

# Knowledge, Exposure, Peer Pressure, and Awareness Among Teenagers on Perceived Factors Influencing Teenage Pregnancy

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## Abstract

This study aimed to determine teenagers' knowledge, awareness, exposure, and peer pressure on perceived factors that influence teenage pregnancy which may serve as a basis for intervention program development. It employed a descriptive-survey method using a validated researcher-made questionnaire to gather data. The 106 respondents involved from the rural town of Tampilisan were obtained through a convenient sampling technique. Weighted mean and Kruskal Wallis H-Test were used for data analysis. The study revealed that teenagers were “moderately knowledgeable” in terms of sex education, they are “less exposed” too risky behaviors from the internet, and “less experienced” peer pressure. Furthermore, there was no significant difference existed among the respondents' exposure to risky behaviors, extent of peer pressure, and extent of awareness of teenage pregnancy when grouped according to educational level, however, respondents differ significantly in terms of knowledge of sex education. Moreover, when respondents were grouped according to family structure, there was no significant difference existed among them. The findings suggest that an intervention program enhancing information dissemination through various mediums can be recommended, to help and guide teenagers in achieving safe, fulfilling, and enjoyable relationships and prevent unplanned pregnancy in the future.

Keywords: Teenage Pregnancy, Maternal Risk Factors; Teenage Pregnancy Awareness

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## 1. Introduction

One of the most common and pressing issues that involved the youth of today is the prevalence of teenage pregnancy which can be considered as one of the social problems that bear great impact, especially on young women. Presently, the World Health Organization (WHO) reported that at least 10 million unintended pregnancies occur each year among adolescent girls in developing countries including the Philippines (Adolescent Pregnancy, 2020). The Philippines has become the leading country in terms of teen pregnancies among six major economies of the Association of Southeast Asian Nations (ASEAN), with an increasing number as compared to other member-state which are declining. Every day, 576 babies are delivered by Filipino teenage mothers, for a total of 210,240 babies annually. Because of immaturity, teenage mothers were more likely to have premature and underweight babies, suffer chronic poverty, and are unlikely to achieve higher educational attainment (Chavez, 2019).

Teenage Pregnancy is a pregnancy experienced by girls aged between 13 and 19 years old. This group may be particularly vulnerable when their capabilities are still developing at a younger

age. Thus, it has become a public concern that has generated a great deal of attention in the locality and became a significant social problem. It has been linked to an array of other social issues, such as welfare dependency, child health, and well-being, out-of-wedlock birth, school drop-out, and workforce development (Jones et al., 2019; Ochen et al., 2019; Torivillas, 2013).

Some factors may have contributed to teenage pregnancy as explained by the Population Commission such as individual and institutional. Among the individual factors was the knowledge of sex education and exposure to risky behaviors on the internet and in their circle of friends. While institutional factors include information dissemination and provision of access to family planning services for the younger population (Magsino, 2020). These factors are also congruent with the results of several recent studies (Chung, et al., 2018; Kaur, 2020; Wright et al., 2019; Yakubu & Salisu, 2018). It was also noted that no known study was conducted particularly in Tampilisan Municipality on factors that may influence teenage pregnancy, thus, this study was realized.

This study aimed to determine the teenagers' knowledge of sex education, the extent of exposure to risky behaviors from the internet, the extent of pressure from peers, and the extent of awareness of the information as factors that influences teenage pregnancy, particularly in selected barangays in a rural town of Tampilisan, which could be a basis for an intervention program.

## **2. Methodology**

### **2.1 Research Design**

This study utilized a quantitative, particularly descriptive-survey method of research to determine the teenagers' extent of knowledge, exposure, pressure, and awareness of factors that influence teenage pregnancy in selected barangays of Tampilisan, Zamboanga del Norte. This study can be categorized as a descriptive survey as the entire research tend to describe the perceived extent of knowledge on sex education, the extent of exposure to risky behaviors on the internet, the extent of pressure to peers, and the extent of awareness of information dissemination in which process involves quantifiable numerical data which were coded, tabulated, computed, analyzed, and presented (Cresswell, 2014; Leavey, 2017; Stockemer, 2019, pp. 31-32).

### **2.2 Research Environment**

This study was carried out in the municipality of Tampilisan, Zamboanga del Norte, a rural town in the Southern Philippines. Three barangays were purposively chosen as the location of the study namely, Poblacion, Znac, and Galingon. These are the three most densely populated barangays in the municipality in terms of teenagers aging from 13 to 19 of both sexes. Barangay Poblacion has a total population of 562 teenagers with 11,446 square kilometers of land area which serves as the seat of municipal government. Barangay Znac, on the other hand, has 286 total populations of teenagers in a political land area of 12,076 square kilometers and it is 3 kilometers away from the Poblacion. This is where the Jose Rizal Memorial State University (JRMSU)-Tampilisan Campus, one of the organic campuses of JRMSU is located. Barangay Galingon has a total population of teenagers of 228 with a land area of 10,439 square kilometers and it is 8 kilometers away from the Poblacion.

### **2.4 Participants**

The participants of the study were teenagers of both sexes with ages ranging from 13 to 19 years old who are specifically residing in the three barangays being selected (Poblacion, Znac, and Galingon). Based on the record from the municipal office (Municipal Planning and Development Coordinator), and the Sangguniang Kabataan Municipal Federation, there are 562 teenagers in Poblacion, 284 in Znac, and 224 in Galingon from ages ranging 13 to 19 years old of both sexes. Naing et al. (2006 as cited in Pourhoseingholi, et al., 2013) contested the notion that "the larger the sample size the better the study," as not always true. They believe that it is wise for the investigators to use a 10% to 20% computed sample size as long as they assume no problem with non-response or missing values discrepancies. Hence, the researchers used 20% and the computed sample size is 106 teenagers, who were the respondents of the study.

Each barangay took respondents proportionately from their total population. In this manner, the result becomes more representative among the teenagers. Table 1 summarizes the population and the corresponding sample distribution in each barangay.

**Table 1.0**  
**Population and Sample Distribution**

<b>Barangay</b>	<b>Population (N)</b>	<b>Percentile (%)</b>	<b>Sample Size (at 10%)</b>
Barangay 1	562	52	56
Barangay 2	284	27	28
Barangay 3	224	21	22
Total	1,076	100.00	106

## 2.5 Research Instrument

This study utilized a validated researcher-made checklist to obtain the needed data. The instrument was validated by a panel of experts from the academe and in public health. The instrument was also pilot tested to examine the instrument reliability using Cronbach Alpha. Results revealed .859 to .959 Alpha coefficients which fall to an acceptable value for good instrumentation (Ogbasi & Okpala, 1994, cited in Egwu, 2015).

A letter addressed to the respondents was made in the first section of the questionnaire which explains the nature and purpose of the research. Below the letter was a consent form asked for the target participants and their parents before the conduct of the study. Respondents with their parents who willingly signed the consent form were the ones chosen as the final respondents of the study. Also, the personal information of the respondents such as name (optional), educational level, and family structure of the respondents was asked to answer inferential questions set in the study. Then, item statements on the prevalent factors influencing teenage pregnancy as perceived by teenagers. This part required participants to answer by indicating a checkmark on the five columns on the right which represents their answer on each item. On average, the instrument was answerable within 15-30 minutes.

However, with the threat posed by COVID 19 and with the government's response to impose social distancing, using a face mask, and staying at home to curtail the further transmission, the researchers created a digital copy of the validated questionnaire in a form of Google Form and

the link was sent to target respondents. For those with a lacked internet connection, some questionnaires were printed and administered to the respondents as researchers have visited personally the research sites following IATF and DOH protocols since Tampilisan is a low-risk area in COVID 19 at the time of data gathering.

## 2.6 Data Collection Procedures

At first, the researchers had secured permission from the different offices and authorities such as the College of Education Research Chairperson, Municipality Mayor, and office head of the Municipal Social Welfare and Development. After obtaining permits, the researchers administered the printed and online questionnaire checklist after determining the fixed schedule that guarantees respondents' availability in their respective homes.

In the case of the printed questionnaire, the researchers had taken personal home visitation observing the proper protocols set by the government as well as the coordination from the Rural Health Unit (RHU) was observed. Likewise, they also read and explained the instructions orally to the respondents to secure the accuracy of the responses. The respondents were given ten to fifteen minutes to answer all items. Retrieval of the questionnaires was done after the respondent has finished answering all the items. For the digital online questionnaire, the researchers sent the link to at least one barangay official and asked a favor to let the target respondents answer the link with accuracy while giving assurance to take the responsibility with the utmost confidentiality in compliance with the Republic Act 10173 (the Data Privacy Act of 2012).

## 2.7 Data Analysis

The data being gathered were analyzed using descriptive and inferential statistics. To answer the first problem, particularly on the respondents' extent of knowledge, awareness, exposure, and pressure towards factors that influence teenage pregnancy rate, a weighted mean was employed. Moreover, to address the problem of testing the difference in respondents' extent of knowledge, awareness, exposure, and pressure towards factors that influence teenage pregnancy grouped according to profile, Kruskal Wallis H-Test was used.

## 3. Results

### 3.1 Teenagers' Perceptions of the Factors that Influence Teenage Pregnancy

The result shows that in terms of knowledge of sex education, the respondents are moderately aware with a mean of 2.84 and on the exposure to risky behavior on the internet, respondents obtained a mean of 2.38, interpreted as Less Exposed. Furthermore, respondents also acquired a mean of 2.36, interpreted as Less Pressured on the Peer Pressure as a factor that influences teenage pregnancy while they got 2.84, interpreted as Moderately Aware on the Information Dissemination.

<b>Factors</b>	<b>Mean</b>	<b>Interpretation</b>
Knowledge of Sex Education	2.84	Moderately Knowledgeable
Exposure to Risky Behavior on the Internet	2.38	Less Exposed

Peer Pressure	2.36	Less Pressured
Information Dissemination	2.84	Moderately Aware

### 3.2 Difference in Teenagers' Perceptions of the Factors that Influence Teenage Pregnancy when grouped according to Educational Level

When data were statistically treated using Kruskal-Wallis Test at a 0.05 margin of error, it revealed that the teenager's response on the Knowledge on Sex Education garnered an H-value of 14.930 and a p-value of .011 which can be interpreted as "Significant". Also, on the Exposure to Risky Behavior on the Internet where respondents of six educational levels acquired an H-value of 9.204 and a p-value of .101 which is interpreted as "Not Significant". In the same vein, on the Peer Pressure there appeared an H-value of 8.260 and a p-value of .142 also interpreted as "Not Significant". This is also true in the Information Dissemination which obtained an H-value of 7.327 and a p-value of .197 interpreted as "Not Significant".

Factors	EDUCATIONAL LEVEL	N	Mean Rank	H-value	p-value @ 0.05 significance	Interpretation	Decision
Knowledge of Sex Education	GRADE 8	14	44.32	14.930	.011	Significant	Reject Null Hypothesis
	GRADE 9	16	69.03				
	GRADE 10	19	64.55				
	GRADE 11	29	38.79				
	GRADE 12	12	59.46				
	1ST YEAR COLLEGE	16	55.06				
	Total	106					
Exposure to Risky Behavior on the Internet	GRADE 8	14	38.82	9.204	.101	Not Significant	Fails to Reject Null Hypothesis
	GRADE 9	16	51.59				
	GRADE 10	19	54.89				
	GRADE 11	29	65.74				
	GRADE 12	12	53.08				
	1ST YEAR COLLEGE	16	44.72				
	Total	106					
Peer Pressure	GRADE 8	14	41.36	8.260	.142	Not Significant	Fails to Reject Null Hypothesis
	GRADE 9	16	42.66				
	GRADE 10	19	52.92				
	GRADE 11	29	62.95				
	GRADE 12	12	63.38				
	1ST YEAR COLLEGE	16	51.13				
	Total	106					
Information Dissemination	GRADE 8	14	38.36	7.327	.197	Not Significant	Fails to Reject Null Hypothesis
	GRADE 9	16	55.41				
	GRADE 10	19	51.13				
	GRADE 11	29	51.74				
	GRADE 12	12	57.63				
	1ST YEAR COLLEGE	16	67.75				
	Total	106					

### 3.3 Difference in Teenagers' Perceptions of the Factors that Influence Teenage Pregnancy when grouped according to Family Structure

When data were statistically treated using Kruskal-Wallis Test at a 0.05 margin of error, it reveals that the response of teenagers on the Knowledge on Sex Education garnered an H-value of 2.200 and a p-value of .532 which can be interpreted as "Not Significant". Also, on the Exposure

to Risky Behavior on the Internet, the respondents of five family structures acquired an H-value of 7.681 and a p-value of .053, which is interpreted as “Not Significant”. In the same vein, on the Peer Pressure there appeared an H-value of 4.860 and a p-value of .182 also interpreted as “Not Significant”. This is also true on the Information Dissemination which obtained an H-value of 3.496 and p-value of .321 interpreted as “Not Significant”.

	<b>FAMILY STRUCTURE</b>	<b>N</b>	<b>Mean Rank</b>	<b>H-value</b>	<b>p-value @ 0.05 significance</b>	<b>Interpretation</b>	<b>Decision</b>
Knowledge of Sex Education	NUCLEAR FAMILY	72	52.37	2.200	.532	Not Significant	Fails to Reject Null Hypothesis
	SINGLE PAREN FAMILY	13	46.85				
	SEPARATED FAMILY	14	62.75				
	EXTENDED FAMILY/ STEP FAMILY	7	59.00				
	Total	106					
Exposure to Risky Behavior on the Internet	NUCLEAR FAMILY	72	50.43	7.681	.053	Not Significant	Fails to Reject Null Hypothesis
	SINGLE PARENT FAMILY	13	54.42				
	SEPARATED FAMILY	14	73.79				
	EXTENDED FAMILY/ STEP FAMILY	7	42.79				
	Total	106					
Peer Pressure	NUCLEAR FAMILY	72	55.82	4.860	.182	Not Significant	Fails to Reject Null Hypothesis
	SINGLE PARENT FAMILY	13	49.46				
	SEPARATED FAMILY	14	57.00				
	EXTENDED FAMILY/ STEP FAMILY	7	30.14				
	Total	106					
Information Dissemination	NUCLEAR FAMILY	72	54.71	3.496	.321	Not Significant	Fails to Reject Null Hypothesis
	SINGLE PARENT FAMILY	13	62.08				
	SEPARATED FAMILY	14	41.11				
	EXTENDED FAMILY/ STEP FAMILY	7	49.93				
	Total	106					

## 4. Discussion

### 4.1 Teenagers' Perceptions of the Factors that Influence Teenage Pregnancy

In terms of knowledge of sex education, respondents are not well knowledgeable on the natural and artificial use of contraceptives which are related to sex education and sexual health. The researchers expected less knowledgeable results because this was not being explained by teachers to the teenage students or was probably discussed slightly without digging deeper about



contraceptives during the sex education classes. Thus, teachers merely teach theoretically as these methods are also included in the reference books and other learning materials but are probably given less importance because these are seemingly not relatable in the parts of the students.

In terms of knowledge exposure to risky behavior on the internet, respondents are more exposed to visual, audio-visual, and textual digital materials available on the internet showing lewd and other acts of intimate sexual activities that may arouse and ignite teenagers' desire to engage the same. This result is expected the fact that teenagers at these ages already possessed gadgets like cellphone, tablets, personal computers, and the like and have the access to internet reaching different social media platforms, and other pornographic websites. This means that the availability of the technology and access to the internet might make the teenagers prone to exposure to the harm that the internet may bring just like the overflowing pornographic materials of all kinds.

In terms of peer pressure, respondents are less pressured among its associated with other peers of the same age. However, it is noteworthy to consider that the teenagers are moderately pressured by their circle of friends about getting into a relationship, encouraged to watch porn, boast one's sexual experience, challenged to prove their fertility and even igniting them to engage in sex. This implies that some teenagers may be more open to sharing their desire and experience with friends about sex than their parents as social acceptance are better achieved among them.

In terms of information dissemination, the respondents are less aware, especially of contraceptives like contraceptive injection, vasectomy, tubal ligation, Implant, and IUDs. This result is expected as the respondents have little to no experience being educated with the information drives as rural areas have been less likely conducted with this education activity among interested groups and youth leaders. Further, these topics are also not being discussed in case of information dissemination because these aren't appropriate in their ages.

#### 4.2 Difference in Teenagers' Perceptions of the Factors that Influence Teenage Pregnancy when grouped according to Educational Level

The result means that the respondents of each educational level in terms of Knowledge of Sex Education differ significantly. This is because the amount of learning is dependent on the level of experience and knowledge of a certain individual. On contrary, in the Exposure to Risky Behavior on the Internet, Peer Pressure, and Information Dissemination, there emerged results with an interpretation of the "Accepted Null Hypothesis". This means that in this given variable, teenagers have similar or almost the same level of response, respectively. This simply indicates that teenagers of six educational year levels have significant differences in the perception of the extent of Knowledge on Sex Education. On the other way around, there found no difference between the Exposure to Risky Behavior on the Internet, Peer Pressure, and Information Dissemination. This is because cohorts are unique and are raised in different environments and backgrounds, where the knowledge and drive of pursuing a certain situation are also different.

The result concedes with the study of Basch (2011), which revealed that non-marital teen births are highly and disproportionately prevalent among school-aged urban minority youth and they affect educational level, having a significant difference in the perception towards pregnancy, and is recommended that effective practices are available for schools to address this problem.

#### 4.3 Difference in Teenagers' Perceptions of the Factors that Influence Teenage Pregnancy when grouped according to Family Structure

The result simply implies that teenagers from the five family structures in selected barangays of Tampilisan municipality have the same level of perceptions of both individual and institutional factors. Thus, teenagers reared from different family structures have no significant difference in their perceptions of the prevalent factors influencing teenage pregnancy. Regardless of the family structure, someone's behavior is determined by their intention to perform the behavior. This means that there may be other factors that may have affected their perception of the matter but not their family structure. In conclusion, family structure has nothing to do with the level of perception of the respondents. The result supports the study of Santosa and Rosa'rio (2011) which revealed that there is no significant difference in the perceptions between nuclear and extended families as to the extent of teenage pregnancy.

## 5. Conclusion

The teenagers in selected barangays of Tampilisan municipality in terms of the prevalent factors influencing teenage pregnancy under the individual factors, were "Moderately Knowledgeable" on the Knowledge on Sex Education, "Less Exposed to Risky Behavior on the Internet, Less Pressured by their Peers, while they were "Moderately Aware" in the institutional factor on Information Dissemination regarding prevention, control, and effects of teenage pregnancy.

Furthermore, when data are grouped according to educational level, there found no significant difference in the respondents' perceived extent of exposure, pressure, and information to factors that may influence teenage pregnancy. However, a significant difference in the teenagers' extent of knowledge on sex education existed. This means that teenagers have the same extent of exposure, pressure, and information but vary their knowledge on sex education towards factors that influence teenage pregnancy. It was found that Grade 9 teenagers were more knowledgeable than those teenagers in the higher years which might due to less focus on sex education in higher years curriculum than in lower years. Likewise, when data are grouped according to family structure, there found the same level of perceptions among teenagers on both individual and institutional factors. This means that teenagers' extent of exposure, pressure, information, and knowledge about factors that influence teenage pregnancy is not associated with family structure.

An information drive was recommended to increase awareness and knowledge among teenagers regarding factors that influence teenage pregnancy so that issues and problems related to the unwanted teenage pregnancy rate may be reduced if not may be avoided.

## 6. Recommendations

Based on the result of the study, there is a need to conduct an information drive for the teenagers with regards to the awareness of the factors that influence teenage pregnancy to enable the youth with comprehensive sex education. The information drive generally aims: to equip teenagers with the necessary knowledge and skills and values for them to achieve safe, fulfilling, and enjoyable relationships and make them responsible for promoting their health, safety, and well-being. Specifically, it aims to provide input to the teenagers on the technical and appropriate application of sexuality services, explain to the teenagers the adverse psychological and physiological effects of being exposed to visual, audio-visual, and textual digital materials available on the internet, inform teenagers with the adverse effects of their association and immersion to the social group that pressures them, instruct teenagers with important information



pertaining sexual health and the like and acquaint teenagers with the access on the important sexual health services available. Also, expected in attendance are the teenagers, the HEI-JRMSU-TC, LGU, and RHU.

### References

- Adolescent Pregnancy. (2020, January 31). Retrieved from World Health Organization: <https://www.who.int/news-room/fact-sheet/details/adolescent-pregnancy>
- Ayele, B. G., Gebregzabher T. G., Hailu, T. T., & Assefa, B. A. (2018). Determinants of teenage pregnancy in Degua Tembien District, Tigray, Northern Ethiopia: A community-based case-control study. *PLoS ONE*, 13(7). <http://doi.org/10.1371/journal.pone.0200898>.
- Basch, C. E. (2011). Teen pregnancy and the achievement gap among urban minority youth. *Journal of School Health*, 81(10), 614-618.
- Chandra-Mouli, V., Lane, C., & Wong, S. (2015). What does not work in adolescent sexual and reproductive health: a review of evidence on interventions commonly accepted as best practices. *Global Health: Science and Practice*, 3(3), 333-340. <https://doi.org/10.9745/GHSP-D-15-00126>.
- Chavez, C. (2019, October 29). Teenage pregnancy worsening in PH. Retrieved from Manila Bulletin: <https://news.mb.com.ph/2019/10/29/teenage-pregnancy-worsening-in-ph/>
- Chung, H. W., Kim, E. M., & Lee, J. E. (2018). Comprehensive understanding of risk and protective factors related to adolescent pregnancy in low- and middle-income countries: A systematic review. *Journal of Adolescence*, 69, 180-188. <http://doi.org/10.1016/j.adolescence.2018.10.007>.
- Creswell, J. W. (2014). *Qualitative, quantitative, and mixed methods approach*. California: SAGE Publications.
- Donkor, E. S., Annan, J. A., Badoe, E. V. et al. (2017). Pneumococcal carriage among HIV-infected children in Accra, Ghana. *BMC Infect Dis*, 17(133), <https://doi.org/10.1186/s12879-017-2224-0>.
- Garcia, C. K. (2015). Sexual health education in Quebec schools: A critique and call for change. *The Canadian Journal of Human Sexuality*, 24(3), 197-204. <https://doi.org/10.3138/cjhs.243-C01>.
- Hailu, S., Mergal, B., Nishimwe, D., Samson, M., & Santos, N. (2018). Sex Education from Home and School: Their Influence on Adolescents' Knowledge, Attitude, and Beliefs toward Sexuality. *Journal of Health Sciences*, 1(1), 81-89.
- Jones, C., Whitfield, C., Seymour, J., & Hayter, M. (2019). 'Other girls': A qualitative exploration of teenage mothers' views on teen pregnancy in contemporaries. *Sexuality & Culture*, 23(3), 760-773. <https://doi.org/10.1007/s12119-019-09589-4>

- Kanku, T., & Mash, R. (2010). Attitudes, perceptions, and understanding amongst teenagers regarding teenage pregnancy, sexuality, and contraception in Taung. *South African Family Practice*, 52(6), 563-572. <http://doi.10.1080/20786204.2010.10874048>.
- Kaur, A. (2020). Peer Pressure as Predictor of Career Decision making among adolescents. *IJRAR-International Journal of Research and Analytical Reviews (IJRAR)*, 7(1), 72-77.
- Leavy, P. (2017). *Research design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches*. New York City: The Guilford Press.
- Magsino, D. (2020, February 14). More girls aged 10-14 get pregnant in the Philippines—POPCOM. Retrieved from GMA News: [https://www.gmanetwork.com/news/news/nation/726028/more-girls-aged-10-14-get-pregnant-in-the-philippines-popcom/story/?utm\\_source=GMANews&utm\\_medium=Facebook](https://www.gmanetwork.com/news/news/nation/726028/more-girls-aged-10-14-get-pregnant-in-the-philippines-popcom/story/?utm_source=GMANews&utm_medium=Facebook)
- Maternal, newborn, child, and adolescent health. (2020). Retrieved from World Health Organization: [https://www.who.int/maternal\\_child\\_adolescent/topics/adolescence/development/en/](https://www.who.int/maternal_child_adolescent/topics/adolescence/development/en/)
- Naing, L., Winn, T. B. N. R., & Rusli, B. N. (2006). Practical issues in calculating the sample size for prevalence studies. *Archives of Orofacial Sciences*, 1, 9-14. In Pourhoseingholi, M. A., Vahedi, M., & Rahimzadeh, M. (2013). Sample size calculation in medical studies. *Gastroenterology and hepatology from bed to bench*, 6(1), 14–17.
- Ochen, A. M., Chi, P. C., & Lawoko, S. (2019). Predictors of teenage pregnancy among girls aged 13–19 years in Uganda: a community-based case-control study. *BMC pregnancy and childbirth*, 19(1), 1-14. <https://doi.org/10.1186/s12884-019-2347-y>
- Olubayo-Fatiregun, M. A. (2012). The Parental Attitude towards Adolescent Sexual Behaviour in Akoko-Edo and Estako-West Local Government Areas, Edo State, Nigeria. *World Journal of Education*, 2(6), 24-31. <http://dx.doi.org/10.5430/wje.v2n6p24>.
- Pourhoseingholi, M. A., Vahedi, M., & Rahimzadeh, M. (2013). Sample size calculation in medical studies. *Gastroenterology and Hepatology from Bed to Bench*, 6(1), 14–17.
- Salvador, J. T., Sauce, B. R. J., Alvarez, M. O. C., & Rosario, A. B. (2016). The phenomenon of teenage pregnancy in the Philippines. *European Scientific Journal*, 12(32), 20. <http://dx.doi.org/10.19044/esj.2016.v12n32p173>.
- Sámano, R., Rojano, H., Robichaux, D., Ventura, A. L., Jiménez, B., Hoyuela, M. L., Godínez, E., & Segovia, S. (2017). Family context and individual situation of teens before, during, and after pregnancy in Mexico City. *BMC Pregnancy and Childbirth*, 17(382). <http://doi.10.1186/s12884-017-1570-7>.
- Santosa, M. I., & Rosa´rio, F. (2011). A score for assessing the risk of first-time adolescent pregnancy. *Family Practice*, 28, 482–488. <http://doi:10.1093/fampra/cmr015>.

- Stockemer, D. (2019). Quantitative Methods for the Social Sciences: A Practical Introduction with Examples in SPSS and Stata. Springer International Publishing AG pp.31-32. <https://doi.org/10.1007/978-3-319-99118-4>
- Thobejane, T. D. (2015). Factors contributing to teenage pregnancy in South Africa: The case of Matjitjileng Village. *Journal of Sociology and Social Anthropology*, 6(2), 273-277.
- Tomokawa, S., Kaewviset, S., Saito, J., Akiyama, T., Waikugul, J., Okada, K., ... & Jimba, M. (2018). Key factors for school health policy implementation in Thailand. *Health Education Research*, 33(2), 186-195. <https://doi.org/10.1093/her/cyy008>.
- Torivillas, D. (2013, July 11). Teenage Pregnancy in the use. Retrieved from The Philippine Star: [www.philstar.com/opinion/2013/07/11/963984teenage-pregnancy-rise](http://www.philstar.com/opinion/2013/07/11/963984teenage-pregnancy-rise)
- Van, V. T. S., Uy, J., Bagas, J., & Ulep, V. G. T. (2021). Trends in national-level governance and implementation of the Philippines' Responsible Parenthood and Reproductive Health Law from 2014 to 2020. *Global Health: Science and Practice*, 9(3), 548-564. <https://doi.org/10.9745/GHSP-D-21-00184>.
- Varga, C., A., & Zosa-Feranil, I. (2003). Adolescent reproductive health in the Philippines: Status, issues, policies, and programs. Washington D.C.: Futures Group International. In Serquina-Ramiro L. (2014) Adolescent Pregnancy in the Philippines. In: Cherry A., Dillon M. (eds) *International Handbook of Adolescent Pregnancy*. Springer, Boston, MA. [https://doi.org/10.1007/978-1-4899-8026-7\\_27](https://doi.org/10.1007/978-1-4899-8026-7_27).
- Wagner, C. (2008). The latest cell phone use: Sexting. Retrieved from The center for parent/youth understanding:
- Wall-Wieler, E., Roos, L., & Nickel, N. (2016). Teenage pregnancy: the impact of maternal adolescent childbearing and older sister's teenage pregnancy on a younger sister. *BMC Pregnancy and Childbirth*, 16(120), <http://doi.10.1186/s12884-016-0911-2>.
- Wright, L. S., Branscum, P., Maness, S., Larson, D., Taylor, E. L., Mayeux, L., & Cheney, M. K. (2019). Parents' beliefs of the Black Church's role in teen pregnancy prevention. *Journal of Adolescence*, 72, 52-63. <https://doi.org/10.1016/j.adolescence.2019.02.004>
- Yakubu, I., & Salisu, W. J. (2018). Determinants of adolescent pregnancy in sub-Saharan Africa: a systematic review. *Reproductive Health*, 15(15), <http://doi.10.1186/s12978-018-0460-4>.