Factors Associated with Attitudes on Induced Abortion – A Community Based Study among Adults in Colombo City of Sri Lanka

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Abstract

Attitudes towards induced abortion can influence not only individual decision-making on the outcome of unwanted pregnancies, but also the health sector policy response towards future changes in the law. A structured questionnaire was administered among 743 randomly selected residents between the ages of 19 to 49 years after receiving written informed consent to identify the factors associated with abortion attitudes. Ethnicity, religion, age, years of formal education, marital status, and number of living children, individual exposure and personal experience about the issue were identified as the factors influencing abortion attitudes. The results of this study may be used by the stakeholders to design more focus interventions to address the issue in the future.

Key Words: Abortion attitudes; Associated factors; Induced abortion

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Introduction

Abortion is the termination of a pregnancy, whether spontaneous or induced (Rock, Jones, & Howard, 2008). Induced abortion is caused intentionally by the administration of drugs or by mechanical means (The American Heritage Stedman's Medical Dictionary, 2002). Illegal abortion is an induced abortion performed contrary to the laws regulating abortion in that country (Mosby's Medical Dictionary, 2009). According to the World Health Organization (WHO); an unsafe abortion is the termination of an unintended pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards or both (World Health Organization, n.d.). Globally, unsafe abortions are a significant cause of maternal mortality and morbidity. An estimated 21.6 million unsafe abortions took place worldwide in 2008, almost all in developing countries. Each year, an estimated 80,000 women die from complications of unsafe abortions, accounting for at least 13 percent of global maternal mortality (World Health Organization, 2011).

Abortion is legally permitted in Sri Lanka only if it is performed to save the mother's life (Sri Lanka Penal Code Section 303, 1883; Senanayake, Willatgamuwa, Moonasinghe, & Tissera, 2012). Even with a high national contraceptive usage rate of 68 percent with 50 percent using modern methods, some women still face the problem of unwanted pregnancy and resort to abortion in Sri Lanka (Senanayake, 2009). As there is a very restrictive law on abortion and a law enforcement mechanism in the country, women will avoid divulging the fact and it is difficult to determine the accurate prevalence rate for illegal abortions. However, a study undertaken in the late 1990s estimated that 125,000 to 175,000 induced abortions mostly illegal are performed annually in Sri Lanka (De Silva, 1997). A subsequent study estimated a much higher figure of 658 induced abortions per day giving an abortion ratio of 741 per 1000 live births (Rajapakse, 2000). The latest study applying Bongarts' models estimates induced abortion rate as 0.035, 0.147 and 0.087 per women in year 1993, 2000 and 2007 (Abeykoon, 2012). In the year 2013, the percentage contribution from abortion to maternal mortality was around 10 percent, making it the third most common cause of maternal death (Family Health Bureau, 2014).

General societal attitudes towards induced abortion can influence not only decision-making by individuals regarding the fate of unwanted pregnancies, but also the health sector policy response towards providing safe abortion services. It is not only the burden of illegal abortion; almost all health related issues are inevitable consequences of socio-economic perspectives of communities in the world. Health systems, health programs, and health policies of any country need to be developed taking in to consideration the social perceptions, attitudes, and values of the people.

Although there is limited research-based evidences on abortion attitudes in Sri Lanka, a few previous studies have focused on abortion attitudes of general public targeted sub segments of the community. Only less than half (43 percent) of abortion seekers felt that abortion services should be available on demand especially for unmarried women and approved the liberalization (45.9 percent) of abortion law. Among those who approved liberalization, only 27 percent approved such liberalization for both married and unmarried women (Rajapakshe & De Silva, 2000). Only 23 percent of women with history of abortion, 15 percent of women with unwanted pregnancies and even less proportion (10 percent) of women with wanted pregnancies felt that legalizing abortion will be beneficial for women (Thalagala, 2010). A qualitative study conducted by a group of researchers on knowledge attitudes and understanding of 25 legal professional regarding safe abortion as a women's right found that the majority (22/25) were either vehemently opposed on cultural and moral grounds or had some reservations about health implications for women. They said that legalizing abortions would promote irresponsible behavior; and that the government may not be able to fulfill the demand and there would be cultural and moral clashes (Dalvie, Batua, & De Silva). In another study, researchers highlighted that, all most all doctors (93 percent) and four fifth of (81 percent) of medical students accepted pregnancy termination as an appropriate course of action if a gross genetic defect is detected antenatal. Furthermore, 87 percent of doctors and 80 percent of students supported a change to the law allowing for termination of a pregnancy (Senanayake , Willatgamuwa, & Jayasinghe, 2008). However, none of these studies have especially focused on factors associated with abortion attitudes.

Various attitudinal studies conducted in other countries have identified religion, religiosity, race, education, age, gender, gender role attitude, child baring motivation and ideal family size as determinants of the abortion attitudes (Carter & Dodge, 2009; Hertel, Hendershot, & Grimm, 1974; Wilcox, 1992; Jelen & Wilcox, 2003; Patel & Johns, 2009; Legge, 1983; Miller, 1994; Scott, 1998; Secret, 1987; Walzer, 1994). However, These factors and their association vary depending on the country context.

This study aims to understand the factors associated with adults attitudes towards induced abortion in Sri Lanka. Sri Lankan government and other development agencies may use the results of this study for development of health policies and programs.

Methodology

The selected population for this study included all adults, aged 19 to 49 who have lived in the city of Colombo for at least one year. The study was conducted at the (Thimbirigasyaya Divisional Secretariat Division)(DSD). The 20 Grama Niladhari Divisions (GND) of Thimbirigasyaya DSD were

divided into two strata considering the percentage of households (HH) with toilet facilities exclusively for the HHs within the HH unit. Three GNDs were selected from each strata (total of six GNDs) using systematic probability proportionate to the size (PPS) cluster selection method. The selected GNDs were divided into housing clusters using the housing data derived from the 2012 department of election report. Five to eight housing clusters were selected from each GND by following the systematic PPS cluster selection method. 50 HHs were selected from each GND. Starting from a random point, every third HH was selected for the survey until the expected sample size was attained. The primary sample size for the HH survey was 300 HHs which was arrived by application of a standard sample size calculation formula for HH surveys (Department of Economic and Social Affairs, Statistics Division, United Nations Secretariat, 2005). All the eligible individuals who were willing to participate in the survey were interviewed after receiving written informed consent. Apart from the HH survey, 12 key informants (Health Professionals and Community Health Service Providers) were selected to identify possible interventions to address the issue. The Ethical Approval was received from the Ethical Review Committee of the Sri Lanka Medical Association. A structured questionnaire was administered by a team of well-trained survey staff who were recruited from Sociology Special graduates of University of Colombo. The key informant interviews were conducted by the Principle Investigator. Field data collection was conducted from February to April 2014.

Measuring Abortion Attitudes

Respondent's level of agreement for provision of legal abortion in 10 specific circumstances were collected using a 1 to 5 Likert scale (Strongly disagree to strongly agree). The widely accepted methodology of additive scale, where an answer for each statement was given a score of 1 to 5 which were summed up to measure attitudes towards abortion (Elizabeth, Jelen, & Wilcox, 1993; Finlay, 1981; Harris & Mills, 1985; Emerson, 1996; Boggess & Bradner, 2000; Wilcox, 1992; Walzer, 1994). This aggregated score ranged from 10 to 50 where lower values reflect conservative attitudes towards induced abortion and higher scores reflect liberal attitudes towards induced abortion. The scale shows an acceptable level of internal validity with 0.883 Cronbach's alpha (Tavakol & Dennick, 2011). The data was statistically analyzed using SPSS software.

Results and Discussion

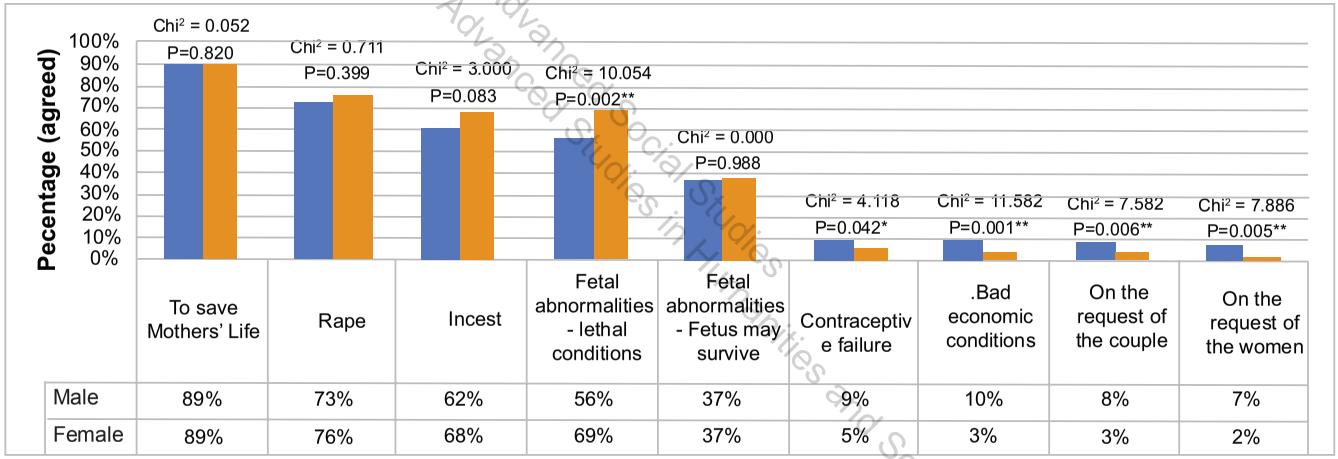
This research obtained at least one response from 271 HHs out of 300 selected HHs. The remaining HHs had no person eligible to participate in the study or they were not willing to participate in the study. There were 1,022 eligible people residing in the 271 HHs surveyed. However, only 825 participants (80.72 percent) were available for the interview on the date of the visit. 743 valid responses (90.06 percent) were received.

Sample Characteristics

The average age of the respondents was 33 years (SD = 11.15). The sample consists of 305 (41.22 percent) males and 435 (58.78 percent) females. The average HH size of the sample was 5.46 per HH. The sample consisted of 384 (51.68 percent) Sinhalese, 131 (17.63 percent) Muslims, and 221 (29.74 percent) Tamils. Similarly, the sample contained 316 (42.53 percent) Buddhists, 136 (18.30 percent) Islamists, 165 (22.21 percent) Hindus, 50 (6.73 percent) Roman Catholics and 76 (10.23 percent) Christians. Approximately 71.53 percent of the participants have received education up to General Certificate of Education (GCE) ordinary level (O/L) or above with average years of formal education of 11.20 (SD = 2.75) years ranging from 2 years to 19 years. Around 53.44 percent of the respondents were married and the mean age at first marriage was 24.36 (SD=3.25) with the range of 18 years to 41 years. The demographic profile of the sample was aligned with the Department of cense data of Thimbirigasyaya DSD in 2012 (Department of Censes and Statistics, 2012).

Socio Demographic Factors Associated with Abortion Attitudes

As described in Table 01, there was no statistically significant association between sex and aggregated score of respondents' attitudes on abortion. Detail analysis shows, that males are more likely to accept legalized abortion for hard reasons (Rape, Incest and Fetal Abnormalities) than females (Figure 01). However, the interesting finding is that females are more likely to accept legalizing abortion than males for soft reasons (in the situations of poor economic conditions (x^2=11.582, P=0.001), contraceptive failure (Chi2=4.118, P=0.042), at the request of the couple (x^2=7.703, P=0.006) and at the request of the woman (x^2=7.886, P=0.005). This result indicates that the males are more reluctant to accept legalizing abortion for the conditions which are within the control of women. This may be due to the distribution of gender roles in Sri Lankan society where women are more likely to be sensitive towards the issues related to poor economic conditions of the family and contraceptive failures.



	To save Mothers' Life	Rape	Incest	Fetal abnormalities - lethal conditions	Fetal abnormalities - Fetus may survive	Contraceptive failure	.Bad economic conditions	On the request of the couple	On the request of the women
Male	89%	73%	62%	56%	37%	9%	10%	8%	7%
Female	89%	76%	68%	69%	37%	5%	3%	3%	2%

Figure 1:- Percentage of respondents agreed to accept legalized abortion under different conditions by sex

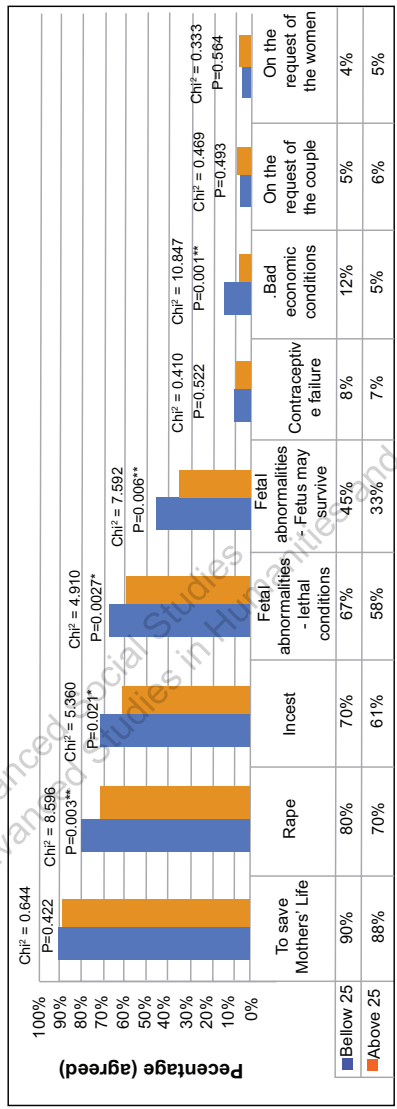


Figure 2:- Percentage of respondents agreed to accept legalized abortion under different conditions by age

Supporting the findings of the current study, Rogers Robyn (1987) theorized that women take abortion more seriously than men since they have the final responsibility and therefore tend to be more liberal in their attitudes (Robyn, 1987). However, after reviewing past studies, Anna Narendra (2010) summarized that the past findings of whether sex affects abortion attitudes are inconsistent and yield diverse results under different social settings (Narendra, 2010).

Table 01. Socio-Economic and Demographic Factors Associated with Attitudes on Abortion

Variables and levels		Observations		Central tendency and dispersion				Tests for association and differences		
Variable	**Levels**	**N**	**%**	**Mean**	**Median**	**Mean Rank**	**SD**	**Spearman Rank Correlation (2-tailed)**	**Test for median**	**Mann Whitney U test / Kruskal-Wallis test**
01) Ethnicity	Indian Tamil	16	2%	30.92	30.12	435	9.44	N/A	P=0.000**	P=0.000** Chi^2=154.912 Effect size=21%
	Sinhalese	384	52%	28.62	29.00	421	7.74			
	Sri Lankan Tamil	205	28%	27.81	28.00	385	7.92			
	Muslims	131	18%	19.62	19.00	159	6.83			
	Burger	7	1%	29.00	27.00	381	12.78			
	Total	**743**	**100%**	**26.86**	**28.00**	**N/A**	**8.43**			
02) Religion	Buddhist	316	43%	28.85	29.00	424	7.24	N/A	P=0.000**	P=0.000** Chi^2=148.153 Effect size=20%
	Islam	136	18%	20.16	19.00	171	7.54			
	Hindu	165	22%	27.05	28.00	368	8.11			
	Roman Catholic	50	7%	28.44	30.00	424	8.68			
	Christian	76	10%	29.17	20.00	422	9.05			
	Total	**743**	**100%**	**26.86**	**28.00**	**N/A**	**8.43**			
03) Gender	Female	435	59%	27.50	28.00	367	8.28	N/A	N/A	P=0.560 Z=-0.584
	Male	305	41%	25.96	28.00	358	8.57			
	Total	**740**	**100%**	**26.86**	**28.00**	**N/A**	**8.43**			
04) Age	Below 25	267	36%	28.36				r= -0.122** P=0.001	N/A	N/A
	25-39	189	25%	27.66						
	Above 29	287	39%	26.23						
	Total	**743**	**100%**	**26.86**						

05) Years of formal Education	2-6	43	6%	23.69			9.74	r=0.111** P=0.003	N/A	
	7-11	409	56%	26.69			8.26			
	12-16	256	35%	27.82			8.23			
	17-21	26	4%	27.72			7.56			
	Total	**734**	**100%**	**26.94**			**8.36**			
06) Marital Status	Married	396	53%	25.91	27.00	335	8.36	N/A	P=0.005**	P=0.000** Chi^2=18.189 Effect size=2%
	Never Married	317	43%	27.94	28.00	395	8.45			
	Divorced	7	1%	32.57	30.00	504	6.73			
	Widow	21	3%	27.05	28.00	397	8.01			
	Total	**741**	**100%**	**26.87**	**28.00**	**N/A**	**8.44**			
07) Number of living children	0	379	51%	27.91			8.18	r=-0.184** P=0.000	N/A	N/A
	1	78	10%	26.50			9.89			
	2	144	19%	26.87			8.00			
	3	99	13%	24.38			8.09			
	4	32	4%	24.98			8.68			
	5	9	1%	20.97			9.06			
	6	3	0%	14.67			8.08			
	Total	**744**	**100%**	**26.83**			**8.48**			

* Statistically significant at 95% confidence interval
* * Statistically significant at 99% confidence interval

Aggregated score of respondents' attitudes on abortion is negatively correlated with the age of the respondent (Spearman Correlation Co-efficient = -0.122, P=0.001). Youth respondents are more likely to accept liberalized abortion than adults (Table 01). Detail analysis shows that respondents below 25 years of age are more likely to accept legalizing abortion under rape (X^2=8.596, P= 0.003), incest (x^2 = 5.360, P= 0.021), fetal abnormalities (x^2 =7.592, P= 0.006) and poor economic conditions (x^2 =10.847, P= 0.001) than adults above 25 years of age (Figure 02). This difference of attitudes may be due to the generational differences with the influence of human rights concepts which emerged recently and are discussed broadly during the past few decades in Sri Lanka.

Furthermore, we found that the Muslims were more conservative compared to all other ethnic groups. As indicated in the Table 01, attitudes of the "Muslim" ethnic group was significantly different from Sinhalese (effect size =28%, P=0.000), Indian Tamils (effect size=13%, P=0.000) and Sri Lankan Tamils (effect size = 31%, P=0.000). Detail analysis confirm that there are statistically significant (Confidence Interval = 99 percent) associations between the respondents' ethnicity and attitudes towards the abortion for all 10 conditions concerned (Figure 03). Muslims are less likely to accept liberalized abortion laws for all these conditions compared to other ethnic groups. Previous studies on fertility intention conducted in Sri Lanka also demonstrate the same pattern where Muslim women showed highest desired family size (De Silva, 1992b) and highest reluctance to stop childbearing, irrespective of their age (De Silva, 1992a). In comparison to other ethno-religious groups in Sri Lanka, Muslim women commonly resist contraception, especially sterilization (De Silva, 1992c).

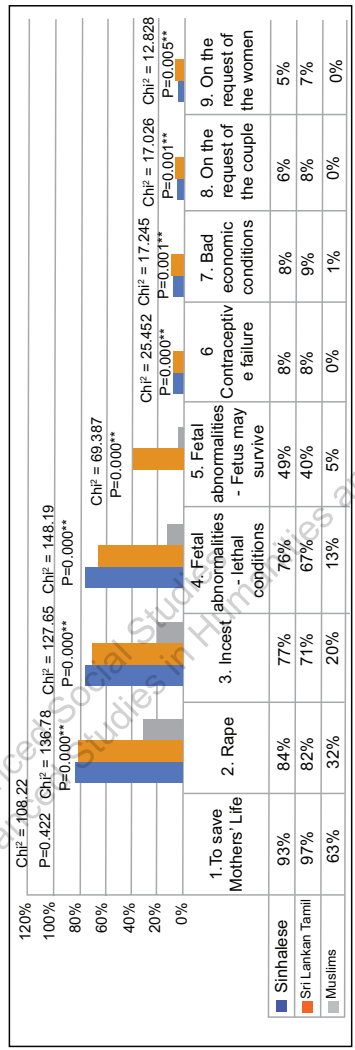


Figure 3:- Percentage of respondents agreed to accept legalized abortion under different conditions by ethnicity

Similarly, as described in Table 01, Islam was identified as the most conservative religion in comparison to Buddhism (effect size = 30%, P=0.000), Hinduism (effect size = 26%, P=0.000), Roman-Catholicism (effect size = 23%, P=0.000) and Christianity (effect size = 27%, P=0.000). There are statistically significant (Confidence Interval = 99 percent) associations among respondents' religion and attitudes towards abortion for all 09 conditions concerned except for "at the request of the couple or women (on demand)". Islam respondents are less likely to accept liberalized abortion laws for all these conditions compared to other religions (Figure 04).

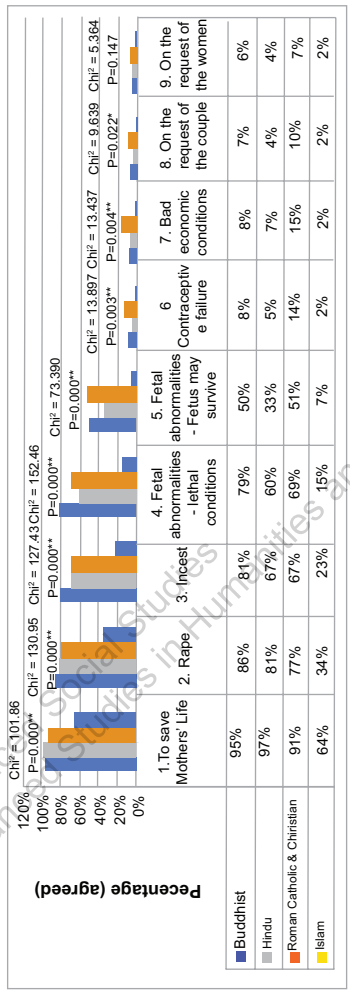


Figure4:- Percentage of respondents agreed to accept to legalized abortion law under different conditions by religion

One of the interesting findings of this study is that, even though respondents (belonging to all religions) agreed that induced abortion is against their religious beliefs irrespective of their religion. When it comes to practical situations, respondents of various religions tend to accept legalizing abortion differently.

As described in Table 01, there is a statistically significant and positive correlation between the aggregated score of respondents attitude towards the abortion law and years of formal education (r=0.111, P=0.003). Respondents with high level of education are more likely to accept a liberalized law on abortion

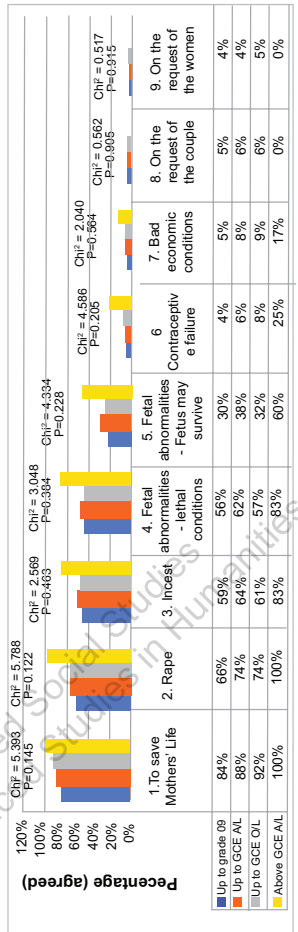


Figure5:-Percentage of respondents agreed to accept to legalized abortion law under different conditions by level of education

Previous studies conducted in Sri Lanka show that well educated women have lower ideal family size and prefer smaller families (De Silva, 1992b). Similarly, educated women are more likely to be motivated to cease childbearing than non-educated women (De Silva, 1992a). This fertility intention may affect when determining the attitudes towards abortion. In fact, in her review of past studies, Finlay Barbara (1981) noticed that one of the most important factors in explaining a person's attitude toward abortion was educational attainment. Researchers who have studied this area of interest agree that education has a profound impact on general abortion attitudes. The positive association between level of education and liberal attitude towards abortion is a regular finding in other countries as well (Lucinda & Cynthia, 2009).

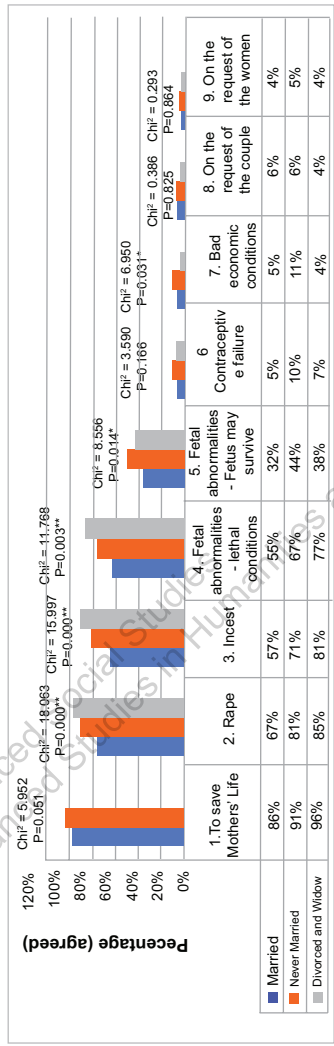


Figure 6:- Percentage of Respondents Agreed to Accept Legalized Abortion Law Under Different Conditions by Marital Status.

As shown in the Table 01, there is a statistically significant association between marital status and the aggregated score on attitudes towards induced abortion (P=0.000, Effect size=2). Married respondents are more conservative compared to other categories. There are statistically significant (Confidence interval = 95 percent) associations between the respondents' marital status and respondents' attitude towards the abortion law for rape, incest, fetal abnormality conditions and poor economic conditions. Never married respondents are more likely to accept a liberalized abortion law when compared to married respondents for all these conditions (Figure 06).

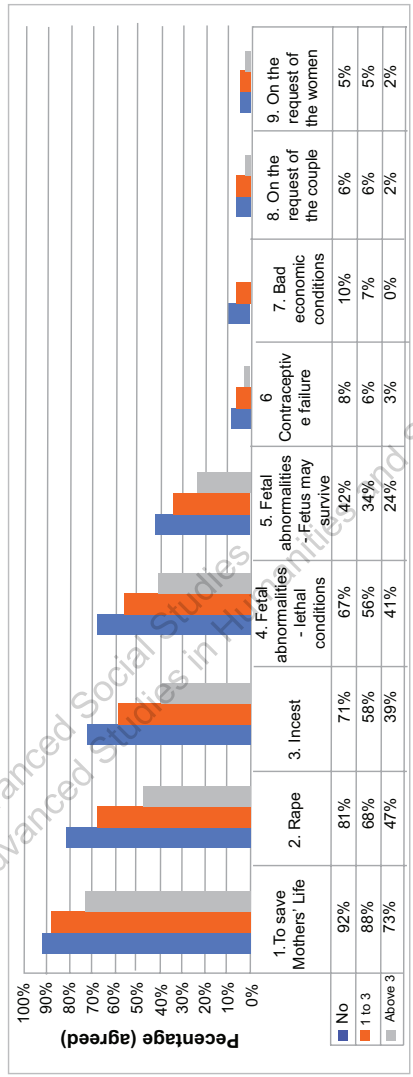


Figure 7:- Percentage of respondents agreed to accept to legalized abortion law under different conditions by level of living

There is a statistically significant correlation between number of living children and aggregated score on respondents attitudes towards the abortion law (r= - 0.184, P=0.000). More specifically, respondents with lesser number of living children are more likely to accept a liberalized law on abortion (Table 01). Detail analysis shows that there are statistically significant (Confidence Interval = 95 percent) associations between number of living children and attitudes towards abortion law for rape, incest and fetal abnormality (Figure 07).

Table 02: Individual Exposure to Contraceptive Failure and Unexpected Pregnancies as Factors Associated with Attitudes Towards Abortion

Variables and Levels		Observations		Central tendency and dispersion				Tests for associations	
Variable	**Levels**	**N**	**%**	**Mean**	**Median**	**Mean Rank**	**SD**	**Test for median**	**Kruskal-Wallis test**
1. Do you know any person (relation, or friend) who has ever faced to a situation of contraceptive failure?	No	586	88%	27.05	28.00	324	7.67	P=0.069	*P=0.020* x^2=5.406 Effect size=1%*
	Yes	79	12%	29.25	31.00	377	9.26		
	Total	**665**	100%	**27.31**	**28.00**		**7.90**		
2. Do you know any person (relation, neighbor or friend) who has ever faced an unexpected pregnancy?	No	536	81%	26.77	28.00	314	7.93	P=0.002**	*P=0.000** x^2=19.434 Effect size=3%*
	Yes	128	19%	29.70	30.00	397	7.44		
	Total	**664**	100%	**27.33**	**28.00**		**7.91**		
3. Do you know any person (relation, neighbor or friend) who has had to go through an illegal abortion?	No	609	92%	27.22	28.00	325	7.83	P=0.051	*P=0.105 x^2=2.623 Effect size=0%*
	Yes	53	8%	28.32	30.00	369	9.05		
	Total	**662**	100%	**27.31**	**28.00**		**7.94**		
4. Do you aware of a woman who had experienced complications after undergoing an illegal abortion?	No	635	96%	27.17	28.00	326	7.87	P=0.156	*P=0.044* x^2=4.039 Effect size=1%*
	Yes	28	4%	29.46	31.00	400	9.07		
	Total	**663**	100%	**27.27**	**28.00**		**7.93**		
5. Do you aware of a person / health professional who would be ready to provide an abortion service illegally?	No	610	92%	27.15	28.00	323	7.83	P-0.047*	*P=0.012 x^2=6.338 Effect size=1%*
	Yes	51	8%	29.28	30.00	393	8.64		
	Total	**661**	100%	**27.32**	**28.00**		**7.91**		

* Statistically significant at 95% confidence interval

* * Statistically significant at 99% confidence interval

Previous studies conducted in Sri Lanka clearly shows that there is a substantial interest in limiting fertility among women with lower parities (De Silva, 1992b). Supporting the findings of current study, William Marsiglio and Constance Shehan (1993) conclude that young American men who desire a large number of children and those who would be most pleased by becoming a father in the immediate future had the most unfavorable attitudes towards induced abortion. These facts indicate the association of fertility intentions with abortion attitudes. Researchers tend to consider that abortion in Sri Lanka is an unrecognized method of fertility control (De Silva, Perera & Anuranga, 2010; De Silva, 1996; De Silva, 1992a).

Individual Exposure to Contraceptive Failure and Unexpected Pregnancies as Factors Associated with Abortion Attitudes

As explained in Table 02, respondents with higher levels of pregnancy related vulnerable exposure generally tend to have liberal attitudes towards the abortion law. More specifically, respondents who knew any person (relative, neighbour or friend) who experienced an unplanned pregnancy (P=0.000, Effect size=3%), respondents who are aware of any person (relative, or friend) who has ever faced a situation of contraceptive failure (P=0.020, Effect size=1%) and respondents who are aware of a woman who has experienced complications after undergoing an illegal abortion (P=0.044, Effect size=1%) are more likely to accept liberalization of abortion law than respondents who were not exposed to these kind of situations. Respondents who knew any person (relation, neighbor or friend) who has gone through a termination and respondents who are aware of a person including health professionals who would be ready to provide abortion services illegally do not show a statistically significant association with respondents' attitudes towards the abortion law at the 95 percent confidence interval. However, individual pregnancy related vulnerable exposure does not show any negative association with liberal attitudes of the respondents under any situation.

Personal Experiences on Using Contraceptives and Unexpected Pregnancies as Factors Associated with Abortion Attitudes

Table 03 illustrates the association between respondents' attitudes towards the abortion law and individual experiences of using contraceptives or emergency contraceptives, contraceptive failures, unexpected pregnancies and induced abortion. Results show that the individual experiences are positively associated with liberal attitudes towards abortion under all situations. In other words, respondents who have ever used contraceptives (P=0.000, Effect size=3%), respondents who have ever used emergency contraceptives (P=0.000, Effect size=4%), respondents who have ever faced a situation of contraceptive failure (P=0.001, Effect size=3%), respondents who have ever faced a situation of unplanned pregnancy (P=0.011, Effect size=2%), and respondents who have ever undergone a termination (P=0.013, Effect size=1%) tend to accept liberalization of the abortion law compared to respondents who have not experienced these types of personal experiences.

Table 03: Personal experiences of using contraceptives and unexpected pregnancies as factors associated with abortion attitudes

Variables and Levels		Observations		Central tendency and dispersion				Tests for associations	
Variable	**Levels**	**N**	**%**	**Mean**	**Median**	**Mean Rank**	**SD**	**Test for median**	**Kruskal-Wallis test**
1) Have you (or your sexual partner) ever used any kind of contraceptive method?	No	272	65%	25.43	26.00	189	7.46	P=0.000**	P=0.000** Chi^2=12.808 Effect size=3%
	Yes	144	35%	27.36	28.00	233	9.77		
	Total	**416**	100%	**26.10**	**28.00**		**8.37**		
2) Have you (or your sexual partner) ever used any kind of emergency contraceptive?	No	363	87%	25.99	27.00	195	7.68	P=0.000**	P=0.000** Chi^2=16.134 Effect size=4%
	Yes	52	13%	26.82	31.00	269	12.31		
	Total	**415**	100%	**26.10**	**28.00**		**8.38**		
3) Have you (or your sexual partner) ever faced a situation of contraceptive failure?	No	399	97%	25.85	27.00	199	8.16	P=0.023*	P=0.001** Chi^2=11.242 Effect size=3%
	Yes	14	3%	32.06	33.00	309	12.31		
	Total	**413**	100%	**26.06**	**28.00**		**8.38**		
4) Have you (or your sexual partner) ever faced a situation of unexpected pregnancy?	No	399	97%	25.92	27.00	200	8.21	P=0.087	P=0.011* Chi^2=6.521 Effect size=2%
	Yes	14	3%	30.07	33.00	284	12.16		
	Total	**413**	100%	**26.06**	**28.00**		**8.38**		
5) Have you (or your sexual partner) ever faced a situation of illegal abortion?	No	405	98%	25.98	27.00	201	8.25	P=0.124	P=0.013* Chi^2=6.203 Effect size=1%
	Yes	8	2%	29.86	35.00	311	13.81		
	Total	**413**	100%	**26.06**	**28.00**		**8.38**		

** Statistically significant at 95% confidence interval*

** * Statistically significant at 99% confidence interval*

Results of Binary Logistic Model

Apart from bi-variate analysis described in previous sections, this study was extended to identify factors which affect a respondent's agreement to legalize abortion in two selected circumstances; Rape and Incest. Table 04 demonstrate the results of binary logistic regressions for above two selected circumstances. While the results of the binary logistic model confirm the findings of the bi-variate analysis, individual and household characteristics have been included in the model to enhance its goodness of fit. As per the binary logistic mode, increase in formal education by 1 year increase the odds of accepting legalized abortion in the case of rape by 5.3 percent and incest by 3.3 percent. Similary, increase of the parity by one child decrease the odds of accepting legalized abortion in the case of rape by 23 percent and incest by 20 percent. Odds of accepting legalized abortion for rape by Muslim respondents is 96 Percent lower than the respondents belonging to other religions. Odds of accepting legalized abortion for rape by male respondents is 79 percent higher than the females.

Table 04:- Results of Binary Logistic Regression to Elaborate Factors Associated with Respondent's Willingness to Legalize Abortion for Rape and Incest

Variable in the model	Government of Sri Lanka must legalize abortion to terminate pregnancy resulting a rape case				Government of Sri Lanka must legalize abortion to terminate pregnancy resulting an incest			
	B	Wald	Significance	Odd Ratio	B	Wald	Significance	Odd Ratio
Formal Education (Number of completed Years)	0.051	1.374	0.241	1.053	0.032	0.635	0.425	1.033
Number of Living Children	-0.266	10.906	0.001	0.767	-0.224	8.453	0.004	0.800
Muslims or Other (Muslim=1, Other =0) - Reference Category = Muslim	-2.566	100.309	0.000	0.077	-2.672	95.209	0.000	0.069
Number of Bed Rooms in the Household	0.425	8.072	0.004	1.530	0.402	8.344	0.004	1.495
Read any newspaper article on abortion during the last year (Yes = 1, No=0) - Reference category = No	-0.724	4.373	0.037	0.485	-0.380	1.356	0.244	0.684
Gender (Male=1, Female = 0) - Reference category = Male	0.582	6.510	0.011	1.790	0.789	13.025	0.000	2.201
Constant	0.133	0.063	0.801	1.143	-0.307	0.384	0.536	0.736
-2 Log likelihood	580.424a				651.298a			
Cox & Snell R Square	0.216				0.225			
Nagelkerke R Square	0.317				0.310			

Summery and Conclusion

Ethnicity, religion, age, years of formal education, marital status and number of living children were identified as the factors associated with respondent's attitude towards induced abortion. Muslims are more conservative over all other ethno-religious groups for legalizing induced abortion. Respondents with high level of education, less number of living children and lower age (youth) are more likely to accept liberalized law on abortion. Similarly, never married respondents are more likely to accept legalizing abortion over married respondents. Respondents with higher level of exposure generally tend to hold liberal attitudes towards the abortion law. Respondents who know any person (relation, neighbour or friend) who has ever faced with an unexpected pregnancy, respondents who are aware of any person (relation, or friend) who has ever faced a situation of contraceptive failure and respondents who are aware of a woman who had experienced complications after undergoing an unsafe abortion are more likely to accept liberalization of abortion law than the respondents who do not have exposure to these kind of situations. Similarly, own personal experience of the individual is positively associated with liberal attitude towards abortion for all the situations. Respondents who have ever used a contraceptive, respondents who have ever used emergency contraception, respondents who have ever faced a situation of contraceptive failure, respondents who have ever faced a situation of unplanned pregnancy, respondents who have ever undergone a pregnancy termination tend to accept liberalization of the abortion law than the respondents who do not have these kinds of personal experiences.

A series of more focused interventions are needed to generate public awareness on current law on abortion and to sensitize the community. The results of this study may be used by the stakeholders to design more focused information, education and communication (IEC) interventions to address the issue. Particularly, future IEC interventions must be more focused on Muslims with higher family size and lower level of education. Future studies may focus on analyzing reasons for conservative attitudes and its behavioral intensions.

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