The Effect of Smartphone on Adolescents Desire to Marry Early in Pasuruan Regency

Lely Hermi
Widyaiswara Madya of Education and Training for Population and Family Planning Malang-Indonesia

Abstract
Smartphone become something inseparable with adolescents. Like a double-edged knife, Smartphone can give good or bad effect for adolescents, one of them is on teenage sexual behavior. This study aims to determine the effect of Smartphone on adolescents desire to marry early. The population is all Senior High School (SMA) and Vocational School (SMK) in Pasuruan Regency. Data were collected by questionnaire. The obtained data is analyzed by multiple regression analysis. The results showed that ease access to internet and parental controls have no significant effect on adolescents desire to marry early. The adolescents desire to marry early more affected by peers milieu and religious activities. The positive peers milieu and religious activity followed have a positive effect on mindset of adolescents to choose a way of life in accordance with religious advice, namely getting married. Considering these results, it is advisable for parents and teachers to lead adolescents to a more positive association, such as come to religious environments, following groups of youth information and counseling centers (PIK-Adolescents) and not forget to apply 8 family functions

Keywords: BKKBN, adolescents desire to marry early, Smartphone,

INTRODUCTION
Smartphone continue to be developed and more sophisticated. Smartphone use the operating system of operating system designed specifically for mobile phones called the android operating system. Smartphone have a lot of features and complete, not only equipped with a camera, radio, games, music player, video player like a normal mobile phone, but also equipped with applications related to internet.

Smartphone are no longer a luxury item so the needs are higher. Smartphone is a mobile phone that has high capabilities such as computers because the smartphone also has an Operating System (Ghazizadeh, 2012). Smartphone developers continue to innovate by adding features that increasingly diverse and make the smartphone as a device that can perform various functions (multitasking) it is also that sparked public interest to have a smartphone to help the needs of work that demands speed and multifunctional.

The highly sophisticated technology of telecommunication Smartphone is accompanied by an affordable price making Smartphone used by wider community. Smartphone users not only among business people, but from all elements, from general public even to students (Choi et al., 2016). People of all ages, from children, adolescents, elderly, even the elderly are many who are smartphone users. Smartphone are not only used for phones and SMS, but also for social, work, and education and entertainment needs.

Adolescents are active smartphone users. Smartphone seem to be something that is integral to adolescents, so sometimes cause things that are not desirable. The existence of a smartphone as a two-edged blade. On one hand positive, Smartphone can be used to simplify many human affairs, such as communication tools, work tools and entertainment. On negative side, Smartphone can be easily misused for negative things. Teens forget the time, forget learning, do not care about the environment and make Smartphone to do negative things like cheating, dating or entering the forbidden site. One of restricted sites that many adolescents enter is a porn site (Strassberg, 2015).

Easy access to porn sites is something that needs serious attention. The effects of pornography are also difficult to control. Now a lot of news is delivered about how adolescents have sex behavior that deviates as the effects of pornography (Alfawareh and Jusoh, 2014). The existence of Smartphone and easy access to pornographic sites ultimately make adolescents mature ahead of time. Sexual maturity that has not timed it will also affect the psychology. Adolescents are becoming increasingly quick to know things related to sexual problems which in turn make them have a desire to try them.

The adolescents desire to find out more about sexual problems leads to two main lines of legal and illegal channels. On illegal side, many adolescents now have pre-marital sex, not even a few of girls who are trapped in prostitution due to pornography. On a legal path, adolescents then consider doing an early marriage. This is indicated by a fairly high number. Population in East Java based on BPS data of East Java Province, in 2015 amounted to 38,847,561 with total adolescent age of 9117,751 or 23.47% of total population. While the population in Pasuruan is 1,581,787 with number of adolescents reaching 271,973 or 17.19%. From data, it can be said that number of adolescents in East Java and especially Pasuruan district is relatively large, although the average of Pasuruan district adolescent under East Java, so it is necessary to get and give understanding about the importance of smartphone usage wisely and useful so that it can make a positive enrichment for adolescent.

Early marriage is a marriage performed by adolescents under 16 years of age in women and under 19 years
in men (Romeuli: 2012). As it is known that marriage at an early age would have an effect to various aspects, especially on reproductive health.

Adolescents in Pasuruan who married early before the age of 20 years, in October 2017 the number of marriages 11,946, who married under the age of 20 years amounted to 2,679 or 22.43%. The number of marriages fell to 430 in November 2017 with number of early marriage of 105 but with a percentage increase of 30.51% and then to 13,864 with number of marriage ages 20 years of 3.127 or 22.58% in December 2017. While based on average recapitulation province, marriage under 20 years old in October 11%, November 19,40% and December 18,35%. Smartphone can affect the desire of young married adolescents. This condition is interesting to investigate considering adolescents are not fully mature either physically or psychologically to enter the marriage level. Based on these conditions, this study aims to examine how the effect of Smartphone on the desire of early married teens.

THEORETICAL BASIS

A. Smartphone

Smartphone become an integral part of people's lives. Smartphone were first introduced eleven years ago when Apple introduced them to consumer market. However, in reality the smartphone has been marketed in limited since 1993. The difference between the smartphone now with previous smartphone is the previous smartphone primarily targeting the user market and used as a business tool. The company is the target businesses because the price of Smartphone at that time is too expensive to be consumed by general public (Balakrishnan, 2012).

Nusca (2009) defines Smartphone as a mobile phone or cell phone with a sophisticated operating system which combines features of a computer operating system with other useful features for mobile use and features application programs such as games, office applications, navigation, music player, video player and so on.

The development of smartphone is divided into three major eras. The first era is a smartphone that is purely used for business. Smartphone in this phase are all aiming at corporations and have functions and features based on business needs. The existence of Smartphone in this era is the first progress of smartphone. This era began with development of first smartphone called the Simon of IBM in 1993. Blackberry is the most revolutionary equipment in this era by introducing many features such as e-mail, internet, fax and browsing, including already equipped with a camera. This phase is entirely based on Smartphone that are marketed to businesses (Brown et al., 2011).

The development of smartphone then entered in second era. This era began with development of iPhone, main breakthrough smartphone that occurred in 2007. This type of smartphone was first introduced by Apple. This era is the first era in which the industry introduced Smartphone to public. Google then introduced the Android operating system in late 2007. Consumers are targeted smartphone market. In this period introduced features of consumer needs in general. The general consumer market requires a low price, company presses costs to low to attract more consumers. Some common features are introduced such as internet access, chatting, video and audio, websites and so on (Elder, 2013).

The third phase arises where to close the distance between the general consumer and company. Improvements are made on display quality, display technology using a stable mobile operating system. The battery is developed so that it can last longer. This phase begins in 2008 by improving the mobile operating system. The most popular and widely developed operating system is iOS, Android, Blackberry OS and Windows Mobile. The companies that are growing rapidly are Apple, Samsung, HTC, Motorola, Nokia, LG, Sony and so on (Hingorani et al., 2012).

B. Youth and Early Marriage

Adolescence is a period in which the process of growing up from children to adults is often called puberty. According to WHO, age limit of adolescents is 12 to 24 years. Meanwhile, BKKBN sets the teen age limit between 10 and 24 years. Adolescence is a period in which it begins to show behavior driven by sexual desire to opposite sex (Sarwono, 2002: 140). This happens because teens enter a period of sexual growth. The growing sex glands provide a sex drive in adolescents.

In this age of growth, adolescents begin to show their sexual activity. Adolescent activity in seeking knowledge about sex can be carried on wrong path. Therefore, parental and teacher control and supportive religious activities are essential. Parents who are able to provide an understanding of sexual behavior properly to children create a child who tends to control his sexual behavior in accordance with understanding provided by parents. This happens because the best sex education can be given by parents by way of life as husband and wife united in bond marriage (Sarwono 2011). The BKKBN itself in GenRe program sets the ideal first marriage age limit of 21 for women and 25 years for men through Married Age Maturity (PUP). These limits are considered to be ready in terms of health and emotional to face family life also seek that first pregnancy occurs at a fairly mature age.

Religion is the rules and obligations that must be done in relation to God, fellow human beings and universe. Rinker et. al. (2016) describes religious feelings as inner feelings in relation to God. Religious activity
is an activity performed in relation between man and God, man with other human beings and man with universe.

At that age female reproductive organs are psychologically well developed and strong and ready to give birth to physical descent began to mature. While men of that age are psychologically and physically very strong, they are able to sustain family life to protect both psychic and emotional, economic and social. Having a marriage without readiness and careful consideration from one side may indicate an unresponsiveness to meaning of marriage and even further could be a harassment of sanctity of a marriage. Some of communities that are married to this early age are affected by several factors that encourage them to marry early.

Article 6 paragraph 2 of Law no. 1 Year 1974 states that to hold a marriage a person who has not reached the age of 21 years must get permission from both parents. But in practice in society today is still found many people who marry at an early age or under age which is also strengthened with Article 7 paragraph 1 and 2 of Law no. 1 of 1974 which regulates the age dispensation of marriage. The dispensation of marriage age is a dispensation or waiver to an unaccompanied bride who is given a Religious Court for marriage, for a man who has not reached the age of 19 years and a woman not yet 16 years of age. So that Law that has been made, some does not apply in a certain area even though the law has existed since the first.

In terms of reproductive health, early marriage is related to several aspects (BKKBN: 2014) as follows: From aspect of health affects the high maternal mortality rate, infant mortality and low degree of maternal and child health. In addition, it affects the risks of morbidity and mortality that arise during the process of pregnancy and childbirth.

RESEARCH MODEL AND HYPOTHESES DEVELOPMENT

Based on introduction and above theory, this research model can be presented in figure 1 below.

Figure 1. The research model

Based on research model it can be arranged hypothesis as follows:

H1. Easy access to pornographic sites, parental and teacher control, peers milieu and religious activities simultaneously affect the adolescents desire to marry early

H2. Easy access to pornographic sites, parental controls and teachers, peers milieu and religious activities partially affect the adolescents desire to marry early

H3. The easy access to internet site is thought to have dominant effect on adolescents desire to marry early

RESEARCH METHODS

A. Location and Time of Study
This research was conducted in Pasuruan Regency. This location was chosen with consideration that adolescents are an important element in society. The study was conducted from January to February 2018.

B. Types of Research
The type of research used in writing of this thesis is explanatory research or research explanation of Sekaran (2003). The main reason to use explanatory research related to selection of hypotheses conducted through this study the author tries to explain causal relationship and test the relationship that occurs between the facts about the effect of smartphone use on desire of young married adolescents.

C. Population and Sample Research
Population is the total number of elements that become the center of research (Sugiyono, 2010; Santos, 2002; Riduwan2007). Based on above understanding, in this study the targeted population is high school students (total 81 schools with number of students 7150) and SMK (total 32 schools with number of students 7296) in Pasuruan. Selection of sample of high school students because according to Law Number 1 Year 1974, Article 7 paragraph
(1) mentioned that marriage is only permitted if the man has reached the age of 19 years and women reach the age of 16 years (Soemiyati, 1982). Sampling of high school and vocational school students in this study used a random sampling technique, which is a random sampling of 80 people, with consideration that minimum sample requirement for multiple regression analysis is 30 samples, so as to meet the need to improve the accuracy of statistical data analysis (Ridwan and Kuncoro, 2007: 45).

D. Types and Sources of Research Data
The type of research is quantitative. Quantitative research is a research using questionnaire data. After the data obtained then analyzed using multiple regression. (Now, 2002). Primary data is data obtained directly from respondents through filling questionnaires given to respondents. Secondary Data is a data obtained through data reports (documents). This secondary data is an indispensable to support data in this study, such as data on number of students in Pasuruan District.

E. Statistical Analysis
1. Multiple Linear Regression Analysis
Statistical analysis used to test the hypothesis in this study is using multiple linear regression analysis. It is based on reason that this research wants to know about how the effect of independent variable to dependent variable. The model used is as follows.

\[ Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 \]

Description
- \( Y \) = Adolescents desire to marry early
- \( \alpha \) = Constants
- \( \beta_1, \beta_4 \) = Regression coefficients
- \( X_1 \) = Easy access to the site
- \( X_2 \) = Control of parents and teachers
- \( X_3 \) = Peers milieu
- \( X_4 \) = Religious activity

2. First Hypothesis Testing
Analysis aims to test the effect simultaneously between independent variables of Smartphone (easy access to porn sites, parental and teacher control, peers milieu and religious activities variables) on the adolescents desire to marry early. \( F \) test is performed using SPSS 18.00 software program. Simultaneously, independent variable has significant effect on dependent variable if significance value of \( F \) is smaller than alpha (\( \alpha \))

3. Second Hypothesis Testing
To test the second hypothesis used \( t \) test, namely to determine the partial effect of independent variables to dependent variable. Independent and dependent variables are said to be partially significant if the level of significance is smaller than the value of alpha (\( \alpha \))

4. Third hypothesis Testing
To test the third hypothesis is done by counting the value of \( t \) arithmetic. The highest \( t \) value indicates the variable that has dominant effect.

RESEARCH RESULT AND DISCUSSION
A. Research Instrument Testing
Instrument test is required to obtain valid and reliable data. Variables studied is the effect of Smartphone that include easy access to porn sites, parental and teacher control, peers milieu and religious activities towards the adolescents desire to marry early. Data analysis was performed using SPSS version 22. The instrument test showed that all data used was valid because the significance value were all smaller than the 0.05 threshold (Now, 2003). The reliability test shows that cronbach alpha has a value greater than 0.6. It meets the criteria of data validity and multiple regression analysis can be performed (Nunally, 1978). Testing the following classical assumptions is a prerequisite that must be done in order to perform multiple regression analysis.

B. Classic Assumption Testing
Multicollinearity test is used to test whether the regression model found the correlation between independent variables. A good regression model has no correlation between independent variables. Variance Inflation Factor (VIF) is used to determine the correlation. VIF value> 10 indicates the presence of multicollinearity and if the VIF value <10 then no multicollinearity occurs.

<table>
<thead>
<tr>
<th>Variables</th>
<th>VIF value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1. Ease to access the porn sites</td>
<td>1.691</td>
<td>There is no multicollinearity</td>
</tr>
<tr>
<td>X2 Control of parent and teacher</td>
<td>1.400</td>
<td>There is no multicollinearity</td>
</tr>
<tr>
<td>X3. Peer milieu</td>
<td>1.708</td>
<td>There is no multicollinearity</td>
</tr>
<tr>
<td>X4. Religious activities</td>
<td>1.244</td>
<td>There is no multicollinearity</td>
</tr>
</tbody>
</table>

Source: Primary data processed, 2017
Test results in Table 1 show that all independent variables have VIF values less than 10. This proves this analysis does not occur multicollinearity problems (now, 2003).

C. Heteroskedasticity assumption test

In case of variant inequality from residual one observation to another observation then there is indication of Heteroscedasticity. The variant from one observation to another observes shows homoequedasticity. But if there is a different variant called heteroscedasticity. A data does not have heteroscedasticity if the points on heteroscedasticity graph show the pattern spreads above and below 0. Heteroscedasticity testing occurs by using SPSS 22 is shown in Figure 2.

![Scatterplot]

Figure 2. Graph of Heteroscedasticity Test

Figure 2 shows that spots spread above and below zero and do not form a particular pattern. Therefore, it can be said that data obtained does not show signs of heteroskedastisitas so that can be done further analysis (now, 2003).

D. Normality assumption test

Figure 3 shows the results of normality test. Normality test aims to test whether in a regression model, residual values have normal data distribution or not. A good regression model is the normal or near-normal distribution of data. If there is data that is far from data distribution is said to be abnormal (not normally distributed), basic desire of early marriage is as follows:

- If the data spreads around the diagonal line and follows the direction of diagonal line, then the regression model meets the assumption of normality.
- If the data spreads far from diagonal line and or does not follow the direction of diagonal line, then the regression model does not meet the assumption of normality.

![Normal P-P Plot of Regression Standardized Residual]

Figure 3: Normality Test
Figure 3 above shows that data distribution has a straight line pattern around the diagonal line. This proves that assumption of normality has been fulfilled, (Now, 2003).

E. Regression Analysis Result
Testing the classical assumption as a condition that must be met to perform multiple regression analysis shows the results above the required criteria. This becomes the basis that regression analysis can be done. Testing the effect of Smartphone are broken down into four namely the easy access to pornographic sites, parental controls and teachers, peers milieu and religious activities on the adolescents desire to marry early can be continued. The results of analysis are presented in Table 2 below.

Table 2. Multiple Regression Analysis Results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Beta</th>
<th>T</th>
<th>p-value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1. Ease to access the porn sites</td>
<td>-0.162</td>
<td>-0.134</td>
<td>0.150</td>
<td>Negatif and insignificant</td>
</tr>
<tr>
<td>X2. Control of parent and teacher</td>
<td>0.270</td>
<td>0.157</td>
<td>0.014</td>
<td>Positive but insignificant</td>
</tr>
<tr>
<td>X3. Peer milieu</td>
<td>0.492</td>
<td>0.347</td>
<td>0.121</td>
<td>Positive and significant</td>
</tr>
<tr>
<td>X4. Religious activities</td>
<td>0.438</td>
<td>0.268</td>
<td>0.000</td>
<td>Positive and significant</td>
</tr>
</tbody>
</table>

Constant = 6.957
Coefficient Determinasi ($R^2$) = 0.4315 or 43.15%
F-count = 5.871
P-value = 0.000

Source: primary data processed, 2017

From table above, it can be obtained the following equation:

$$Y = -0.134 X1 + 0.157 X2 + 0.347 X3 + 0.268 X4$$

Calculations in Table 2 show the results of testing the effect of Easy access to pornographic, Parent and teacher control, peers milieu and religious activities variables on adolescents desire to marry early. In F test section obtained F value of 5.871 with a significance level of 0.000 and coefficient of determination ($R^2$) of 0.4315 or 43.15%.

F. H1 Testing Hypothesis
H1 hypothesis states that simultaneously there is a significant effect of Easy access to porn sites, Control of parents and teachers, peers milieu and Religious activity on the adolescents desire to marry early. F-test results to value of F of 43.15 (p-value = 0,000) has shown that simultaneously Easy access to pornographic variables, Control parents and teachers, peers milieu, religious activity and Empathy significantly effect on adolescents desire to marry early. This means that hypothesis 1 is accepted.

The results of this test explain that simultaneously obtained the existence of significant effect from Ease factor accessing porn site, Control of parent and teacher, environment association, religious activity and empathy toward adolescents desire to marry early equal to 43.15%. While the remaining 86.85% affected by variables outside this study.

G. H2 hypothesis testing
Partial effect of each variable Easy access to porn site, Control of parent and teacher, peers milieu and religious activity towards the adolescents desire to marry early is done by t-test. The t-test results for all regression coefficients in Easy access to pornographic variables are negative and insignificant, Control of parents and teachers is positive and insignificant. Meanwhile, results of societal environment and religious activity were positive and significant (p-value <0.05).

Variable Easy access to porn site (X1) with regression coefficient equal to -0.134 have negative effect and not significant to adolescents desire to marry early. This is evident from value of p-value 0.311 which is bigger than $\alpha = 0.05$, so statistically regression coefficient from Easy access to porn site variable to adolescents desire to marry early is negative and not significant. Because using a reversed score then the interpretation of these results is that adolescents desire to marry early can positively be explained or affected by Easy access to porn sites. This means that higher the easy access to porn sites, the higher adolescents desire to marry early. These results are in line with research conducted by (Kuehni et al., 2011) that easy access to porn sites has a great effect on adolescents desire to marry early.

Control variables of parents and teachers (X2) with regression coefficient of 0.157 have a positive but not significant effect on adolescents desire to marry early. This is evident from value of p-value 0.193 which is smaller than $\alpha = 0.05$. The statistically regression coefficient of Parent Control and teachers variable on adolescents desire to marry early is positive but not significant. This result explains that adolescents desire to marry early can be positively explained or affected by control of parents and teachers, although not significant. This means that higher the control of parents and teachers, higher level of adolescents desire to marry early. These results are in line with research conducted by (Edler, 2013) that better parental and teacher controls have a great effect to stop adolescents from falling into promiscuity of free sex and increase the adolescents desire to marry early.

Peers milieu variable (X3) with regression coefficient equal to 0.347 have positive and significant effect on
adolescents desire to marry early. This is evident from value of p-value = 0.01 greater than \( \alpha = 0.05 \). The statistically regression coefficient of peers milieu on the adolescents desire to marry early is positive and significant. These results explain that adolescents desire to marry early can be explained or affected by peers milieu. This means that higher the peers milieu, higher the desire level of adolescents desire to marry early. These results are in line with research conducted by (Carver et al., 2012) that peers milieu has a great effect on adolescents desire to marry early.

Variable Religious activity (X4) with regression coefficient equal to 0.268 have positive and significant effect on adolescents desire to marry early. This is evident from value of p-value = 0.02 is smaller than \( \alpha = 0.05 \). The statistically regression coefficient of religious activity on adolescents desire to marry early is significant. These results explain that adolescents desire to marry early can be explained or affected by religious activity. This means that higher the religious activity, lower the desire level of adolescents desire to marry early. This result is in line with research conducted by (Fatma and Safak, 2016) that higher religious activity has a great effect to brake of adolescents desire to marry early.

The above test results indicate that independent variables Easy access to porn sites (X1) has a negative but not significant effect on adolescents desire to marry early (Y). Control variables of parents and teachers (X2) showed positive but not significant results on adolescents desire to marry early (Y). Peers milieu variables (X3) and religious activity (X4) showed a positive and significant effect on adolescents desire to marry early (Y). Hence it can be said that hypothesis 2 is partially accepted.

**H. H3 hypothesis testing**

H3 hypothesis states that variable easy access to porn site (X1) has dominant effect on the adolescents desire to marry early (Y). The proof is done by comparing the t count of four independent variables. It shows that Easy access to site (X1) has negative t value (-0.134). The value of largest t arithmetic obtained from peers milieu (X3). This result proves that hypothesis 3 is rejected.

**CONCLUSIONS AND RECOMMENDATIONS**

**A. Conclusion**

1. Simultaneously smartphone that divided into Ease of accessing porn sites, Control of parents and teachers, peers milieu and religious activity variables have a significant effect on adolescents desire to marry early.

2. Smartphone that is divided into variable Ease of accessing porn sites (X1) has a negative but not significant effect on the desire of early married youth (Y). Parents and teachers control showed positive but not significant effect on adolescents desire to marry early, peers milieu and religious activity variables showed positive and significant influence on adolescents desire to marry early.

3. Variable with dominant effect on adolescents desire to marry early is peers milieu variable.

**B. Suggestion**

The adolescents desire to marry early is affected by many variables. Some of these are the easy access to pornographic sites, parental and teacher control, peers milieu and religious activities. The results showed that easy access to the internet and parental controls have no significant effect on adolescents desire to marry early.

The adolescents desire to marry early turned out to be more affected by peers milieu and religious activities. The positive peers milieu and religious activity have a positive effect on mindset of adolescents to choose a way of life in accordance with religious advice, namely getting married. Considering these results, it is advisable for parents and teachers to lead adolescents to a more positive association, such as intercourse in religious environments, following groups of youth information and counseling centers (PIK-Adolescents) and do not forget the application of 8 family functions in adolescents. In addition, in each school should be formed group PIK Remaja. In BKR parents apply 8 Functions of family intensively.

Finally, this study provides some limitations that need to be improved in future research. First, sample of this study is limited to SMA and SMK in Pasuruan district. This lowers the generalization of results. Therefore, future research is expected to expand sample throughout East Java or even throughout Indonesia. In addition, independent variables included in this study only 4 variables so that only able to explain effect on dependent variable of 43.15 percent and the rest is explained by other variables outside the variables studied. Therefore, future studies should include other variables related on adolescents desire to marry early.

**REFERENCES**


Brown, K., Campbell, S. W., & Ling, R. 2011. Mobile phones bridging the digital divide for teens in the US?
Future Internet, 3(2), 144–158.


Elder, A.D. 2013. College students’ cell phone use, beliefs, and effects on their learning. CollegeStudentJournal, 47(4). 585-592


Miller, Brandon. 2015. “They’re the modern-day gay bar”: Exploring the uses and gratifications of social networks for men who have sex with men. Computers in Human Behavior, Volume 51, Part A, October 2015, Pages 476-482


Rinker, Cortney Hughes, Jesse Roof, Emily Harvey, Elyse Bailey and Hannah Embler Schneidawind. 2016. Transforming Religious Authority and the Nature of Religion. USA Today. p. 2B

Sager, Ira (June 29, 2012). "Before iPhone and Android Came Simon, the First Smartphone". Bloomberg Businessweek. Bloomberg L.P. Retrieved June 30, 2012. "Simon was the first smartphone. Twenty years ago, it envisioned our app-happy mobile lives, squeezing the features of a cell phone, pager, fax machine, and computer into an 18-ounce black brick."


Soemiyati, Hukum Perkawinan Islam dan Undang-undang Perkawinan (Undang-Undang No.1, Tahun 1974, Tentang Perkawinan), (Yogyakarta: Liberty, 1982), 4.


Strassberg, Donald S., Jordan E. Rullo, Julia E. Mackaronis. 2014. The sending and receiving of sexually explicit cell phone photos (“Sexting”) while in high school: One college’s students’ retrospective reports.
