ORIGINAL ARTICLE

Sexual assault cases presenting in One Stop Crisis Centre of a tertiary hospital in Malaysia: A retrospective study

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ABSTRACT

Introduction: Sexual assault is a serious social problem. Due to its stigma, it is severely underreported with the survivors delay in seeking treatment. We aim to study the patterns, clinical characteristics, and time taken to manage sexual assault cases in our One Stop Crisis Centre (OSCC), and determine the factors associated with delayed presentation.

Materials and methods: This was an observational case review study of all sexual assault cases from 2012-2017 at the OSCC of a suburban, tertiary hospital in Malaysia. A total of 304 cases were analysed.

Results: The median age of the survivors was 15 years old. Majority were females (n=291, 95.7%), single (n=290, 95.4%), students (n=235, 77.3%), and from low socio-economic class (n=230, 75.7%). Rape constitutes the majority (n=246, 80.6%) with 153 cases (62.1%) were statutory rape. The most common perpetrator was the victim's boyfriend (n=107, 35.2%) while only 60 cases (19.7%) involved strangers. Delayed presentations were more likely among victims who previously knew their perpetrators (AOR 2.53, 95% CI: 1.37 to 4.68, *p*<0.01). The median duration for management at OSCC was 6.48 hours.

Conclusion: Majority of sexual assault survivors were females, teenagers, and from low socio-economic class. Rape, mainly statutory rape, made the majority of cases. Therefore, sexual and safety education targeting primary intervention should be started early. Multidisciplinary teams must work together to optimise the management of sexual assault.

KEYWORDS:
Sexual assault, emergency department, woman, delayed presentation

INTRODUCTION

Sexual assault is a serious social problem. Although it may sound more like a public health issue, it has long become an important focus in the emergency care settings. Since its implementation in 1996, the examinations of sexual assault survivors are centred at One Stop Crisis Centre (OSCC) in the emergency department (ED) of government and university hospitals in Malaysia.[1]

Prior to the establishment of OSCC services, survivors were handled on ad-hoc basis. The development of OSCC services provides a holistic approach to ensure a continuity of care in a single unit. All involved agencies and multidisciplinary teams will be reviewing the survivors at one centre rather than sending the survivors to multiple different units. It aims to provide optimal multidisciplinary care and multilevel crisis intervention to the survivors from the crisis period to the rehabilitative phase, at the same time safeguarding their confidentiality and privacy. Another important objective of the centre is to ensure appropriate management of medico-legal evidence.

Due to its negative stigma, this topic is usually reserved, making it severely underreported with the survivors delay in seeking appropriate management. There is limited data and analysis produced on the pattern of sexual assault throughout Malaysia, let alone in the east-coast region which is more isolated and largely of rural areas.

The first objective of this study is to identify the demographic and social factors of the sexual assault survivors, their relationship with the perpetrators, and the assault characteristics. Secondly, we aim to determine the factors associated with delayed presentation. The final purpose of this study is to analyse the time taken for a complete management of the sexual assault cases at the ED level.

These data will provide information about the survivors' background and experience, creating better awareness of the characteristics which are more at risk of being sexually victimised. This greater understanding may in various ways aid not only the medical staff but also the social workers, counsellors, and police officers to approach the survivors as one whole person, rather than just a patient with mere physical injuries. The findings will also benefit the government in delivering better public health and sexual education to certain target groups, as well as the in-hospital multidisciplinary teams to improve their services.

MATERIALS AND METHODS

Sampling method and data collection

We conducted an observational case review of all sexual assault survivors seen from 1st January 2012 to 31st January 2017 at our suburban, academic tertiary centre ED with an approximate annual attendance of 62,000 patients. The

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study duration was to obtain enough sample size to increase the power of the study to 0.8. Throughout the study duration, the census of 365 victims who were classified as alleged rape or statutory rape, incest, sodomy, child and geriatric sexual abuse, attempted rape, molestation and sexual harassment in the OSCC registry were taken as initial sample. Their medical records were reviewed after gaining ethical approval from the Human Research Ethical Committee, Universiti Sains Malaysia (study protocol code USM/JEPeM/17020074) and written permission from the Hospital Director. To ensure the confidentiality of the victims, the name list was only known to one researcher and all the patient identifications in the data collection form were coded.

The data were extracted using a standardised data collection form which included the demographic of the survivors and the incident details, as well as the duration of management in OSCC (Figure 1); that is the duration from registration at triage to their dispositions, whether being admitted, discharged home, or provided a temporary shelter. However, out of the 365 cases from the census, 61 (16.7%) were excluded due to unobtainable case notes (45 cases, 12.3%), mislabelling of sexual assault at registration (6, 1.6%), and insufficient data significant to the study (10, 2.7%), leaving a total number of 304 cases being analysed.

Data analysis

Data were entered and analysed using Statistical Packages for Social Science (SPSS) version 24.0. We used frequency and cross-tabulation analysis to describe patterns of the socio-demographic variables of the victims and the clinical characteristics of the events as well as to report mean, median, and skewness of the duration of a survivor being managed in OSCC. Simple and multiple logistic regression were used to determine the factors that were associated with delayed presentation. Variables with p values of < 0.25 from simple logistic regression (univariate analysis) were selected for multivariate analysis, in which a p value of < 0.05 is considered as statistically significant when the confounders were controlled. Forward and backward likelihood ratio (LR) were applied to run the multivariate analysis. The final classification table is 54.3% correctly classified with area under receiver operating characteristics curve of 56.9%.

Variable definitions

Sexual assault refers to the act of rape, sodomy, molestation, or sexual harassment. Rape refers to the penetration of vagina by any body part or object, without the valid consent of the victim.[2] Rape of a victim aged less than 16 years old, with or without consent is, by law defined as statutory rape.[1,2] Sodomy is a sexual intercourse between two person by introduction of penis into the anus, and is a crime, consented or not.[1] Molestation means any sexual conduct that involves physical touching against the will of the victim but does not include penetration of vagina, anus, or oral, whereas sexual harassment is that does not involve physical touching.[1]

The terms sexual assault survivor and victim are used interchangeably, referring to the ED attendees who were registered for being alleged sexually assaulted as aforementioned, bearing in mind these cases were just based on reports and complaints of the survivors but not the actual court decision whether they were true crimes. Socio-economic groups are divided into low, middle, and high class according to the Department of Statistics Malaysia definitions.[3]

There are multiple definitions of early and late presentation of sexual assault cases based on previous studies. Most similar studies clearly defined delayed presentation as presenting after 72 hours following a sexual assault.[4-6] Some other studies took different values as cut-off point to describe the time of presentation, ranging from 12 hours to 1 week, and most of these only use the time limit to group the study subjects and did not clearly define them as early or late presentation.[7-10]

In our study however, the term delayed presentation will be based on the 'One Stop Crisis Centre: Policy and Guidelines for Hospitals' published in 2015 by the Malaysia Ministry of Health. According to the guideline, the cut-off points to differentiate acute (fresh) and cold cases for rape and sodomy are 72 and 120 hours, respectively.[1] Presentation of rape cases beyond 72 hours and of sodomy cases beyond 120 hours after the sexual assault are therefore designated as late or delayed presentation. When a victim survived rape and sodomy simultaneously, she will be categorised as rape due to the lower value taken to distinguish between fresh and cold cases. The aforesaid guideline however does not define fresh and cold cases for molestation and sexual harassment; therefore 72 hours will be taken as the cut-off point for other sexual assault types (molestation and harassment) as per most similar studies.

RESULTS

There was no obvious yearly or monthly pattern in the number of our OSCC visits for sexual assault. Total attendance was 365 cases from the registry of study period although only 304 were further analysed; the highest annual attendance was 86 cases in 2015, and the lowest 52 cases in 2016. There was 71, 76, and 72 cases presenting to us in 2012, 2013, and 2014, respectively. Majority of cases were rape (n=246, 80.9%), followed by molestation (n=42, 13.8%), sodomy (n=13, 4.3%), and sexual harassment (n=3, 1.0%).

Demographic pattern of survivors

Out of 304 cases studied, there were only two victims that were not Malay, one was Chinese, and the other was a Siamese. The median age was 15 years old with positive skewness (1.3) while the mean age was 14.89 ± 5.35, ranging from 1 to 42 years old. Almost half of the victims originated from Besut district, Terengganu (n=139, 45.7%), approximately half came from Kelantan; highest from Bachok district (n=86, 28.3%), followed by Kota Bharu (n=67, 22.0%), Pasir Puteh (n=18, 5.9%), Machang (n=3, 1.0%), and other districts in Kelantan (n=11, 3.6%). The rest 10 cases or 3.3% were those who came from outside Kelantan and Besut district of Terengganu. Further details of the demographic variables of the survivors are tabulated in Table I. Data on parental marital status of the victims were not available in 30 cases (9.9%). Otherwise, we found that around one-fifth of victims had divorced parents (n=65, 21.4%) and one-tenth with either parent passed away (n=31, 10.2%), with the rest had married parents (n=178, 58.5%). More than half of total

Table I: Demographic characteristics of sexual assault victims

Variables	Early presentation (n=165) n (% within type of assault*)				Late presentation (n=139) n (% within type of assault*)				Total (%) (N=304)
	Rape	Sodomy	Molestation	Sexual harassment	Rape	Sodomy	Molestation	Sexual harassment	
Age (years)									
≤ 12	9 (6.6)	7 (77.8)	10 (55.6)	0 (0.0)	12 (11.0)	4 (100.0)	17 (60.7)	1 (50.0)	57 (18.8)
13–15	76 (55.5)	1 (11.1)	3 (16.7)	0 (0.0)	56 (51.4)	0 (0.0)	5 (17.9)	0 (0.0)	140 (46.1)
16–17	30 (21.9)	0 (0.0)	2 (11.1)	1 (100.0)	21 (19.3)	0 (0.0)	2 (7.1)	0 (0.0)	56 (18.4)
≥ 18	22 (13.3)	1 (11.1)	3 (16.7)	0 (0.0)	20 (18.3)	0 (0.0)	4 (14.3)	1 (50.0)	51 (16.8)
Gender									
Female	137 (100.0)	3 (33.3)	17 (94.4)	1 (100.0)	109 (100.0)	0 (0.0)	23 (95.8)	2 (100.0)	292 (96.1)
Male	0 (0.0)	6 (66.7)	1 (5.6)	0 (0.0)	0 (0.0)	4 (100.0)	1 (4.2)	0 (0.0)	12 (3.9)
Marital status									
Single	130 (94.9)	8 (88.9)	17 (94.4)	1 (100.0)	105 (96.3)	4 (100.0)	23 (95.8)	2 (100.0)	290 (95.4)
Married	5 (3.6)	1 (11.1)	1 (5.6)	0 (0.0)	1 (0.9)	0 (0.0)	0 (0.0)	0 (0.0)	8 (2.6)
Divorced	2 (1.5)	0 (0.0)	0 (0.0)	0 (0.0)	3 (2.8)	0 (0.0)	1 (4.2)	0 (0.0)	6 (2.0)
Previous sexual status									
Active	66 (48.2)	1 (11.1)	2 (11.1)	1 (100.0)	46 (42.2)	0 (0.0)	1 (4.2)	0 (0.0)	117 (38.5)
Not active	71 (51.8)	8 (88.9)	16 (88.9)	0 (0.0)	63 (57.8)	4 (100.0)	23 (95.8)	2 (100.0)	187 (61.5)
Education level									
Preschool	3 (2.2)	3 (33.3)	6 (33.3)	0 (0.0)	0 (0.0)	1 (25.0)	3 (12.5)	1 (50.0)	17 (5.6)
Primary school	10 (7.3)	5 (55.6)	5 (27.8)	0 (0.0)	17 (15.6)	3 (75.0)	11 (45.8)	0 (0.0)	51 (16.8)
Secondary school	118 (86.1)	0 (0.0)	6 (33.3)	1 (100.0)	85 (78.0)	0 (0.0)	9 (37.5)	1 (50.0)	220 (72.4)
Tertiary education	2 (1.5)	1 (11.1)	1 (5.6)	0 (0.0)	3 (2.8)	0 (0.0)	1 (4.2)	0 (0.0)	8 (2.6)
Not documented	4 (2.9)	0 (0.0)	0 (0.0)	0 (0.0)	4 (3.7)	0 (0.0)	0 (0.0)	0 (0.0)	8 (2.6)
Occupational status									
Student	110 (80.3)	5 (55.6)	10 (55.6)	1 (100.0)	87 (79.8)	4 (100.0)	17 (70.8)	1 (50.0)	235 (77.3)
Employed	12 (8.8)	1 (11.1)	2 (11.1)	0 (0.0)	7 (6.4)	0 (0.0)	4 (16.7)	0 (0.0)	26 (8.6)
Unemployed	15 (10.9)	3 (33.3)	3 (33.3)	0 (0.0)	15 (13.8)	0 (0.0)	3 (12.5)	1 (50.0)	43 (14.1)

* Because of rounding, some percentages do not total 100

Table II: Clinical characteristics of sexual assault

Variables	Early presentation (n=165) n (% within type of assault*)				Late presentation (n=139) n (% within type of assault*)				Total (%) (N=304)
	Rape	Sodomy	Molestation	Sexual harassment	Rape	Sodomy	Molestation	Sexual harassment	
Place of crime									
Perpetrator's house	35 (25.7)	3 (42.9)	1 (5.6)	0 (0.0)	32 (31.4)	0 (0.0)	6 (25.0)	0 (0.0)	77 (26.2)
Victim's house	15 (11.0)	1 (14.3)	8 (44.4)	0 (0.0)	19 (18.6)	0 (0.0)	4 (16.7)	0 (0.0)	47 (16.0)
Other's house†	30 (22.1)	1 (14.3)	2 (11.1)	1 (100.0)	18 (17.6)	1 (25.0)	3 (12.5)	1 (50.0)	57 (19.4)
School/Workplace	0 (0.0)	0 (0.0)	1 (5.6)	0 (0.0)	1 (1.0)	2 (50.0)	8 (33.3)	1 (50.0)	13 (4.4)
Jungle/Bush/Plantation	16 (11.8)	1 (14.3)	1 (5.6)	0 (0.0)	6 (5.9)	0 (0.0)	0 (0.0)	0 (0.0)	24 (8.2)
Hotel/Guesthouse	6 (4.4)	0 (0.0)	0 (0.0)	0 (0.0)	5 (4.9)	0 (0.0)	0 (0.0)	0 (0.0)	11 (3.7)
Beach	5 (3.7)	1 (14.3)	0 (0.0)	0 (0.0)	3 (2.9)	0 (0.0)	0 (0.0)	0 (0.0)	9 (3.1)
Car	7 (5.1)	0 (0.0)	1 (5.6)	0 (0.0)	3 (2.9)	0 (0.0)	1 (4.2)	0 (0.0)	12 (4.1)
Others	22 (16.2)	0 (0.0)	4 (22.2)	0 (0.0)	15 (14.7)	1 (25.0)	2 (8.3)	0 (0.0)	44 (15.0)
Perpetrator									
Unknown	36 (26.3)	2 (22.2)	5 (27.8)	0 (0.0)	13 (11.9)	0 (0.0)	4 (16.7)	0 (0.0)	60 (19.7)
Boyfriend	57 (41.6)	0 (0.0)	2 (11.1)	1 (100.0)	47 (43.1)	0 (0.0)	0 (0.0)	0 (0.0)	107 (35.2)
Friend	20 (14.6)	0 (0.0)	1 (5.6)	0 (0.0)	17 (15.6)	1 (25.0)	2 (8.3)	1 (50.0)	42 (13.8)
Parent/Grandparent	1 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)	6 (5.5)	0 (0.0)	1 (4.2)	0 (0.0)	8 (2.6)
Step parent/grandparent	2 (1.5)	0 (0.0)	1 (5.6)	0 (0.0)	6 (5.5)	0 (0.0)	3 (12.5)	0 (0.0)	12 (3.9)
Sibling	2 (1.5)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.8)	0 (0.0)	0 (0.0)	0 (0.0)	4 (1.3)
Other relatives	7 (5.1)	0 (0.0)	4 (22.2)	0 (0.0)	5 (4.6)	1 (25.0)	4 (16.7)	0 (0.0)	21 (6.9)
Teacher	0 (0.0)	1 (11.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	7 (29.2)	0 (0.0)	8 (2.6)
Neighbour	2 (1.5)	1 (11.1)	4 (22.2)	0 (0.0)	3 (2.8)	1 (25.0)	0 (0.0)	0 (0.0)	11 (3.6)
Others known to victim	10 (7.3)	5 (55.6)	1 (5.6)	0 (0.0)	10 (9.2)	1 (25.0)	3 (12.5)	1 (50.0)	31 (10.2)
Number of perpetrator(s)									
One	96 (70.1)	9 (100.0)	15 (83.3)	1 (100.0)	85 (78.0)	3 (75.0)	23 (95.8)	2 (100.0)	234 (77.0)
Multiple	41 (29.9)	0 (0.0)	3 (16.7)	0 (0.0)	24 (22.0)	1 (25.0)	1 (4.2)	0 (0.0)	70 (23.0)
Involvement of alcohol/ drugs/weapons									
Yes	12 (8.8)	2 (22.2)	1 (5.6)	0 (0.0)	12 (11.0)	2 (50.0)	1 (4.2)	0 (0.0)	30 (9.9)
No	125 (91.2)	7 (77.8)	17 (94.4)	1 (100.0)	97 (89.0)	2 (50.0)	23 (95.8)	2 (100.0)	274 (90.1)
Was victim defensive?									
Yes	18 (13.1)	0 (0.0)	4 (22.2)	0 (0.0)	11 (10.1)	1 (25.0)	2 (8.3)	0 (0.0)	36 (11.8)
No	119 (86.9)	9 (100.0)	14 (77.8)	1 (100.0)	98 (89.9)	3 (75.0)	22 (91.7)	2 (100.0)	268 (88.2)

* Because of rounding, some percentages do not total 100

† House other than victim's or perpetrator's

Table III: Simple logistic regression for factors associated with late presentation

Variable	B	Crude OR (95% CI)	*p* value
Age (years)	- 0.02	0.99 (0.94, 1.03)	0.49
Age group			
≤ 12	0	1	
13 – 15	- 0.46	0.63 (0.34, 1.17)	0.14
16 – 17	- 0.54	0.59 (0.28, 1.23)	0.16
≥ 18	- 0.22	0.81 (0.38, 1.72)	0.58
Gender			
Female	0	1	
Male	- 0.17	0.84 (0.26, 2.72)	0.77
Previously sexually inactive	0.37	1.44 (0.90, 2.30)	0.13
Socioeconomic status*			
Low class	0	1	
Middle class; non-professional	0.23	1.26 (0.49, 3.20)	0.64
Middle class; professional	- 0.17	0.85 (0.19, 3.87)	0.83
Type of assault			
Rape	0	1	
Sodomy	- 0.58	0.56 (0.17, 1.86)	0.34
Molestation	0.52	1.68 (0.87, 3.25)	0.13
Sexual harassment	0.92	2.51 (0.23, 28.09)	0.45
Known perpetrator (acquaintance)	0.93	2.53 (1.37, 4.68)	< 0.01
Multiple perpetrator	- 0.46	0.63 (0.37, 1.10)	0.10
Involvement of drugs and alcohol	0.19	1.21 (0.57, 2.57)	0.62
Defensive victim	- 0.32	0.73 (0.36, 1.48)	0.38

Abbreviation: B = Regression Coefficient, OR = Odd Ratio, CI = Confidence Interval
*Only 256 cases being included in the analysis for socio-economic status (missing data in 48 cases)

Table IV: The mean and median of duration, in hours, taken in managing sexual assault cases in OSCC according to type of assault

Description	Type of assault	n*	Mean (SD)	Median (IQR)	Skewness
Registration to clerking	Overall	268	1.69 (2.34)	1.02 (1.32)	5.27
	Rape	216	1.63 (2.40)	1.00 (1.22)	5.76
	Sodomy	11	2.51 (2.96)	1.93 (1.82)	1.98
	Molestation	38	1.68 (1.65)	0.98 (1.65)	2.10
	Sexual harassment	3	3.05 (3.01)	1.88 (-)	1.48
Clerking to referral	Overall	147	1.47 (2.05)	1.00 (0.80)	4.41
	Rape	121	1.50 (2.12)	1.00 (0.83)	4.53
	Sodomy	7	1.67 (3.10)	0.50 (0.67)	2.59
	Molestation	18	1.26 (1.06)	1.04 (0.77)	2.03
	Sexual harassment	1	0.58 (0.00)	0.58 (-)	-
Referral to decision of disposition	Overall	116	3.67 (3.94)	2.73 (2.58)	3.71
	Rape	101	3.37 (3.22)	2.75 (2.55)	4.55
	Sodomy	7	6.60 (5.99)	4.27 (10.92)	0.63
	Molestation	7	5.32 (8.54)	2.67 (2.05)	2.54
	Sexual harassment	1	2.05 (0.00)	2.05 (0.00)	-
Decision of disposition to actual disposition	Overall	205	1.46 (1.54)	1.02 (1.07)	3.91
	Rape	170	1.41 (1.52)	1.02 (1.05)	4.59
	Sodomy	11	1.22 (0.88)	0.98 (0.77)	1.28
	Molestation	22	2.02 (1.94)	1.19 (2.77)	0.97
	Sexual harassment	2	0.56 (0.08)	0.56 (-)	-
Total duration (registration to disposition)	Overall	205	7.61 (4.77)	6.48 (3.40)	3.29
	Rape	170	1.69 (2.34)	1.02 (1.32)	5.27
	Sodomy	11	1.63 (2.40)	1.00 (1.22)	5.76
	Molestation	22	2.51 (2.96)	1.93 (1.82)	1.98
	Sexual harassment	2	1.68 (1.65)	0.98 (1.65)	2.10

SD = standard deviation, IQR = interquartile range.
* Total number of cases analysed differs due to missing data.

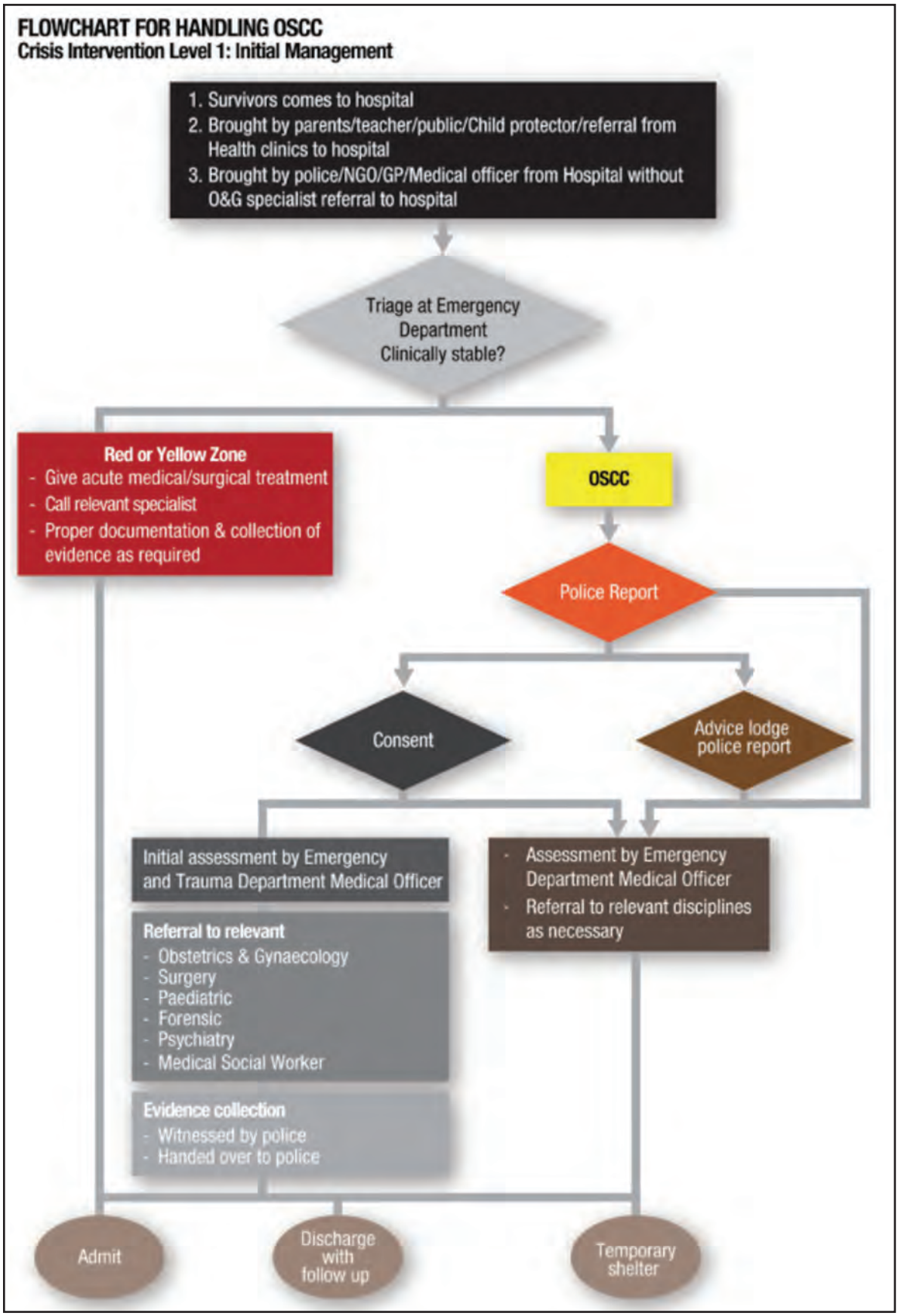

Fig. 1: Flowchart for handling One Stop Crisis Centre (OSCC).1 Duration of management in OSCC refers to duration from registration at triage to disposition of survivors. Source: One Stop Crisis Centre: Policy and Guidelines for Hospitals. Malaysia: Ministry of Health Malaysia, July 2015.

victims analysed were brought up by both parents (n=169, 55.6%), and majority stayed within nucleus family (n=245, 80.6%).

Clinical characteristics of sexual assault

The clinical characteristics of sexual assault cases including the victim–perpetrator relationship were summarised in Table II. Out of 246 rape cases, 153 (62.1%) were statutory rape. In general, majority of the assailants were known to the victims. Only 60 cases (19.7%) were committed by strangers. Majority of victims claimed they were not defensive during the assault, and even when they did so, it was only evident in 8 or 22.2% of those defensive victims.

Factors associated with delayed presentation

Among the 304 encounters, the time elapsed from assault to ED presentation ranging from 77 minutes to 1 year. Only 43 (14.1%) presented very early (less than 12 hours) post sexual assault. Another 122 cases (40.1%) presented in between 12 and 72 hours, 12 (3.9%) presented within 72 to 120 hours, and 127 (41.8%) presented more than 120 hours. When these cases are classified further into early and late disclosure by the definition for each type of assault (refer to variables definition in methodology), we found that 165 (54.3%) did present early, leaving 139 victims (45.7%) presenting late.

When the confounders were not adjusted, the crude odd ratios from simple logistic regression analysis of variables potentially associated with delayed disclosure were shown in Table III. At univariate analysis, age group, previous sexual status, type of assault, victim–perpetrator relationship, and number of perpetrators were important variables associated with late presentation (p value ≤ 0.25). All these five variables were selected for further analysis to control the confounders.

From multivariate analysis, there was a significant association between victim–perpetrator relationship towards late presentation. Victims who previously knew their perpetrators (acquaintance cases) had 2.53 times the odds to delay presentation when compared to the victims who were assaulted by strangers (95% CI: 1.37 to 4.68, $p < 0.01$). Other factors did not significantly contribute to the late disclosure of sexual assault victims.

Duration of management in OSCC

Overall, the mean duration of sexual assault survivors managed at OSCC was 7.61 ± 4.77 hours (n=205) with median of 6.48 hours (skewness 3.29) before being admitted for further evaluation (n=220, 72.4%) or discharged home (n=84, 27.6%). Details of the duration spent for each management process, overall and according to type of cases, were illustrated in Table IV. Our study showed that the longest time taken was during the review by respective teams (refer Figure 1). This was approximately 2.7 times the duration spent waiting to be seen by ED doctor, the duration of first clerking (from clerking to referral), and the duration of waiting to be admitted after being seen by all teams. With exclusion to ED team, more than half of the cases were seen by four different managing teams (n=175, 57.6%). Otherwise, cases were referred to one (n=2, 0.7%), two (n=34, 11.2%), three (n=80, 26.3%), and at most five respective departments (n = 13, 4.3%).

DISCUSSION

The incidence of sexual assault was higher in female teenagers' group, and this finding is consistent with many international literatures including the previous national studies done in Hospital Universiti Sains Malaysia and Hospital Kuala Lumpur.[11,12] We also noticed that majority of the perpetrators were known to the victims, which included victims' boyfriends and family members, similar to the previous studies mentioned.[11,12] However, there is a decreasing trend in the median age of the victims at presentation, which was 22.4 years old in the study in Hospital Kuala Lumpur in 2005, compared to 15 years old in our study. At this age, they begin to develop the secondary sexual characteristics and explore their own sexual identity. A prevalence study by Ahmad et al. in 2012 found that 8.3% of adolescents aged 12 to 17 years had sexual intercourse at least once, which suggested a four times increased prevalence compared to 2010.13 Among these, 50.6% had their first intercourse before the age of 14.[13] The intercourse might be consensual but lawfully, it is considered statutory rape as legal age of consent for sexual relationship is 16 years old for female,[1,14,15] contributing to the higher number of female victims and rape cases being reported among teenagers.

Cultural, socioeconomic, and educational disparities are usually the contributing factors to the sexual health and education of these adolescents, on top of parental involvement and peer influence. In Malaysia, sexual education is still a taboo, even though there have been efforts on making it a proper subject in schools. The importance of this could not be emphasised more by our study, which found that 84.3% rape victims were school-aged children. Sexual education programs in schools may include teaching of consent, healthy relationship, dating violence, coercion, and refusal skills. A study done in the US found that the states with sexual education program or curriculum prior to graduation have the lowest rates of rape, while the states with the highest rate of rape have policies which do not support sexual education as part of graduation. 16 Another study suggests that school-based sexual education with training in refusal skills was a protective factor and recommends that pre-college sexuality education may be effective in preventing sexual assault.[17]

Although the introduction of sexual education here in Malaysia is thought to encourage pre-marital sexual activity which is against the religious and moral values of most Malaysians, it actually did not hasten the initiation of sex but rather delayed it.[18] It is important to instil the correct concept of sexuality and sexual activities at earlier age before being misled by irresponsible media, especially in this era where sex information is readily available electronically. Young children should also be introduced to what kind of 'touch' is wrong and the importance of letting the parents or a trusted person know if there has been any breach. All of these are some of the many objectives that should be emphasised in the sexual education program.

Early presentation of sexual assault survivors to the OSCC is very crucial. It allows early assessment and management of physical injuries and nonphysical stress that might be life-threatening and provides ample time for the prevention of

other complications such as HIV post-exposure prophylaxis and emergency contraception, which are more effective when delivered sooner. There is also a greater chance of obtaining critical forensic evidence and better injury documentation with early presentation, which are generally believed to be imperative for a successful legal prosecution.[19,20]

There are few reasons to explain why the victims of sexual assault present late. Fear of perpetrator, fear of minor victim, scared of not being trusted by family or relatives, being held captive by perpetrator, intoxication, mental retardation, sick or injured, lack of faith in criminal justice system, and distance from sexual assault service centre were among the reasons identified by Adefolalu to explain why sexual assault survivors delay their presentation.[4] Younger victims might not understand what constitutes sexual assault. Other reasons can be due to fear of the stigma and its effect in the later life, as well as of the daunting medical and legal procedures. The acquired data showed that acquaintance cases were more likely to delay presentation, like what have been reported globally.[7] The victims might worry that they would jeopardise the perpetrators who are known to them, let alone if they were their own family members. This explains why in some cases, a victim can repetitively be assaulted sexually by the same person before lodging a report.

The longer the duration taken to completely manage a sexual assault case, the longer the stressful period for the traumatised victims is. Getting a proper history and addressing the survivors with good communication skills are inevitably time-consuming. This justifies why the process of clerking and review by respective teams took time, especially when there can be as many as five different disciplines reviewing the victim. Thorough clerking and proper referrals are vital in delivering the best treatment to the survivors physically and emotionally, hence it is only appropriate to allow as much time spent on these as it is for the victims' best interest.

However, duration of waiting to be seen by the doctor, as well as the administrative process of admission should be improvised to address the long duration of time elapsed from registration to disposition. This could be affected by some reasons. Firstly, if police report was not available prior to ED registration, it will be lodged from OSCC. The process of getting the police officers to arrive, get back to their department, and came back with an investigating officer and consent; these contributed to the lengthy managing time. Also, a stable victim might be attended later if ED is occupied, as priority will be given to those who are critically ill. When the survivors are decided for admission, they need to wait for hospital porters to send them to the ward, in addition to queuing for an available bed in ward. All these would also prolong the management time in OSCC.

There were a lot more that can be explored regarding our final objective. However, we were limited by incomplete documentation, in which the time of clerking, referral, being seen by referred teams, sent to ward, or discharge were not recorded in some cases.

Another limitation of our study is that we did not define who to be considered as strangers or acquaintances. In some of our samples, the assailants who were new online contacts, family friends, or employers' relatives whose names were known to victims were considered as acquaintances when the victims might just have their first contact with them when they were assaulted. A duplicate of multicentre prospective study with a pre-prepared data collection form for each sexual assault cases attending OSCC will be more effective to eliminate these limitations and provide better holistic information on the pattern of sexual assault cases in the east coast region of Malaysia.

CONCLUSION

Our study found that most sexual assault cases managed in the OSCC were rape, and mostly were statutory rape. Majority of sexual assault survivors were females, teenagers, and from low socio-economic class. The independent factor for delayed presentation was that the assailants were known to the victims. The long duration of the management of sexual assault survivors in the OSCC was mainly contributed to the time taken for review by the respective teams. To facilitate the victims in seeking help and avoid late disclosure, available services for sexual assault such as OSCC should be publicised and made easily accessible. Education on sexual assault prevention should begin earlier at the targeted groups. Multidisciplinary teams must work together to optimise and hasten the management of sexual assaults in the OSCC while providing a safe environment to the victims.

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