfage IJ, Affourtit MJ, Ruige M, van den Elzen AP, de Koning HJ, et al. Accuracy of a screening instrument to identify potential child abuse in emergency departments. *Child abuse & neglect*. 2014; 38 (7): 1275–81.
- [17] Dinpanah H, Pasha AA. Potential Child Abuse Screening in Emergency Department; a Diagnostic Accuracy Study. *Emerg (Tehran)*. 2017; 5 (1): e8.
- [18] Hidden in plain sight: a statistical analysis of violence against children. New York: United Nations Children's Fund; 2014.
- [19] Stoltzenborgh MA, van Ijzendoorn MH, Euser E, Bakermans-Kranenburg MJ. A global perspective on child sexual abuse: Meta-analysis of prevalence around the world. *Child Maltreatment*. 2011; 16: 79–101.
- [20] Stoltzenborgh MA, Bakermans-Kranenburg MJ, van Ijzendoorn MH, Alink LR. Culturalgeographical differences in the occurrence of child physical abuse? A meta-analysis of global prevalence. *International Journal of Psychology*. 2013; 48: 81–94.