SEXUAL EXPOSURE AMONG PRIMARY SCHOOL CHILDREN

Roziana Binti Zailani Aminudin Hehsan Juhazren Junaidi Siti Suhaila Ihwani

ABSTRACT

Malaysia's new special court for child sexual crimes which begin their operation since July 4th 2017 reported that a total of 62 child sexual offences in Malaysia were registered after about 2 months they started the operation. Child sexual crimes are highly increasing, causing the development of this special court by the government. Thus, the aims of the paperwork are to identify the level of sexual knowledge and sexual acts among children in primary school, to identify the factors of sexual exposure, to analyse the relation between level of sexual knowledge and sexual acts and provide suggestions for resolve sexual problems among children. The methods used in this study are interview and questionnaire. The findings of this study will reveal the knowledge, involvement and involvement factor of primary school children on sexual issues. The data will help to find the source of sexual exposure among primary school children, thus helping to formulate the best solution to overcome this problems by consider the sexual behaviors and the environment of the children. It will be value to practitioners working with children and to scholar in the fields of sexual issues among children.

Key words: child sexual crimes, sexual, primary school children

INTRODUCTION

Sexual Crime cases among children in Malaysia is seem to increase in recent years. Sexual Crime cases among children in Malaysia are seen as increasingly in recent years. Studies show that sexual crimes not only victimise the child but they are also as a cause for crime (Abdul Kuthoos et al., 2016; Salamatussaadah Abg.Ghadur & Nor Ba'yah Abdul Kadir, 2009). Allah SWT has created man with tendencies and instincts including sexual instincts. Therefore, Allah SWT has outlined ways to educate the instincts so as not to harm humans beginning from early childhood (Abdullah Nasih, 2015; Yusuf Al-Qardhawi, 2015).

According to studies, child sexual behavior will be reduced in tandem with an increase in age as sexual behavior will continue to grow due to various factors such as attitudes and habits in family, education and culture (Bjorklund & Hernandez, 2012; Schoentjes & Deboutte, 1999). Therefore, sexual acts in these children may become better or more harmful depending on the environment of the child (Bjorklund & Hernandez, 2012). In Malaysia, sexual crimes in children show a significant increase in number, hence the establishment of special court to deal with cases related to child sexual crimes. Adolescents are at high risk (Ket. Polis Negara, 2015).

Therefore, there are many studies on the sexual issues that have been done towards teenagers aged 13-18 years. However, in Malaysia there are lack of studies regarding this issue performed to children aged 12 and below although there are statistics indicating the presence of children's sexual involvement at this age (Guttmacher Institute, 2002; Ket. Polis Negara, 2015; WCC, 2016) In this regard, the solution to this issue is to take into account the psychological condition of the child, the sexual behavior and sexual exposure of the childs environment.

RESEARCH BACKGROUND

Children are a highly-potential group to become victim to crime (Siti Hajar & Noralina, 2010). This is due to the lack of knowledge, experience and maturity in their life. This matter is also mentioned in Children Rights Convention regarding the need of formulating law and act in relation to children (SUHAKAM, 2005). On 1 August 2017, Court of Sexual Crimes towards Children which started its operation since 4 July 2017 reported that a number of 62 cases of sexual crimes towards children had been registered ("62 kes jenayah seksual kanak-kanak didaftar," 2017). This issue shows the ratio that at least one sexual crime case upon children happened every day.

Table 1: Statistic of Sexual Crime towards Children between 2011 until 2015 (Augus	t)
--	----

Crime	2011	2012	2013	2014	2015 (August)
Rape	3301	2998	2767	2349	1448
Anal Sex / Oral Sex	174	158	186	214	191
Molestation	1941	1803	1730	1590	1091

TOTAL	5416	4959	4686	4153	2730

(Ket. Polis Negara, 2015)

Above 18 years old

Total

39

249

Based on Table 1, the seriousness of sexual crime cases towards children in Malaysia can be seen. Even though there is a trend of decline in number of cases, nonetheless the huge figure shows the dire need for the society to get hand in hand in overcoming the issue. According to the same source, based on the overall cases noted by the Malaysian Royal Police (PDRM), children under the age of 18 years involved in rape cases are 76%, 68% involved cases in crimes of sex out of norm and 48% crimes of molestation.

Age	2013	2014	2015
	Cases	Cases	Cases
Below 12 years old	65	70	60
13-15 years old	96	125	103
16-18 years old	49	51	47

58

304

41

251

Table 2: Division of Age, Victim in Incest Crime in Malaysia

Based on Table 2, the highest number of victim in incest crime cases is from the category of 18 years and below (Wcc, 2016). This shows that children are not only falling as victim of sexual crime from outside factor, but also becoming prey for immediate family whom are supposed to be trusted with the care for the children. The overall number of reported cases shows that this issue is currently very alarming as children are becoming victim of sexual crime. The data also hints possibility for children under the age of 12 to be involved in cases of sexual crime in Malaysia.

Islam puts utmost attention at prevention. A famous saying goes "prevention is better than cure". Familiarizing oneself with the children psychology is important, especially for parents, teachers, and society in assisting the children's harmonized development. In Islam, sexual education has been exposed since the children's early age. At the age of 7 until 10, children are taught the manners of asking for permission and lowering down their gaze. At the age 10 until 14, they need to be avoided from all elements that may stimulate their sexual desire. At the age of 14 until 16, children need to be taught the manner in having sexual relation if they are ready to get married (Abdullah Nasih, 2015). Based on the explanation, at the early age of children's life, they are in the state of lacking knowledge and experience. At this age, exposure to pornography is very inappropriate towards their psychology and this affects their daily habitual action. Such knowledge would apparently jeopardise the children. Unfortunately, children nowadays are very much exposed to media showcasing pornography such as internet browsing, video CD, film and porn reading materials (Nor Azah, 2009; Ramanaidoo & Rathakrishnan, 2012). Thus, supervision towards the children is direly needed so as to have guidance from adult in assessing the information. Among the factors that expose children into becoming victim of sexual crime are peers. A majority of rape cases happened due to familiar acquaintance such as boyfriend and peers (Abdul Kuthoos et al., 2016; Nasrudin, Radhiah Abu Bakar, Norazura Ahmad, & Suzana Mohd Hoesni, 2012; Nor Jumawaton, Mariani Mansor, Zainal Madon, & Hanina Halimatusaadiah, 2017). There are also sexual offenders who pleads innocent when charged with the crime due to the fact that it was a consensual sex intercourse as well as being seduced by the counterpart which is the female child (Abdul Kuthoos et al., 2016). There were also cases reported such as male child age 10 and 11 suspected to rape female child age 9, when discovered by the victim's mother, were in the act of sexual intercourse (Roji, 2017). It is almost definite that they are not aware of the implication of their action in the future. As a result of uncontrolled exposure towards pornographic element, it becomes a harm and very dangerous because children learn through observation. As there is not guidance and education in relation to sex, children try out the act without realising the crime they are conducting.

Malaysia is a multiracial country. This immoral activity should be curbed without any discrimination. Thus, education towards children in this modern day needs to be suited with the children's learning age so that they are exposed to knowledge that can educate them in relation to life suitable to their age. In this modern world, youth are seen to be drowned in the world of immorality with their main purpose in life to be involved in activities such as watching pornographic movies, immoral drama, as well as visiting places that kills their self-worth and manhood such as brothels and other equal places (Abdullah Nasih, 2015). According to him in his book, this immoral activity is also the planning of enemy of Islam in order to weaken the Muslim. This matter should be handled from an early age using quality education, as failure to do so might give negative impact to the future of the country.

Based on Malaysia fifth Rukun Negara (National Principle), good behaviour and morality, being polite and having good moral conduct need to be emphasised to the citizen from an early age so that it will be part of one's flesh and blood when they grow up. Living in multiracial and multi-religious country, good behaviour and morality is an element that is surely being sowed in the heart of every citizen. Matters such as immoral sex conduct and cruelty in sexual crime portrays that the safety level of the country is now at critical level that makes it adult including caretakers to be questionable. Any religion prohibits immoral sex conduct especially involving children. All in all, this matter can be a source of inspiration that moves children education program according to the children's knowledge suitability in general.

In the era of globalisation nowadays, children are mostly exposed to life out of home. Almost all of their day life is spent outside home. Moreover, with the ease of technology, we are all connected where ever and with whomever even though by being at home. Without guidance, knowledge and maturity, the exposure sometimes can be harmful to the children and the surrounding.

Constant monitoring and care for children is very important to avoid any abuse, neglect and misconduct that may cause suffer either physically or emotionally to the children in care (Zabdi and Tahir, 2001).

Thus, the researcher feels the need to study the extend of exposure among the children in matters related to sex as their growing age possess many advantages such as access to technology, more expanded socialisation amongst friends, mass media and many more. In the state of children not fully developed and matured physically or mentally, this calls for the need for protection or specific care in the form of guidance, prevention as well as medication so that the probability of involvement in sexual crime cases can be reduced.

PROBLEM STATEMENT

The increase of sexual crime among children is becoming more alarming. As the issue is getting more worrisome, Court of Sexual Crimes towards Children was established in order to focus on cases for sexual crime victims such as children sexual grooming activity, child pornography, and sexual assault (Najib, 2017). According to researches, sexual crimes occur among children as children become either the victim or the cause of the crime.

Among the popular sexual crimes occurring towards children are rape by friends, sodomy, oral sex and molestation. Cases such as seclusion with children, sending pornographic text, showing private parts using picture or video, drawing pornographic act, doing masturbation act, saying pornographic words, showing pornographic symbols, watching pornographic videos and many are becoming more alarming among children. There were also occurrences which were seen as minor issues by the adult due to the assumption that children know nothing. Apparently, what is seemed impossible to be done by children is merely assumption. The world lies on the tip of our finger. Different to the era in the 90s, children these days possess updated mobile phones as there are no acts or law to prevent this matter in Malaysia. Moreover, mobile phones can be easily possessed with a very low and affordable price. It is undeniable that there is a need for children to have mobile phones these days; nonetheless there is harm in having and using phones without proper control and guidance. This is made worse with the internet facility which contributes to ease of information access including for the children. With excuses such s looking for information in cyber café or access points, children can also browse the desired information on the internet. Without proper surveillance and guidance from the adult, children misuse the opportunity into looking for improper information, such as getting acquainted with strangers in social media, sharing unwanted information such as pornographic information, watching pornographic videos and many more. Consciously, these activities cannot be detected because it was all performed virtually. Through internet access, pornographic materials are easily accessible (Nor Azah, 2009). This will be extremely harmful to the society especially the children.

Children spent most of their time with friends. This is more accurate for children staying at the hostels. Friends are the most comfortable people to share and discus issues related to sex (Nasrudin et al., 2012; Nor Jumawaton et al., 2017; Ramanaidoo & Rathakrishnan, 2012). There are researches which found that children feel more comfortable to share problems related to sexual issues with friends in comparison to parents and teachers (Azriani Ab. Rahman et al., 2011; Faizah Adbul Ghani & Azian Abdul Aziz, 2013; Salmi Ahmad Sudan, 2013). This becomes a problem when children are sharing information with friends who lack knowledge and experience. This is made worse when children are sharing the problems with boyfriend or girlfriend.

Verse An-Nur ayah 58 clearly shows that Allah s.w.t teaches educators regarding the principles in educating and nurturing a child before they hit puberty. O you who believe! Let your legal slaves and slave-girls, and those among you who have not come to the age of puberty ask your permission (before they come to your presence) on three occasions; before Fajr (morning) prayer, and while you put off your clothes for the noonday (rest), and after the 'Isha' (late-night) prayer. (These) three times are of privacy for you, other than these times there is no sin on you or on them to move about, attending (helping) you each other. Thus Allah makes clear the Ayah (the Verses of this Quran, showing proofs for the legal aspects of permission for visits, etc.) to you. And Allah is All-Knowing, All-Wise (Al-Quran, Verse An-Nur ayah 58). Everyone including children is taught to ask for permission during the three periods in order to restrain their gaze from unwanted sightings. The command from Allah shows that Islam puts utmost concern onto sex education beginning from the age that the child are able to think. This is due to educate the children to have positive shyness and possess good moral conduct. Imagine the child entering the parents' room during the process of intercourse. The children might share the stories with their friends and hence encourage them to try doing the same action regardless their lack of knowledge and experience in determining the danger or result of such action. If this is not curbed and guided by an adult, one will constantly live with arousing sexual stimulation and may try to satisfy the stimulation even though by using the wrong ways (Abdullah Nasih, 2015).

In conclusion, children nowadays are highly exposed to information in relation to sex due to the availability and ease of access of the information. Even though previous studies focus on teenagers and youth in higher learning institution, unfortunately the children of 12 years and below are also falling as prey in this issue. Based on statistic, researches and current news, children at the age of 5 years are also vulnerable to become victim of sexual crimes. Thus, sex education should not only be given to children and teachers, but it should also be disseminated to parents and caretakers due to the roles and authority upon the children.

RESEARCH OBJECTIVE

This research outlines several objectives, which are:

- i. Identify the level of sexual knowledge among children in primary school.
- ii. Identify the level of sexual acts among children in primary school.

- iii. Identify factors for sexual exposure among children in primary school.
- Analyse the relation between level of sexual knowledge and sexual acts among children in primary school. iv.
 - Provide suggestions for resolve sexual problems among children in primary school.

RESEARCH QUESTIONS

Based on the outlined objectives, this study will answer several questions, which are:

- What is the level of sexual knowledge among children in primary school?
- ii. What is the level of sexual acts among children in primary school?
- iii. How do the children in primary school expose on sexual matters?
- iv. What is the relation between level of sexual knowledge and sexual acts among children in primary school?
- What is the suggestion for resolve sexual problems among children in primary school?

RESEARCH SIGNIFICANCE

This research is very significant for teachers in planning the teaching and learning activities in order to be able to relate the subject taught with sex education. From an early age as a child, it is essential that the teachers educate the students to be aware of the difference in gender; teach them to respect the opposing gender; develop responsibility towards female as well as building respect among friends. For example, children need to be shown the proper seating position, permissible touch among friends with the same and the opposing gender and as such so that the theory learnt in Islamic and moral education can be applied in their daily life.

Apart from that, this research is also essential for parents in educating them the importance of sexual education at home towards children at an early age. Separating the place to sleep, asking for permission and manners before entering any bedroom, monitoring gadgets and internet use, interaction among friends, knowing their child's friends and acquaintance, as well as identifying the child's tendencies so that it can be guided from an early age.

This study is also significant to the ministry of education in planning awareness and sexual education programs to children from primary school. This program does not only focus on students, but also the educators, parents, and society so that everyone will be hand in hand in overcoming sexual crimes towards children.

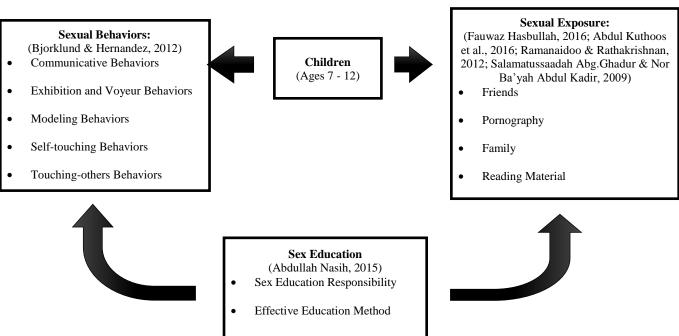
Apart from that, this research will also assist NGO in helping to overcome sexual crime and cases amongst children. NGO also possesses an important role in bringing the society to be together with the ministry or the government for the betterment of the country.

RESEARCH SCOPE

This research will be conducted by using questionnaire and interview method in selected schools in Miri involving children between the ages of 7 until 12 years. Apart from that, 8 teachers will be interviewed for the purpose of getting the information needed. Teachers selected are counsellors, discipline teachers and school administrators.

CONCEPTUAL FRAMEWORK

Figure 1: Research Conceptual Framework



In principle, the conceptual framework of this study provides the impression that children aged 7 to 12 naturally have their own sexual habits as stated by Bjorklund and Hernandez, 2012. This is in line with Islam that states that children have sexual instincts from early childhood. In addition to sexual habits, children are also exposed to sexual matters either intentionally or unintentionally. Therefore, effective sex education should take into account the sexual habits and extent of sexual exposure experienced by children.

OPERATIONAL DEFINITION

Sexual Crime Cases (Children)

This research is conducted for the purpose of scrutinising sexual crime cases in Malaysia. According to Children Rights Convention, sexual crime cases are all form of sexual exploitation and sexual abuse (SUHAKAM, 2005) through:

- i. Children encouragement or force to get involved in any sexual activity against the law;
- ii. Using for the purpose of exploiting children in prostitution or any sexual conduct against the law;
- iii. Using for the purpose of exploiting children in shows and pornography.

There are five categories of sexual abuse which are rape, molestation, incest, sex out of norm and pornographic act such as stalking (voyeurism) and exhibitionism (Nor Shafrin Ahmad, 2007).

This study will look at all sexual act including sexual foreplay, molestation, intercourse, oral sex and masturbation among children either as victim or the doer.

Children

According to Children Rights Convention, a child is someone under the age of 18 years (SUHAKAM, 2005). Nonetheless, this research will focus on children between the ages of 7 until 12 years who go to primary school in Miri, Sarawak.

RESEARCH METHODOLOGY

Table 3: Research Methodology

Objective	Questions	Approaches	Analysis	Findings
Identify the level of sexual knowledge among children in primary school.	What is the level of sexual knowledge among children in primary school?	Quantitative Qualitative	Mean Score / Mean Size Meta-Data Analysis/ Data matrix and frequency table	List Details of list
Identify the level of sexual acts among children in primary school.	What is the level of sexual act among children in primary school?	Quantitative Qualitative	Mean Score / Mean Size Meta-Data Analysis/ Data matrix and frequency table	List Details of list
Identify factors for sexual exposure among children in primary school.	How do the children in primary school gain knowledge on sexual matters?	Quantitative Qualitative	Mean Score / Mean Size Meta-Data Analysis/ Data matrix and frequency table	ListDetails of list
Analyse the relation between level of sexual knowledge and sexual acts among children in primary school.	What is the relation between level of sexual knowledge and sexual acts among children in primary school?	Content Analysis	Meta-Data Analysis	• Data
Provide suggestions for resolve sexual problems among children in primary school.	What is the suggestion for resolve sexual problems among children in primary school?	Content Analysis	Meta-Data Analysis	Table/ Suggestion of Solution Map

Table 3 shows the research methodology for each of the objectives and questions in this study. This study uses quantitative and qualitative methods through interviews and questionnaires.

CONCLUSION

The conclusion from this research suggests that identifying sexual exposures both in terms of knowledge and behavior is very important in finding the cause of sexual problems among primary school children. Once the cause can be identified, appropriate sex education can be formed by taking into account the psychology of the child and the extent of sexual exposure to the child. It can also help the development of children in adolescents and adults to become more mature and responsible individuals, thus affecting the harmony of the nation.

ACKNOWLEDGMENT

The authors hereby acknowledge the Universiti Teknologi Malaysia for their financial support through the Grant no. R.J130000.7831.4F950.

REFERENCES

62 kes jenayah seksual kanak-kanak didaftar. (2017). Retrieved November 15, 2017, from http://www.jkm.gov.my/

Abdul Kuthoos, H. M., Endut, N., Azmawati, A. A., Hashimah, I., Hashim, M., & Selamat, N. H. (2016). Penerokaan awal terhadap jenayah seksual dalam kalangan remaja lelaki di Malaysia: Satu kajian kes terhadap remaja di sebuah pusat pemulihan. *3rd Kanita Postgraduate International Conference on Gender Studies*, (November), 188–200.

Abdullah Nasih. (2015). Tarbiyatul Aulad Fil Islam. Selangor, Malaysia: Publishing House Sendirian Berhad.

Azriani Ab. Rahman, Razlina Ab. Rahman, Mohd Ismail Ibrahim, Halim Salleh, Awaluddin Ahmad, Shaiful Bahri Ismail, ... Siti Hawa Ali. (2011). Knowledge of Sexual & Reproductive Health Adolescents Attending School in Kelantan Malaysia. *Med Public Health*, 42(3), 25–717.

Bjorklund, D. F., & Hernandez, C. (2012). *Child and Adolescent Development An Integrated Approach* (Internatio). Canada: Wadsworth Cengage Learning.

Faizah Adbul Ghani, & Azian Abdul Aziz. (2013). Illegitimate Childbearing Scenario among Adolescents. *Research Journal in Organizational Psychology and Educational Studies*, 7(1), 40–131.

Fauwaz Hasbullah. (2016). SEKSUALITI REMAJA: Isu dan Cabaran keluarga di Malaysia. In *Seminar Isu-Isu Seksualiti Peringkat Kebangsaan 2016*. Terengganu: Dewan Perdana UNISZA, Kuala Terengganu.

Guttmacher Institute. (2002). Teenagers sexual and reproductive health: Developed Countries. New York: Alan Guttmacher Institute.

Jabatan Kebajikan Masyarakat. (1989). Konvensyen Mengenai Hak Kanak-kanak.

Ket. Polis Negara. (2015). Jenayah Seksual Terhadap Kanak-Kanak. Retrieved November 15, 2017, from https://www.rmp.gov.my/

Najib, M. (2017). Majib Perasmian Mahkamah Jenayah Seksual Terhadap Kanak-Kanak. Retrieved November 15, 2017, from http://www.pmo.gov.my/home

Nasrudin, Radhiah Abu Bakar, Norazura Ahmad, & Suzana Mohd Hoesni. (2012). Hubungan Seksual Remaja: Antara Cinta dan Nafsu. *Journal of Social Sciences and Humanities*, 7(1), 15–25. https://doi.org/354554

Nor Azah. (2009). Internet, Laman Web Pornografi dan Kaedah Psikospiritual Islam dalam Menangani Keruntuhan Akhlak Remaja Pelayar Laman Web Pornografi. *Jurnal Usuluddin*, 29, 147-169, 29, 147-169.

Nor Jumawaton, Mariani Mansor, Zainal Madon, & Hanina Halimatusaadiah. (2017). Hubungan Di Antara Perapatan Ibu Bapaanak Dan Estim Diri Dengan Sikap Tingkah Laku Seksual Dalam Kalangan Remaja Hamil Luar Nikah Di Semenanjung Malaysia. *Jurnal Psikologi Malaysia*, 31(2), 57–67.

Nor Shafrin Ahmad. (2007). Mengenal Pasti Indikator Tingkah Laku Mangsa Penderaan Seksual . *Malaysian Journal of Educators and Education*, 22, 107–125.

Ramanaidoo, S., & Rathakrishnan, B. (2012). Sikap pelajar institusi pengajian tinggi terhadap hubungan seks sebelum kahwin: Satu tinjauan di Sabah. *Jurnal Kemanusiaan*, 19, 113–133.

Roji, M. (2017). Budak 10, 11 tahun disyaki merogol. Retrieved November 15, 2017, from https://www.bharian.com.my/berita/kes/2017/09/324259/budak-10-11-tahun-disyaki-merogol

Salamatussaadah Abg.Ghadur, & Nor Ba'yah Abdul Kadir. (2009). Hubungan Romantik Dan Remaja Hamil Luar Nikah Di Pusat Pemulihan. *Jurnal E-Bangi*, 4(1), 106–113. https://doi.org/10.1017/CBO9781107415324.004

Salmi Ahmad Sudan. (2013). Premarital Sex among Shool-going Malay Female Teens: A case Study in Selangor. Universiti Islam Antarabangsa.

Schoentjes, E., & Deboutte, D. (1999). Child sexual behavior inventory: ADucth-speaking normative sample. *Pediatrics*, 104, 885–893

Siti Hajar, & Noralina. (2010). Kesedaran Kanak-kanak di Malaysia terhadap Keselamatan Diri. Seminar Kebangsaan Undang-Undang Kanak-Kanak Ke-2, 1–13.

SUHAKAM. (2005). Konvensyen Mengenai Hak Kanak-Kanak. Kuala Lumpur: Suruhanjaya Hak Asasi Manusia Malaysia (SUHAKAM).

Wcc. (2016). Incest Cases Reported In Malaysia (2006-2015). Retrieved November 15, 2018, from http://wccpenang.org/

WCC. (2016). Penderaan Seksual Kanak-Kanak. Retrieved November 15, 2017, from http://wccpenang.org/

Yusuf Al-Qardhawi. (2015). *Halal & Haram dalam Islam*. (Z. M. Al-Bakri, Ed.) (Cetakan Ke). Selangor, Malaysia: Pustaka Cahaya Kasturi Sdn. Bhd.

Zabdi, J., & Zulazhar. (2005). Akta Kanak - Kanak 2001: Penguatkuasaan Semula Tugas dan Tanggungjawab Ibu Bapa atau Penjaga? Asas Undang-Undang Perlindungan Terhadap Kanak-Kanak Di Peringkat Antarabangsa. *Journal of Malaysian and Comparative Law*, 32(1).

Roziana Binti Zailani Faculty of Islamic Civilization Universiti Teknologi Malaysia, Skudai, 81300 Johor Bahru, Johor, Malaysia Email: rozisirru@gmail.com

Aminudin Hehsan

Faculty of Islamic Civilization Universiti Teknologi Malaysia, Skudai, 81300 Johor Bahru, Johor, Malaysia Email: ahehsan@utm.my

Juhazren Junaidi

Faculty of Islamic Civilization Universiti Teknologi Malaysia, Skudai, 81300 Johor Bahru, Johor, Malaysia Email: juhazren@utm.my

Siti Suhaila Ihwani

Faculty of Islamic Civilization Universiti Teknologi Malaysia, Skudai, 81300 Johor Bahru, Johor, Malaysia Email: sitisuhaila@utm.my