CHAPTER II

REVIEW OF RELATED LITERATURE

From a legal perspective, rape is a criminal act. The Federal Bureau of Investigation (FBI) , Uniform Crime Report(UPR) defines forcible rape as " the carnal knowledge of a female forcibly and against her will." Because the legal definition of forcible rape is so restrictive, the term sexual assault has been used to cover a wider range of sexual crimes. Most states of the United States and Thailand define any type of sexual behavior with a child as illegal [2,22]. Another problem in determining the number of sexual assault is under-reporting [23,24,25]. Lifetime prevalence rates for sexual assault in the general population of women living in the United States range from 5% to 25%[26]. Manopiboon C. et al (2004) studied about sexual behavior in vocational school students from Chiang Rai, Thailand and found that the prevalence of sexual coercion in females was 21%. Mean age at first sexual coercion of female adolescents was 17 years (range 5-21) and most victims knew the perpetrators [27].

From the study of Dhanapoom N. et al [9], there were 555 sexual assault victims coming to PGH in 1989. This study found that 52.1% of the sexual assault victims were 13 – 17 years of age, 11.2% were 12 years of age and younger. Majority of the cases finished primary education or a few years in high school (65.9%), and 20.6% of cases were studying. Handicapped victims constituted 3.8%, most of them were mentally deficit. The victims and the assailants had never known each other in 26.5%, knew each other less than 1 month in 24%. Forty six percent of the victims reported the occurrence to the police within 24 hours. The consequences of rape included STIs 6.2% and pregnancy 3%.

Similarly, in Bangladesh, Islam MN. et al found that 33.5% of 675 victims were in the 12-15 year age group, 69.9% were literate, 75.7% knew the assailants, 38.9% had genital trauma especially hymenal rupture, 2% got pregnant and 0.6% had a history of previous abuse [28]. In India, the rape of a girl is considered shameful for life, while the rape of a boy is disregarded as unfortunate and forgotten. Most of the sexual assault victims were also adolescent (76.9%) with the mean age of 16 years (range 3 - 42

years). The perpetrators were known to the victims in 40 - 60% [25,29]. Acquaintance rape being more common among girls younger than 10 years. The rate of assault by a stranger increased significantly with age. Genital injuries suggestive of sexual assault were present in 32.3% [29]. In Singapore, the victims divided into 2 groups by the age of 14, majority of the victims under 14 were known to the rapists, relatives (i.e. step-daughters or daughters) were by far the most common victims of the rapists [30,31]. Most rapists were more likely to be single men, knew the victims, came from disordered families, attaining low educational levels but seemingly less antisocial [31,32]. In Ethiopia, victims were mainly children aged less than 15 years and less educated. The perpertrator were strangers in rather high percentage (42.6%). At the time of reporting, 5% were pregnant [33].

The victim data from PGH was also similar to the U.S.A National data, which showed that adolescents were the highest rate of sexual assaults compared to other age groups [34,35]. Annual rates of sexual assault per 1,000 persons (males and females) were reported in 1998 by the US Department of Justice to be 3.5 for age 12 through 15 years, 5.0 for ages 16 though 19 years, 4.6 for ages 20 through 24 years, and 1.7 for ages 24 through 29 years. There were significant gender differences in adolescent rape and sexual assaults, with female: male ratio of 13.5:1. Studies have demonstrated that two thirds to three quarters of all adolescent rapes and sexual assaults were perpetrated by an acquaintance or relative of the adolescent. Older adolescents are most commonly the victims during social encounters with the assailants (eg. date) [36]. With younger adolescent victims, the assailant is more likely to be a member or the adolescent's extended family. Adolescents with developmental disabilities, especially those in the mildly retarded range, are at particular risk for acquaintance and date rape. Adolescent victims are more likely than adult victims to have used alcohol or drugs, and are less likely to be physically injured during a sexual assault, as the assailants in adolescent sexual assault tend to use weapons less frequently [36]. Alcohol or drug use immediately before a sexual assault has been reported by more than 40% of adolescent victims and adolescent assailants [37,38]. The recent increase in rate of the adolescent acquainted rape has been associated with

the illegal availability of sedative/hypnotic. eg. Rohypnol. This is a so called "date rape drug" [1,38,39].

Health consequences of sexual assault cases were divided into non-fatal and fatal outcomes. Non – fatal outcomes were physical health consequences and mental health consequences. Fatal outcomes were homicide, murder, post-abortion death, and death from AIDS [14,40].

Physical injury, including genital injury, is not an inevitable consequence of rape and the absence of genital injury does not provide proof of consent [41,42]. Slaughter and Brown (1992) found 13% of sexually assaulted patients had no genital injury. An examination delayed to 14 days postassault detected no acute findings[42]. In 311 rape victims, no scars were noted at the 2 week follow – up examination. Even at 72 hours postassault, only 52% of those assaulted had positive findings[42,43]. Lack of magnification can reduce the possibility of detecting injury from 87% with colposcopy and a trained examiner, to 10% - 30% by gross visualization alone [44,45]. Vaginal lacerations associated with bleeding, rarely require surgery and occur in 1% of victims [46]. Victims who have experienced known sex partner, rape may have no evidence of injury because of kinesthetic memory, lubrication, and other elements of the human sexual response that may be present [47]. When the perpetrator uses minimal force and the victim is non-resistive, physical injury may be limited or absent. The power rapist usually uses only whatever force he believes is necessary to get his victim to cooperate. This may be only verbal threat or intimidation, especially when the victim does not resist. The victim may be physically unharmed [45,48,49]. However, resistance by the victim activate the perpetrator's anger and increased aggression [49,50,51]. Genital injury in postmenopausal sexually assaulted victims (age 65 and older), even without colposcopy, gave clear evidences more than in younger victims [15,42,52]. This may be secondary to the changes that occur with age and the lack of estrogen. However as with those 65 and younger, rape may occur without obvious injury. However abrasion and edema along the vaginal wall were twice as frequent and lacerations were four times more frequent in the elderly [52,53].

Forced oral copulation may occur to stimulate an erection in a sexually dysfunctional perpetrator in preparation for vaginal penetration [51,53]. Erythema,

echymosis, swelling, dilated blood vessels, and petechiae of the soft and hard palate may occur [54].

Of those who engage in anal intercourse, 18% of male cases that had a forensic medical examination presented with an anal injury, significantly more than in females. Serious injury is rare with penile penetration of the anus because anus and rectal canal are expansible and under voluntary control [14,55,56].

Jenny C. et al (1990) found STIs in 43% of 204 postmenarcheal girls and women examined within 72 hours postpenile vaginal assault.[18] These diseases included infections caused by Neisseria gonorrhoeae (6.0%), Chlamydia trachomatis (10.0%), Trichomonas vaginalis (15.0%), Treponema pallidum (1.0%), human immunodeficiency virus type 1 (1.0%) and bacterial vaginosis (34.0%). Among the 109 victims (53.0 %) who returned for at least one follow-up visit (excluding those who were found to be infected at the first visit or who were treated prophylactically), the incidence of new disease for the follow-up victims was as follows: gonorrhea 4%; chlamydial infection 2%; trichomoniasis 12%; and bacterial vaginosis 19%. There were no new infections with herpes simplex virus, cytomegalovirus, Treponema pallidum, or HIV-1, but follow-up serologic testing was performed in only 26% of the victims [18,57,58,59]. The overall incidence of STIs in child abuse is relatively low. Even if a perpetrator of a sexual assault has a STI. The risk of acquiring a STI as a result of an assault varies with the type of assault. Penile penetration of vagina, anus, oral , especially with ejaculation, has the highest risk of STI transmission [58,59]. Anal and oral penile penetrations have lower risk of transmission [58,60]. Other factors increasing the risk of STI transmission are multiple offenders, as well as the larger the size of the inoculum, the greater the infectivity of organisms transmitted and susceptibility of the victim to infection [60,61,62].

Whereas adolescents should be treated as adults and undergo STI testing even if asymptomatic, the approach to STI testing to prepurbertal children differs because prevalence rate of STIs among sexually abused children are low [1,14,59,61]. In deciding whether to test and offer prophylaxis for STIs among prepubertal children, the physician must consider the following: the nature of the abuse (e.g. fondling on top of clothing versus vaginal penetration with a penis), the likelihood of the abuser having an STI, the examination finding in the child (vaginal discharge present , abnormal

examination) and STI presence in the community. It is important that the vagina of a prepubertal girl is much different from the vagina of a female who is matured through puberty. The prepubertal vagina is lined by columnar epithelium with an alkaline pH, whereas the adult or pubertal vagina is more acidic environment lined with squamous epithelium. So the incidence of STIs in sexually abused prepubertal girls is rather low, less than 5%, compared to pubertal girls, where the incidence is around 15% [1,20,62]. Clinical symptoms of STIs may also be different, eg. gonorrhea may be asymptomatic in adult females, whereas it is likely to cause a vaginal discharge in prepubertal girls [20, 58]. Estreich S. et al (1990) studied 124 raped women in the department of genitourinary medicine of the London Hospital and found STIs in 29% and the commonest organisms detected were Neisseria gonorrhea and trichomonas vaginalis, each presented in 12%[20].

HIV antibody seroconvertion has been reported among persons whose only risk factor was sexual assault. The risk of acquiring HIV from sexual assault exposure to ejaculate from a perpetrator with HIV is conservatively estimated to be at a minimum of 2 per 1,000 contacts [18,21,48].