

# Suspected child abuse and neglect cases in a single tertiary hospital in Malaysia - a 5-year retrospective study

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## ABSTRACT

**Background:** Published reports by the Social Welfare Department of Malaysia suggests that child abuse and neglect cases has been steadily increasing. There is a lack of basic data and qualitative study on child maltreatment in Malaysia.

**Objective:** The aim is to describe the pattern and demographic features of all suspected child abuse and neglect (SCAN) cases seen in a single tertiary hospital in Malaysia over a period of five years.

**Methods:** A retrospective descriptive review of children suspected of maltreatment, aged 0 to 18 years old who presented to the Hospital Serdang (HS), Selangor, Malaysia from January 2014 to December 2018 was done. A list of registered SCAN cases obtained from One Stop Crisis Centre (OSCC) HS census. Clinical information of patients was retrieved from the computerised database.

**Results:** In all, there were a total of 391 SCAN cases over five years with almost a 3-fold increase in the number of cases from 2014 to 2018. Physical abuse was the most common (55%) seen followed by sexual abuse (34%) and neglect (10%). There were four deaths, all involving infants <1 year old who were physically abused by babysitters. The main perpetrator in sexual abuse were people known to the victim. Ninety-three percent of patients were neglected by their biological parents and more than 2/3rd of neglect cases occurred due to inadequate supervision.

**Discussion:** Child maltreatment is an inevitable burden to our health system and infants are the most vulnerable group to sustain significant injuries leading to death and disabilities.

## KEYWORDS:

*Physical abuse, Sexual abuse, Neglect, Maltreatment*

## INTRODUCTION

Child abuse and neglect is a widespread global phenomenon causing significant impact to the health and safety of children around the world. Under the Malaysian Child Act 2001, child abuse is defined as "any potential risk of a child being physically, sexually, emotionally injured or neglected in terms of adequate care, supervision and safety". A research commissioned by the United Nations International Children's Emergency Fund (UNICEF) in 2015 found that child maltreatment also contributes to the economic burden of

many countries in East Asia and Pacific region, costing approximately USD 209 billion per year.<sup>1</sup> Based on published data by the Social Welfare Department of Malaysia, child abuse and neglect cases has been steadily increasing over the years from 934 reported cases in 2000 to 4982 cases in 2016.<sup>2</sup> Despite this alarming trend, a systematic review published by UNICEF in 2012 showed that scientific researches on child maltreatment are limited and Malaysia was particularly reported to have a lack of basic data and qualitative study on child maltreatment.<sup>3</sup> There are no recent published studies looking at childhood deaths and morbidities resulting from abuse or neglect.<sup>4</sup>

Therefore, we aim to describe the pattern and demographic features of all suspected child abuse and neglect (SCAN) cases seen in Hospital Serdang (HS), Selangor, Malaysia over a period of 5 years and highlight cases that resulted in death or in serious injuries and identify the common risk factors in different types of abuse.

World Health Organization (WHO) defines child abuse or maltreatment as "all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment or commercial or other exploitation, resulting in actual or potential harm to the child's health, survival, development or dignity."<sup>5</sup>

Physical abuse is classified as any intentional action that uses physical force against a child resulting in harm and injuries to the victim.<sup>6</sup> Physical violence can be on body parts such as by pinching, slapping, punching, scratching, shaking, kicking and biting including using hard objects to cane, hit, scald, burn or poison. Extreme corporal punishment which forces children to stay in uncomfortable positions or forced ingestion of unpleasant substances such as soap or hot spices are also classified as physical abuse. In this study, physical injuries is divided into four main categories namely, soft tissue injuries, intracranial bleed, fractures and burns.

Child sexual abuse involves any act that exploits a child to satisfy the perpetrators sexual needs without the child being able to give informed consent or understand the consequences of the sexual activity.<sup>5</sup> Sexual abuse can include any type of sexual harassment even without genital penetration, acts such as molest involving inappropriate touching, indecent exposure to pornographic materials, or sexual grooming. Penetrative sexual abuse occurs in rape and sodomy which is defined as forceful penetration into vagina and anus, respectively.

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Under the Malaysian Law, children aged below 16 years old who engages in sexual intercourse regardless of whether with or without consent are considered to be victims of statutory rape. In this study, patients with history suggestive of sexual abuse were included if there was a high degree of suspicion although there may not be any positive findings from physical examination. Positive physical examinations include pregnancy, hymen tear, unexplained injuries, redness, or abrasions over private part.

Neglect is defined as any action that deprived a child from receiving their basic needs in terms of health, education, emotional development, nutrition, shelter, and safe living conditions which can result in potential physical or psychological harm of the child.<sup>5</sup> Neglect can be caused by a caregiver who is fully aware of his or her actions but consciously chooses not to provide the best care for the child. In contrast, there are caregivers who did not intend to harm the child but unknowingly acted in a way that imposed risk to the health and safety of the children.

## MATERIALS AND METHODS

This is a retrospective descriptive review conducted among children aged 0-18 years old that presented to Hospital Serdang (HS), Selangor Malaysia from January 2014 to December 2018, suspected to be victims of child abuse and neglect. We took the upper limit of 18 years of age based on definition of a child as outlined in the Child Act 2001. In accordance to standard protocol in HS, any child suspected to be victim of abuse or neglect will be triaged to the One Stop Crisis Centre (OSCC) and referred to SCAN Team. List of all the registered SCAN cases were obtained from the OSCC census database.

A health practitioner from the SCAN team will then review the patients within 24 hours. A detailed history taking, and thorough physical examinations will be conducted. Information obtained during the consultation will be stored in the computerised database. Further information on the demographics, types of abuse, injuries sustained, suspected perpetrators, location of incident, family background, and other potential risk factors of the patients that might lead to the abuse and clinical outcome were collected from this computerised database.

Data analysis was performed using Microsoft Excel and SPSS software. Ethical approval obtained from Medical Research & Ethics Committee (MREC), Ministry of Health Malaysia prior to initiation of study [NMRR-19-3594-46283 (IIR)].

The primary end point was to identify trend of SCAN cases over the five years and to identify any potential contributing risk factors.

## RESULTS

### Baseline demographics

In all, there were a total of 391 SCAN cases registered. A significant increase was noted from 42 cases in 2014 to 116 and 98 cases in 2017 and 2018 respectively (Figure 1).

The basic demographic details of patients are listed in Table I. There is a slightly higher number of females with 221 cases

involving girls and 170 cases involving boys. There were 89 (23%) infants <1 year old but the majority of the patients were between 1 to 12 years old (64%) with the mean age of 5 years old. About 70% of the victims were Malays followed by 15% Chinese and 9% Indians. Physical abuse was most common (55%, n=216) followed by sexual abuse (33%, n=130) and neglect (10%, n=41). There were 4 cases of combined physical and sexual abuse. Throughout the study period, there were 4 deaths recorded. The most common perpetrators overall were biological parents (30%) and babysitters (26%).

### Physical abuse

There was a total of 216 physical abuse cases with 63 patients (29%) aged <1 year old, 64 children were physically abused using external objects or weapons as shown in Table II. Majority of the patients sustained soft tissue injuries (n=134, 62%). Of the 29 patients who sustained intracranial bleed, 23 patients were infants <1 year old. The major perpetrator causing physical injuries to infants were babysitters and caretakers (n=51, 81%). More than half of these infants had unknown mechanism of injury and of these, four infants died, and one had long term morbidity as listed in Table III.

For older children aged 1 to 12 years old, out of 135 physical abuse cases, 69 cases were caused by parents (59 cases by biological parents, 10 cases by stepparents). Eighty-one cases (60%) occurred in the victim's own house. A total of 25 cases involved babysitter or caretaker which showed a marked difference compared to the trend seen in infants. No death or long-term morbidities from physical abuse were recorded in the older age groups. Older children were noted to have less severe injuries compared to infants. There were 17 patients in this study with no documented physical injuries although they were suspected to be victims of physical abuse. These cases involved parental marital conflict or custody battles where parents made police report against each other accusing their partner of physical abuse but there were no positive signs detected on the child during consultation and examination.

### Sexual Abuse

There was a total of 130 sexual abuse cases recorded in our study. Majority of the victims were females (85%) and Malays aged between 5 to 12 years old. The three types of sexual abuse commonly seen were molest (37%), rape (30%) and sodomy (15%) as highlighted in Table II. The main perpetrators in sexual abuse were people known to the victim (84%). There were at least 20 cases involving perpetrators aged less than 10 years old. In 13 cases, suspect was unknown and not identified by victim. Younger children below 12 years old were sexually abused mainly by family members or relatives while for the older children, majority of the perpetrators were acquaintances or friends. Most of the sexual offences also occurred in places familiar to the victims. Half of the sexual abuse cases (51%) had no positive findings on physical examination despite suggestive history as depicted in Table II. Out of the 40 rape victims, 23 of them had partial or complete hymen tear. There were two teenage pregnancy cases resulting from statutory rape.

### Neglect

There were 41 cases of neglect reported with increasing number of cases each year. Eighty-eight patients aged <5

years old and 93% of them were neglected by their biological parents. Out of these, 18 cases resulted in serious injuries with six cases of fractures and four cases each of intracranial bleed, burn injury and drowning (Table II). There were also 15 cases of abandoned babies by unmarried, single mothers. There were two cases of neglect in terms of health where parents refused basic medical treatment for their children, causing further deterioration of the patient's condition. However, parents who refused routine vaccination for their children were not reported under negligence as this issue is still under debate with no compulsory legislation as to date.

#### Risk factors in different types of abuse

The three main categories of risk factors identified in different types of abuse in this study were patient factors, parental factors, and environmental factors. (Table IV).

Parental factor was the most common influence seen in physical abuse among children between 1-12 years old. In all, 69 cases occurred due to broken families, marital conflict, or domestic violence. A total of 14 parents admitted having difficulty to control their emotion and temper causing them to treat their children harshly in the name of discipline. Ten parents were under the influence of alcohol or drug during the physical abuse. Children with behavioural issues (n=9), chronic illness (n=1) or disabilities (n=3) were also noted to be victims of physical abuse by parents.

Physical abuse among infants <1 year old mainly involved risk factors associated with the external environment. In all, 39 children were sent to unregistered nursery or new babysitters with inadequate staff and supervision. Some parents did not have sufficient information regarding the qualification of caretaker, number of children in the nursery, and the presence of other adult in the caretaker's home. There were at least six such cases where parents never met the babysitter and only had information about them from social media and online groups.

Poor sexual education awareness was one of the contributing factors identified in sexual abuse and statutory rape in the adolescent age groups. Victims reported that they did not understand the consequences of their actions and were not aware that they were abused sexually. Only two teenagers interacted with their perpetrators through online dating platforms, but the other victims said they met the suspect either in school, tuition classes or through mutual friends.

In contrast to the adolescent victims, majority of the sexual abuse cases involving younger children occurred due to lack of supervision by parents or caretakers (n=30). These children were often left alone in the presence of adults who took advantage of their vulnerability. There were 21 incest cases committed by trusted family members like father, uncle, brother, grandfather, and cousin. Another five cases involved perpetrators in a respectable position with good image in society such as tuition teachers, religious leaders, and family friends. Other common factors that were observed in sexual abuse cases include broken family and marital conflict. However, in about one quarter of the sexual abuse cases (29%), no specific risk factors were identified as the victims may have been too young to understand and express the maltreatment that they experienced.

**Table I: Baseline demographics of SCAN victims in Hospital Serdang from 2014 to 2018**

Demographic Data	n = 391 (%)
<b>Gender</b>	
Male	170 (43.5%)
Female	221 (56.5%)
<b>Age (years)</b>	
<1	89 (22.8%)
1-4	127 (32.5%)
5-12	124 (31.7%)
>12	51 (13.0%)
<b>Race</b>	
Malay	272 (69.6%)
Chinese	61 (15.6%)
Indian	36 (9.2%)
Others (Malaysian)	6 (1.5%)
Foreigners	16 (4.1%)
<b>Types of Abuse</b>	
Physical Abuse	216 (55.2%)
Sexual Abuse	130 (33.2%)
Combined Physical and Sexual Abuse	4 (1.1%)
Neglect	41 (10.5%)
<b>Parental Marital Status</b>	
Married	289 (73.9%)
Separated/Divorced	89 (22.8%)
Single mother, Unmarried	13 (3.3%)
<b>Perpetrators</b>	
Biological Parents	117 (30.0%)
Stepparents	16 (4.1%)
Siblings/Relatives	26 (6.6%)
Babysitters/Caretakers	103 (26.4%)
Boyfriend/Girlfriend	5 (1.3%)
Known people	85 (21.7%)
Strangers	8 (2.0%)
Unidentified suspect	31 (7.9%)
<b>Location of incident</b>	
Own House	150 (38.4%)
Relative's/Friend's House	27 (6.9%)
Babysitter's House, Nursery/Day-care	119 (30.4%)
Kindergarten/School	27 (6.9%)
Others	31 (7.9%)
Unknown	37 (9.5%)

In all, 58% of neglect cases occurred due to parental factors such as lack of supervision, carelessness, or poor parenting skills (Table IV). There were six cases of children who fell from height leading to significant fractures and intracranial bleeds, but no mortalities were recorded. There were also four cases of drowning caused by children left unsupervised in bathrooms and swimming pools. In all these cases, parents claimed that they were not aware that their actions could cause harm and injures to their children. There was a significant lack of knowledge among parents regarding child safety.

Neglect in terms of education, health and abandoned babies were noted in families with poor socioeconomic status due to inability to cope with the care and supervision responsibilities. Four children were neglected by parents who were under substance abuse while another five cases of neglect happened in broken families. Table IV highlights all the major risk factors identified in different types of abuse.

**Table II: Mechanism of injury and injuries sustained in different types of abuse**

Abuse Type (n, %)	Mechanism of Injury (n, %)	Injuries sustained (n, %)
<b>Physical</b> (n=216, 55.2%)	Shaken Baby Syndrome (n=22, 10.2%) Without using Objects (n=57, 26.4%) Using Objects (n=64, 29.6%) Burning / Scalding (n=3, 1.4%) Unknown Mechanism (n=70, 32.4%)	Soft Tissue Injury (n=134, 62%) Fractures (n=33, 15.3%) Intracranial Bleed (n=29, 13.4%) Burns (n=3, 1.4%) No physical injuries (n= 17, 7.9%)
<b>Sexual</b> (n=130, 33.2%)	Non penetrating/Molest (n=48, 36.9%) Rape (n=40, 30.8%) Sodomy (n=19, 14.6%) Unknown mechanism (n=23, 17.7%)	Vaginal redness / abrasion (n=35, 26.9%) Hymen tear (n=23, 17.7%) Pregnancy (n=2, 1.5%) Anal excoriation (n=4, 3.1%) No physical findings (n=66, 50.8%)
<b>Neglect</b> (n=41, 10.5%)	Baby dumping (n=15, 36.6%) Health (n=2, 4.9%) Education (n=2, 4.9%) Physical (n=14, 34.1%) Unknown mechanism (n=8, 19.5%)	Soft Tissue Injuries (n=6, 14.5%) Fractures (n=6, 14.5%) Intracranial Bleed (n=4, 9.8%) Burns (n=4, 9.8%) Drowning (n=4, 9.8%) No physical injuries (n=17, 41.6%)

**Table III: Details of children <1 year old that were suspected to be physically abused leading to mortality and significant morbidity**

Patient Details	Diagnosis	Risk Factors	Outcome
Age: 5 months Gender: Female Race: Malay	Aspiration pneumonia and Hypoxic Ischemic Encephalopathy	New babysitter with inadequate experience	Death
Age: 5 months Gender: Female Race: Malay	Subdural haemorrhage with cerebral oedema	Unregistered babysitter, Significant delay in bringing patient to hospital	Death
Age: 8 months Gender: Male Race: Indonesian	Intracranial bleed with left occipital bone fracture	New babysitter with no formal training	Death
Age: 10 months Gender: Female Race: Malay	Subdural haemorrhage with left parietal bone fracture	New babysitter found through social media	Death
Age: 8 months Gender: Male Race: Malay	Subdural haemorrhage with developmental delay	New babysitter found through online website	Permanent Disability

**Table IV: Risk factors identified in different types of abuse**

Risk factors in different types of abuse	Physical (n=216) (n = 21, 9.7%)	Sexual (n=130) (n = 15, 11.5%)	Neglect (n=41) (n = 2, 4.9%)
<b>Patient Factors :</b>			
Behavioral issues	9	1	0
Adopted child	8	3	1
Disability	3	3	0
Chronic illness	1	1	1
Poor awareness on sexual education	0	7	0
<b>Parental Factors:</b>	<b>(n = 106, 49.1%)</b>	<b>(n = 51, 39.2%)</b>	<b>(n = 24, 58.5%)</b>
Marital conflict	15	3	0
Broken families	45	21	5
Domestic Violence	9	0	0
Poor emotion	14	0	0
Poor parenting skills	8	0	1
Lack of supervision	5	24	14
Substance abuse	10	30	4
<b>Environmental Factors:</b>	<b>(n = 51, 23.6%)</b>	<b>(n = 27, 20.8%)</b>	<b>(n = 10, 24.4%)</b>
Unregistered nursery	16	9	2
Lack of supervision in nursery	16	6	0
Peer pressure	0	1	0
Social media and technology influence	6	2	0
Religious inadequacy	0	1	0
Inadequate resources and facility	7	0	0
Unsafe environment	4	5	0
Poor socioeconomic	2	3	8
Unknown Risk Factors	(n = 38, 17.6%)	(n = 37, 28.5%)	(n = 5, 12.2%)

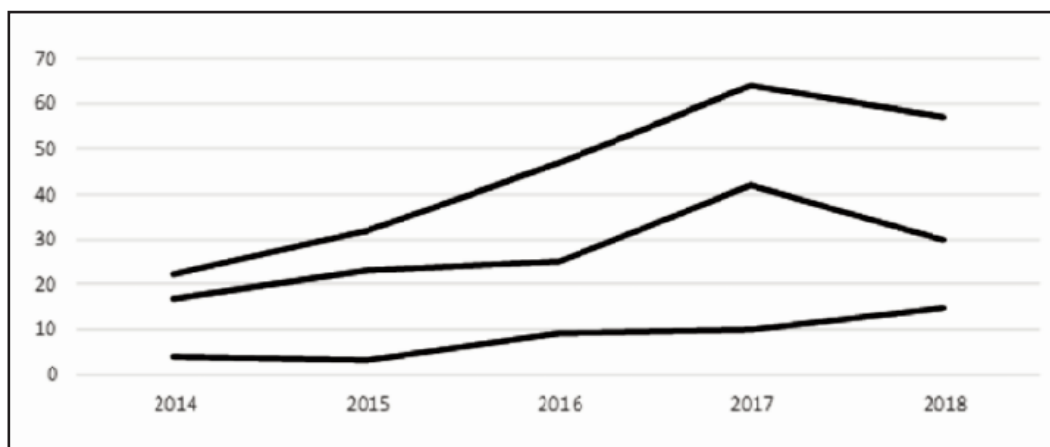


Fig. 1: SCAN cases from 2014-2018 in Hospital Serdang.

## DISCUSSION

Child abuse and neglect cases has been significantly increasing as reflected in our study and also supported by official data from the Department of Social Welfare, Malaysia and this could be due to improved awareness among society regarding child maltreatment resulting in higher number of reported cases over the years.<sup>2</sup>

HS is a multi-specialty tertiary hospital providing medical care to over 570,000 residents around Serdang, Putrajaya, Kajang, and Bangi area in Malaysia with a median household income of RM8174.<sup>7</sup> The sample population in this study mainly represent the urban and sub-urban population in Selangor, a state that has the highest number of child maltreatment cases in Malaysia.<sup>8</sup>

A review on child abuse in Malaysia published in 2016 reported that boys experienced higher number of physical, emotional and sexual abuse.<sup>4</sup> A large survey conducted in 2015 among primary school children in Selangor also reported that boys were at higher risk for child maltreatment but that study did not include sexual abuse.<sup>9</sup> In our review, we had a slightly higher number of female victims (56%) compared to males (44%). Teenage girls who were victims of sexual abuse and statutory rape could have contributed to the higher number of females in our study. As for ethnic distribution, no significant differences were noted, and the results were consistent with our percentages of ethnic distribution in Malaysia.

Majority of suspected child abuse and neglect victims were aged <5 years of age. Similar trend is also observed in a retrospective study conducted in the University of Malaya where 86.1% of the victims were <3 years old.<sup>10</sup> The most common perpetrator of the abuse as reported in our results were biological parents and this finding is consistent with other researches in the past.<sup>4</sup>

### Physical abuse in infants

Our study revealed that infants were mainly abused physically by babysitters causing severe injuries which also led to deaths and long-term morbidities. A 16 year retrospective study conducted in a forensic department

concluded that the most common death in infants are shaken baby syndrome resulting from cranial and cerebral injuries.<sup>10</sup> Most of the time, these children are brought in to hospitals dead and may not be registered under the SCAN registry. Therefore, the reported cases may not even reflect the true incidence.

Many parents are aware of the increasing number of child maltreatment and have expressed high level of anxiety when their child has to be cared by others.<sup>11</sup> However, due to economic burden and high living cost, many parents have to work full time and are forced to send their children to caretakers. Online information often influences the decision of parents when choosing caretakers for their children as reported by parents. Some parents believe that a good review or rating on the internet is a proof of the credibility of the caretakers. Unfortunately, the profiles displayed in the online media were often not accurate. Working parents should make sure that their caretakers are legally registered and follows the standard operating procedure.

Relevant authorities should also regulate strictly all nurseries and private babysitters. Government could amend new regulations to ensure employers provide a compulsory licensed nursery at workplace to assist working parents. We also recommend young working mothers to be given optional leave up to one year so that they can care for their infants on their own. This may help to curb the risk of physical abuse leading to morbidity and mortality in infants.

### Physical abuse in older children aged between 1 to 12 years old

Toddlers are often victims of parental physical maltreatment as highlighted in this study. Domestic violence and marital conflict are major factors contributing to physical abuse inflicted by parents.<sup>9,12</sup> Work pressure and financial burden are major stressors to many young adults in the urban and suburban area leading to anger, depression, anxiety and other mental health issues. As a result, family harmony is disrupted and often children from these broken families become the victims of abuse and other social problems as they do not receive adequate love, care, and supervision.

Knowledge and education on mental health care should be incorporated into school curriculum to help the younger generation to cope better with the increasing pressure and stressful environment. Pre-marital workshop could also be helpful to prepare young adults to anticipate challenges involved in marriage and parenthood. These measures might help in reducing physical abuse inflicted by parents.

Physical abuse caused by bullying may be underrepresented as we only had three documented cases of bullying in school and no reported cases of cyber bullying. However, one survey among secondary school children in Negeri Sembilan with a total sample of 1364 children found that more than half of the kids experienced harassment in the form of online aggression.<sup>13</sup> Therefore, further evaluation is needed for a more comprehensive discussion in this area of interest.

### Sexual abuse

The main victims for sexual abuse were girls aged between 5 to 12 years old. Similar finding was also expressed in a self-administered survey conducted in a nursing school which revealed that 38.1% of sexual abuse crimes occurred in children below 10 years old.<sup>14</sup> We also found that most of the childhood sexual abuse cases involved perpetrators known to the victims. The increasing number of juvenile and adolescent sex offenders is also a concern as these perpetrators may also be victims of abuse themselves.

Some of the risk factors associated with increased risk of child sexual abuse are females, being left alone with the perpetrator without supervision, unemployment and substance abuse which was similar to our findings.<sup>15</sup> Effective sexual education and awareness is of utmost importance to minimise pre-marital sex and teenage pregnancies.

Many of our victims did not have any positive physical findings on examination, similar to a retrospective study conducted in the Hospital Universiti Sains Malaysia, Kelantan. It was found that only 17.6% out of 284 laboratory specimens taken from sexual abuse victims yielded positive results.<sup>16</sup> Young children may not clearly articulate the maltreatment that they had experienced.<sup>17</sup> However, it is important to have a high degree of suspicion to prevent under reporting of cases. Physicians should always evaluate mental and emotional status of patients and not just focus on physical findings because many of these children may not have evidence of physical injuries but could demonstrate significant emotional and psychological impact.

### Neglect

Childhood injury is the second most common cause of death among children aged 1-4 years in Malaysia and 40% of these injuries occurred during absence of adult supervision.<sup>18</sup> However, there are no published data specifically focusing on injuries in children resulting from parental neglect or carelessness. A database on childhood morbidity and mortality resulting from inadequate parental supervision or neglect are not available in Malaysia.<sup>4</sup> In this review, we identified a number of cases involving unintentional drowning, accidental burn injuries, preventable falls, accidental poisoning, and motor vehicle accidents. Awareness on child maltreatment resulting from parental negligence should be emphasized in the community.

Combined efforts are needed to educate parents to minimise preventable accidents and injuries.

This 5-year retrospective study had a large number of patients and included all SCAN victims that presented to our hospital within the research period. Although this is a single centre study, no other recent research had such large sample size and to our knowledge, no other studies have outlined detailed qualitative description of abuse or neglect cases resulting in mortality and significant morbidity. There were no previous published studies that focused on the types of abuse, injuries sustained, or sites of abuse.<sup>4</sup> In this study, we highlighted the risk factors in cases which involved serious injuries, permanent disability and also death.

Children who are neglected, physically or sexually abused often suffer from emotional trauma. However, we were unable to highlight the extent of emotional abuse in this study. We lacked psychological evaluation as many patients defaulted their counsellor follow up. Inpatient psychological assessment could not be provided for all victims due to limited resources. We recommend future studies to incorporate emotional, psychological, and mental health assessment of victims for a more holistic management approach. Based on our data collection from computerised database, we found that the majority of cases are attributed to maltreatment caused by the children's guardian and caretakers. We do not have sufficient information from the clinical histories of patients to suggest other external factors such as exposure to pornographic materials, pre-marital sex with multiple partners, cyber bullying or sexual grooming although we feel that these are significant issues to be highlighted. The main reason for this could be due to lack of emphasis on this topic during the initial clerking and history taking. Parents may not have volunteered such information if not asked specifically due to cultural stigma and taboo. Therefore, there could be an under representation of data.

Future studies should include control groups with similar characteristics for a more accurate statistical comparison of various risk factors. Prospective study with long term follow-up of the victims can also be considered to evaluate the true impact of child abuse and neglect to the victims. Another suggestion for future research would be to include the outcome of prosecuted cases to give a better understanding on the effectiveness of our legal system in providing justice to victims of child maltreatment.

### CONCLUSION

Child abuse and neglect is definitely becoming an inevitable burden to our public health system. This study concludes that the number of child maltreatment are increasing over the years with physical abuse being the most common type of abuse followed by sexual abuse and neglect. Infants <1 year old are the most vulnerable group to sustain significant injuries from physical abuse by caretakers leading to death and long-term morbidities. Effective public health strategy to minimise child abuse and neglect cases in the future depends on combined efforts of parents, teachers, society, government and every stake holder involved in child health care and safety.

## REFERENCES

1. United Nations International Children's Emergency Fund (UNICEF) East Asia & Pacific. Estimating the economic burden of violence against children in East Asia and the Pacific, June 2015.
2. Ministry of Women, Family and Community Development Malaysia, Department of Social Welfare Statistics Report 2016.
3. United Nations International Children's Emergency Fund (UNICEF). A systematic review of research on prevalence, incidence and consequences of child maltreatment in the East Asia and Pacific Region. Measuring and Monitoring Child Protection Systems : Proposed Core Indicators for the East Asia and Pacific Region, Strengthening Child Protection Series No. 1, Bangkok, 2012
4. Cheah IG, Choo WY. A Review of Research on Child Abuse in Malaysia. *Med J Malaysia* 2016; 71(Suppl 1): 87-99.
5. World Health Organization. Report of the consultation on child abuse prevention, 29-31 March 1999, WHO, Geneva. World Health Organization; 1999.
6. United Nations International Children's Emergency Fund (UNICEF). United Nations Convention on the Rights of the Child, 1989. Geneva, Switzerland, November 1989.
7. Department of Statics, Malaysia. Report of Household Income and Basic Amenities Survey 2016
8. Cheah IGS CW. Child maltreatment prevention: Readiness assessment in Malaysia. University of Malay a Press 2013.
9. Ahmed A, Wan-Yuen C, Marret MJ, Guat-Sim C, Othman S, Chinna K. Child maltreatment experience among primary school children: A large scale survey in Selangor state, Malaysia. *PLoS ONE* 2015; 10(3): e0119449.
10. Mutty O, Ming CJ, Ezani MA, Yan PK, Yon TC. Physical injuries in fatal and non-fatal child abuse cases: A review of 16 years with hands on experience of 2 years in Malaysia. *International Journal of Medical Toxicology & Legal Medicine* 2006; 9(1): 33-43.
11. Amin SM, Rameli MFP, Ab Hamid N, Razak AQA, Wahab NAA. Labour supply among educated married women influenced by children. *Journal of Global Business and Social Entrepreneurship (GBSE)* 2016; 2(4): 110-7.
12. Choo WY, Dunne MP, Marret MJ, Fleming M, Wong YL. Victimization experiences of adolescents in Malaysia. *J Adolesc Health* 2011; 49(6): 627-34.
13. Choo W, Marret M. Cyberbullying on the social networks. 10th Asia Pacific Regional Conference on Child Abuse and Neglect, 25-28th October 2015, Royale Chulan Hotel, Kuala Lumpur. 2015.
14. Singh HS, Yiing WW, Nurani HN. Prevalence of childhood sexual abuse among Malaysian paramedical students. *Child Abuse Negl* 1996; 20(6): 487-92.
15. Kassim K, Kasim MS. Child sexual abuse: Psychosocial aspects of 101 cases seen in an urban Malaysian setting. *Child Abuse Negl* 1995; 19(7): 793-9.
16. Islam MN, See KL, Ting LC, Khan J. Pattern of sexual offences attended at accident and emergency department of HUSM from year 2000 to 2003: A retrospective study. *Malays J Med Sci* 2006; 13(1): 30-6.
17. Tan GM, Mohd Awal NA. Interviewing Child Witnesses of Child Sexual Abuse Cases. *International Journal of Asian Social Science* 2018; 8(7): 354-66.
18. Ismail Z. Childhood injury prevention in Malaysia: Make It Safe for Kids (MISK). *Southeast Asian J Trop Med Public Health* 2014; 45(Suppl 1): 53-6.