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Adolescent Pregnancy: A Concept Analysis

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Abstract

Purpose: Adolescent pregnancy (ADOPREG), despite its serious public health & social concerns, are highly neglected worldwide especially in developing countries with restrictive abortion laws. While the concept of ADOPREG may have the same label across disciplines, locations & contexts, its representations and how it is lived vary greatly. Despite diverse representations, ADOPREG is still plagued with great debates and serious public health and socio-economic concerns including persistently high rates and associated consequences even lifetime. Thus this concept analysis of Adolescent pregnancy aimed at clarifying the meaning of the concept and develop an operational definition for it which is believed will lay a common ground for mutual understanding among stakeholders & ameliorate adolescent care.

Materials and Methods: The 8-stage concept analysis theoretical model of Walker and Avant (1994) was used for this work. There was a systematic search & selection of literature in 4 phases:broad preliminary search, Mesh controlled language, revision using Boolean Logic operators OR, "AND" and "Not". Secondly, literature search on 9 electronic databases, then manual search & finally experts' consultation. Study selection was done by a review process guided by PRISMA. Quality appraisal was then done for each selected study separately using appropriate standard tools. Totally, 4090 record were identified & 68 included in final study.

Findings: Key results revealed: ADOPREG has uses in Etymology, Literature; Health, Politics, & Sociology. As Attributes-prevalence, peripartum care, teenage friendly health centres, & role of health practitioner in reducing ADOPREG. As antecedents among others -biological factors (genes), demographic & socio-cultural factors (marital status,) & Health factors (contraception) ; non-constitutive family factors and socio-political factors. Short-term consequences of among others include increased frequency of neonatal complications (LBW) & maternal complications (hemmorhage, abortion), & low rates of CS. Major long-term consequences are socio-economic (rejection); health (suicide) & political (taxpayers drain). Empirical referents-pregnancy rates etc. Conclusively, ADOPREG here is defined as a state in which there is the development of a human being in an individual aged 10-19 from time of conception; thus, aligning with the embryologic definition. However, the dynamic nature of this concept cannot be totally ignored.

Implications to Theory, Practice and Policy: More high quality concept analyses should be carried out on related issues to ADOPREG to better inform policy makers who should work collaboratively on better and operational definitions of adolescent pregnancy and its related issues.

Keywords : *Concept, Analysis, Concept Analysis, Adolescent, Pregnancy, Adolescent Pregnancy*

JEL Codes: 112

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Resume

But: La grossesse adolescente (GADO), malgré ses graves préoccupations de santé publique et sociales, est très négligée dans le monde entier, en particulier dans les pays en développement avec des lois restrictives sur l'avortement. Alors que le concept de la GADO peut avoir la même étiquette à travers les disciplines, les lieux et les contextes, ses représentations et la façon dont il est vécu varient considérablement. Malgré la diversité des représentations, La GADO est encore en proie à de grands débats et à de graves préoccupations de santé publique et socioéconomiques, y compris des taux élevés persistants et des conséquences associées, même à vie. Ainsi, cette analyse conceptuelle de la grossesse adolescente visant à clarifier la le concept et élaborer une définition opérationnelle qui, permettra de créer une base commune de compréhension mutuelle entre les parties prenantes et d'améliorer les soins des adolescents.

Methodologie: Le modèle d'analyse conceptuelle de Walker et Avant (1994) a été utilisé. Il y a eu une recherche et une sélection systématique de la littérature en 4 phases : recherche préliminaire large, langage contrôlé par Mesh, révision par les opérateurs Boolean Logic OR, « AND » et « Not ». Deuxièmement, recherche de littérature sur 9 bases de données électroniques, puis recherche manuelle et enfin consultation d'experts. La sélection de l'étude a été effectuée guidé par PRISMA. L'évaluation de la qualité a ensuite été effectuée pour chaque étude sélectionnée séparément en utilisant des outils standards appropriés.

Resultats: Les résultats clés comprennent : la GADO est utilisé en étymologie, littérature, santé, politique et en sociologie. Comme attributs-prévalence, soins péripartum, formation sanitaire conviviaux pour les ADOs, & le rôle du praticien de santé dans la réduction de la GADO. Comme antécédents - facteurs biologiques (gène), facteurs démographiques & socio-culturels & facteurs de santé (contraception); facteurs familiaux non constitutifs et facteurs socio-politiques. Conséquences à court terme : entre autres, augmentation de taux des complications néonatales (faible poids) et maternelles (hemorrhagie, avortement). Conséquences majeures à long terme sont socio-économiques (rejet), sanitaires (suicide) et politiques (Impôts). Indicateurs empiriques - taux de grossesse, etc. En conclusion, la GADO est ici défini comme un état dans lequel il y a le développement d'un être humain chez un individu âgé de 10 à 19 ans à dès la conception, ainsi, alignement avec la définition embryologique. Toutefois, la nature dynamique de ce concept ne peut être totalement ignorée.

Recommendation: Effectuer davantage d'analyses conceptuelles de qualité sur la grossesse des ADOs afin de mieux informer les décideurs politiques qui devraient collaborer à l'élaboration de meilleures définitions opérationnelles de la grossesse des adolescentes et des questions qui y sont liées.

Mots clés: *Concept, Analyse, Analyse Conceptuelle, Adolescent, Grossesse, Grossesse Chez Les Adolescents*

JEL : 112

1.0 INTRODUCTION

Adolescent pregnancy(ADOPREG), despite its serious public health & social concerns, are highly neglected worldwide especially in developing countries with restrictive abortion laws. Also known as "Teenage pregnancy", Adolescent pregnancy is pregnancy in a female under the age of 20years (Kassa et al, 2018; Ghose & John, 2017, WHO, 2018). It is the state of carrying a developing embryo or fetus within the female body; a condition that can be indicated by positive results clinically and parclinically (Medicine net, 2022). While the concept of adolescent pregnancy may have thesame label across disciplines, locations and contexts, its representations and and how it is lived vary greatly. According to Gasek (2009), determining when human life begins has become the focus of an intense political struggle of great importance because many people believe that human life begins at fertilization and that pregnancy follows from that developmental starting point. Author adds that many who hold this position work in the medical professions, and they object to using technologies that would destroy such young life such as abortion. According to both the scientific community and long-standing federal policy, a woman is considered pregnant only when a fertilized egg has implanted in the wall of her uterus (Gold, 2005) ; however, state definitions of pregnancy vary widely. The differences may be more than academic as debates over emergency contraception has accentuated the issue due to tendencies of potentially serious complications (Gutmatcher, 2018; Gold, 2005).

Analysing the concept of adolescent pregnancy wasn't a product of chance. As stipulated by Geraldine & Joice (2016), concept labels even though may be the same across disciplines, it is important to distinguish any specific disciplinary perspective on the concept to help guide further development of nursing research and professional practice. Moreover, although there are still great debates as to what pregnancy is or when it begins coupled to the serious public health and socio-economic impact of ADOPREG; rates of adolescent pregnancy and associated consequences remains significantly high. According to WHO (2018), worldwide, 1 in 5 people are adolescents (ADOs) aged 10-19 y (1.2 billion) and 21M girls aged 15 -19 years, 2.5 M under 16 years and 1M under 15years (Ramraj et al, 2018) give birth each year globally (11%). Furthermore, ADOPREG has lifetime and even life-threating consequences for both the individual, families and the community, and across varied spheres of the adolescent's life including health, economic, social domains (UNFPA,2022; Mathewos & Mekuria, 2018; Gutmacher Institute, 2016; CDC, 2015). The above irregularities justify this concept analysis of Adolescent pregnancy aimed at clarifying the meaning its meaning & developing an operational definition for it. It is believed that the result of this work would provide a standard language for mutual understanding, lay foundations for development of theories to inform education and practice, better guide policy makers and clinicians make informed decisions regarding adolescents, their pregnancy and care and also identify knowledge gaps regarding the concept of ADOPREG which can be exploited by other researchers. The model of concept analysis of Walker and Avant (1994) was used for this work.

Problem Statement

Inspite of the recent rise in attention to ameliorate the health of adolescents, Adolescent pregnancy (ADOPREG) rates and related consequences remains perstitently high. According to WHO (2018), 21M girls aged 15 -19 years, give birth each year globally (11%) and complications of ADOPA are the greatest cause of maternal morbidity & the 2nd cause of mortality among girls aged 15–19 (2018). Furthermore, ADOPREG has lifetime and even life-threating consequences for both the individual, families and the community, and across varied

spheres of the adolescent's life including health, economic, social domains (UNFPA ,2022; Gutmacher Institute, 2016).

While the concept of adolescent pregnancy may have thesame label across disciplines, locations and contexts, its representations and and how it is lived vary greatly. According to Gasek (2009), determining when human life begins is now the focus of intense political struggle of great importance due to the ambiguity on when human life begins. Governing laws regarding adolescents, adolescent pregnancies, related consequences and care vary widely within and across countries. Some are controversial or paradoxical and sometimes conflicting with health values (WHO, 2011). Authors add that knowledge gaps and misconceptions regarding contraception and health worker bias or unwillingness and transgenerational taboo on SRH communication also compounds the situation (Yibrehu and Mbwele; 2020, Atanga et al, 2015). All the above irregularities render care for adolescents and their pregnancies complex or complicated. However, irrespective of the variation in the context and representation of adolescent pregnancy, there is need for a reasonable common language regarding ADOPREG among care stakeholders to address the issue of ADOPREG and related consequences. Thus, this concept analysis aimed at clarifying the concept and developing an operational definition that could be used by professional, guide research, theory development and ameliorate care of adolescents and their pregnancies.

Definition of Key Concepts

Concept: According to Nkoum (2019), a concept is a word or a group of words that designates a constellation of real phenomena. It is an idea that represents a reality which is more or less vast (ibid).

Concept analysis: this is a method used to assess a concept by distinguishing between defining or critical attributes and less critical attributes of a concept (Walker and Avant, 2005; Wilson, 1971) in order to clarify the concept and provide a basic understanding of the underlying attributes (Walker & Avant, 2005).

Adolescent: An Adolescent is an individual in the age group of 10-19years (WHO,2022; National Academies of Sciences, Engineering, and Medicine, 2020, WHO and UN, 2019).

Adolescent pregnancy: Adolescent pregnancy, pregnancy in a female under the age of 20years (WHO, 2017; Ghose & John, 2017)

2.0 METHODOLOGY

The 8-stages theoretical model of Walker & Avant (1994) was used for this work for its pertinence in permitting elucidation of major aspects of the concept and for its adaptability for the concept analysis. The 8 satges include including Selection of the concept, determination of the purpose and objectives of the concept, identification of the uses of the concept, determination of the defining attributes of the concept, identification of model case (as need be), identification of borderline, related, contrary, invented and illegitimate cases, identification of antecedents and consequences and finally definition of empirical refenrents.

There was then systematic search and selection of literature. Studies eligible for inclusion included all empirical and theoretical literature on the concept ADOPREG, relevant grey literature, studies published in English and French languages, full-text articles with a clear definition/identification of adolescent according to the WHO definition of adolescent (age 10–19 years), and , all available studies till 2021 to reflect current day reality and determine trends in the concept used overtime. Excluded were studies primarily related to adults, no specified

age group or had mixed population which not include a sub-analysis of an adolescent population (results mostly not reflective of ADOs), unpublished theses/dissertations below master's level, pilot studies not evaluated and protocols, studies on ADOs in vulnerable settings such as refugee camps (these will not reflect the reality study focus), abstracts-only and incomplete studies (possible absence of pertinent information), editorials and comments, position papers, keynotes, tutorial summaries (need for methodological rigour).

Regarding search sources and strategy, search was conducted in a step-wise manner in 4 phases. The first phase was a broad preliminary search that was developed with the guidance of an experienced librarian using natural language to generate key word, the Mesh controlled language to help generate a list of appropriate search terms (key words), and then controlled language (Mesh) with revision using Boolean Logic operators OR, "AND" and "Not" for richer results. In the second phase, literature search was conducted using 9 specific electronic databases of nursing and related sciences; HINARY, CINAHL (comprehensive database for nursing research and information), Cochrane library, EMBASE, Medline, Pubmed, Pubmed Central, Scopus, Joanna Briggs Institute and PsycInfo. In the third phase, there was manual search for additional sources of data and in the fourth phase, there was

consultation with experts and colleagues in the fields related to adolescent health. (see Figure 1).

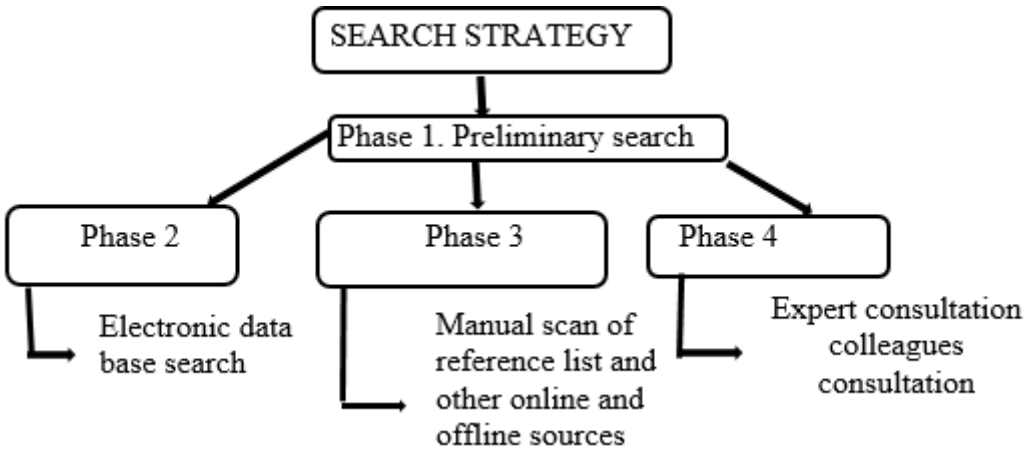

Figure 1: Major Steps in Data Search for Study Material

Source: Researcher-Atanga Vivian Manka'ah

Screening for study selection was done by a review process guided Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) (Moher et al, 2015), given importance of the review process be reported both narratively and visually as stipulated Jewel et al (2017). This was done in 4 main phases. Firstly, search results were imported into the Zotero database where duplicates were screened for and deleted. Secondly, articles then went through an extensive screening process in order to identify sources of relevant data. Thirdly, initially, titles were scanned for relevance, then screening of abstracts of those titles that met the inclusion criteria, then reading of full-text articles of the included abstracts, and finally the full texts that met the inclusion criteria were then sorted into studies. Overally, from PRISMA guideline a total of 4036 studies were identified through data base search, 54 through other sources (Goodle scholar, experts, hand search) giving a total of 4090 records. 2178 duplicates were removed. 1912 titles were screened from which 1569 were excluded. 343 abstracts were screened from the identified title with 207 records excluded, leaving 136 full articles assessed from which 34

were excluded. Thus a total of 102 articles were included in the synthesis for the work. (see Figure 2).

For purpose accuracy and minimize bias and given the diverse types of literature/studies , a quality appraisal was done where each selected study was assessed and graded separately for the different type of literature using the best-fit existing standard design-specific tools.

Firstly, the different types of studies were assessed and graded according to the level of evidence and quality based on methodological approach using the John Hopkins Nursing Evidence-Based Practice evidence appraisal tool into 5 levels of evidence (1-5) and 3 levels of quality (High quality, Good quality and Low quality/major flaws) based on specific criteria (Dearholt, & Dang, 2012). For quantitative studies, an abridged version of the Effective Public Health Practice Project (EPHPP) tool was used. Here each study was given an overall rating as strong, moderate or weak on 8 criteria. (Appendix 2). For qualitative studies an abridged version of the Critical Appraisal Skill Program (CASP) guide was used rating studies as strong, moderate, weak or unclear based on nine criteria: (Appendix 3). For mixed studies (quantitative and qualitative), the overall quality of each study was assessed by summarizing the section ratings for each criterion into a global rating for the study as strong moderate or low quality.

Systematic reviews (scoping, integrative, narrative, systematic review) were critically appraised using the GRADE system of rating quality of evidence which distinguishes between quality assessment conducted as part of a systematic review and that undertaken as part of guideline development (recommendations). (Siemieniuk and Guyatt, 2020; Balshem et al, 2011). Quality of evidence are rated as very low, low, moderate and high while quality of recommendations are rated as strong or weak (Appendix 4). Choosing of quality and relevant grey literature in to study was guided by the AACODS guideline which uses 6 appraisal criteria.(Tyndall, 2013; Tyndal, 2010). There was finally the selection of information to be extracted informed by the key concepts and components of the adolescent pregnancy concept analysis based on the model of Walker and avant (1994).

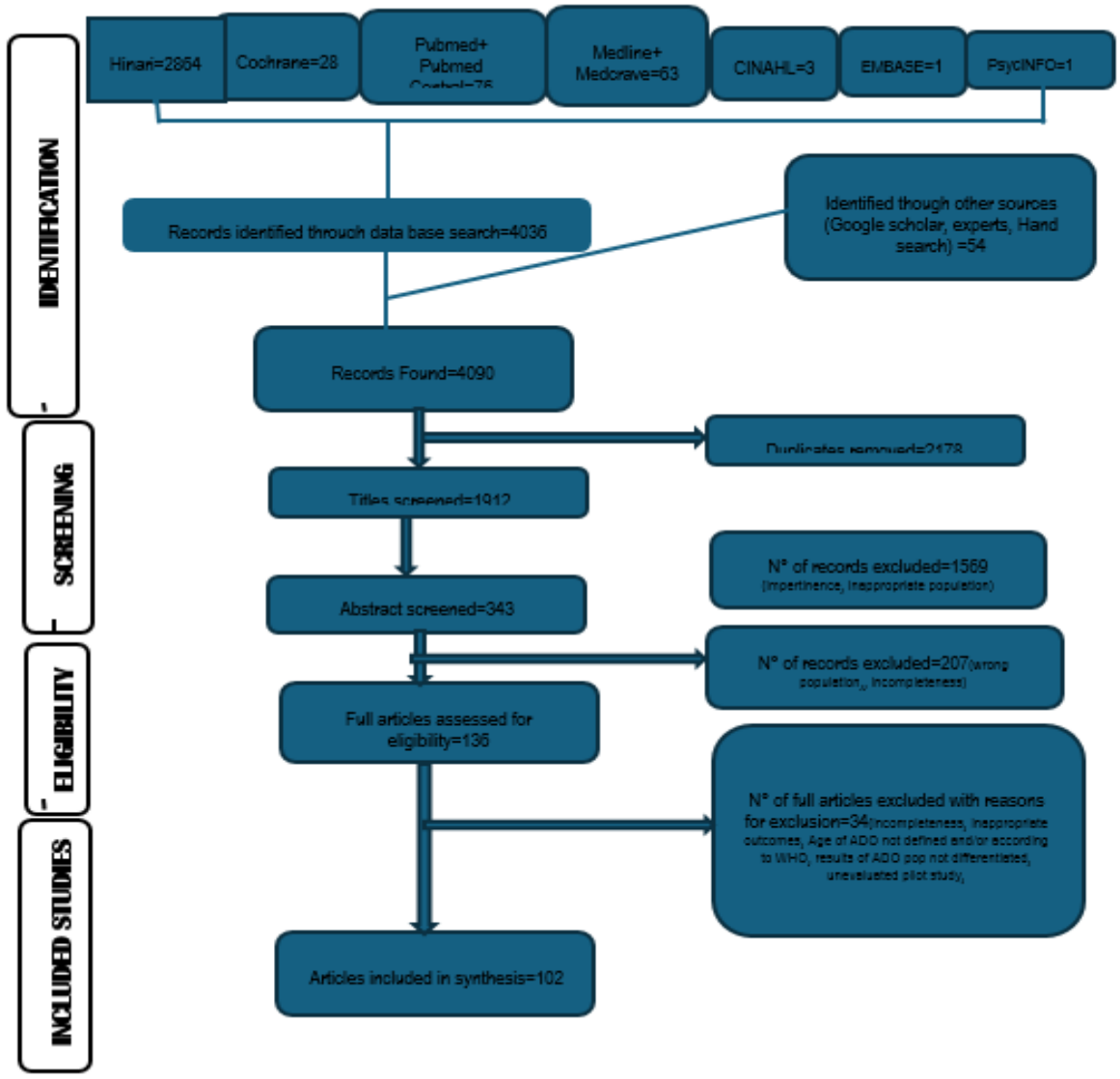

Figure 2: PRISMA flow Chart of Visual Summary of the Review Process

Source: Atanga Vivian Manka'ah (2022) Adapted from PRISMA

3.0 FINDINGS

Results were presented based on the key elements of the Walker and Avant's model (1994) as presented below.

Selection of the Concept Adolescent Pregnancy

The concept adolescent pregnancy (ADOPREG) was chosen based on the following criteria; importance and pertinence to the research problem; its abstraction and at the same time precision; interest of the researcher in them and their relevance to the research work. These characteristics were observed and made evident from preliminary and in-depth literature review on the strategies of curbing ADOPA.

Purpose and Objectives of Analysing Adolescent Pregnancy

The purposes of the adolescence pregnancy concept analysis are to: distinguish between concepts-clarifying their relationships and distinguishing characteristics; develop an

operational definition; and identify the gaps in knowledge and in measurement that should be undertaken in future theoretical work with the overall goal of clarifying the meaning of the adolescent pregnancy; thereby provide a standard language for mutual understanding within the context of this work and its use in practice.

Major objectives of this adolescent pregnancy concept analysis include:

- To explore the essential elements of adolescent pregnancy from emerging categories during a literature review.
- To determine the defining attributes of the ADOPREG
- To determine antecedents of the ADOPREG
- To identify the consequences of ADOPREG
- To define the empirical referents of ADOPREG
- To develop a conceptual/operational definition of ADOPREG

Uses of the Concept Adolescent Pregnancy

The concept "Adolescent pregnancy" is compound concept derived etymologically from two words, adolescent and pregnant. Thus its uses will be made considering this in mind and most definitions will be composed or made by extension.

Etymology

To better elaborate on the uses of the concept adolescent pregnancy, it was judged important to define pregnancy and adolescent. Adolescence stems from the Latin word "adolescere" which means "the one who is in the process of growing". "to grow up or to grow into maturity (Lerner & Steinberg, 2009).The word "pregnant" comes from the Latin pre- meaning before + (g)natus meaning birth = before (giving) birth. The word "prenatal" has exactly the same origin (Medcinet, 2021). Pregnant: The state of carrying a developing fetus within the body (ibid).

Etymologically, according to (Etymoline, 2022), the word pregnancy dates back to the early 15C and has its origin from the Latin word "praegnantem" which means "with child," and which literally means "before birth," probably from the word prae- which means"before" stemming from the root word gnasci which means "be born". Authors add for politeness sake, the word as avoided till the 1950s when more polite words were used to represent it such as anticipating, enceinte, or expecting in a family way or in a delicate condition. Thus etymologically, adolescent pregnancy can be defined as child impregnated or conceived in the womb or pregnancy in an individual who is the process of growing up into maturity.

Literature/ (Literary)

The word pregnancy literally means "before birth," (Etymoline, 2022). Pregnant is an adjective referring to a state of a woman and some female animals having a baby or babies developing inside the womb (Cambridge Advanced Learner's Dictionary, 2022; Oxford Advanced American Dictionary, 2022). Thus by extension, Adolescent pregnancy is the noun referring to the state of an adolescent being pregnant; having a baby or babies developing in the womb (Oxford Learner's dictionary 2022, Oxford Advanced American Dictionary, 2022; Cambridge Advanced Learner's Dictionary, 2022).

Health

General Medicine

Adolescent pregnancy also known as adolescent gravity, the state of carrying a developing embryo or fetus within the female body; a condition can be indicated by positive results on an over-the-counter urine test, and confirmed through a blood test, ultrasound, detection of fetal

heartbeat, or an X-ray (Medicine net, 2022). Adolescent pregnancy, pregnancy in a female under the age of 20years (WHO, 2017; Ghose & John, 2017). It is pregnancy in a woman aged 10–19 years (Kiani et al, 2019; Kassa et al, 2018). According to Kassa et al (2021), teenage pregnancy is a pregnancy in girls aged 10–19 years.

Obstetrics and Gynecology

According to the American College of Obstetricians and Gynecologists (2013), pregnancy is considered to be established only after implantation is complete. To ACOG, the term conception properly means pregnancy (Gold, 2005). Thus in health and by extension, adolescent pregnancy is a state in which there is the development of a human being in an individual aged 10-19yrs from time of complete implantation.

Embryology

According to embryologists, pregnancy is considered established once there is fertilsation (Gold, 2005). A zygote is the beginning of a new human being (i.e., an embryo) (Moore and Persaud, 2007). According to Moore & Persaud (2008), Human development begins at fertilization when a male gamete or sperm unites with a female gamete or oocyte to form a a zygote. Thus in embryology, and by extension, adolescent pregnancy is a state in which there is human development in an individual 10-19years beginning from fertilization.

Politics

According to Gasel (2009), determining when human life begins has become the focus of an intense political struggle of great importance because many people believe that human life begins at fertilization and that pregnancy follows from that developmental starting point. Author adds that many who hold this position work in the medical professions, and they object to using technologies that would destroy such young life such as abortion. According to both the scientific community and long-standing federal policy, a woman is considered pregnant only when a fertilized egg has implanted in the wall of her uterus (Gold, 2005); however, state definitions of pregnancy vary widely. The differences may be more than academic as debates over emergency contraception has accentuated the issue due to tendencies of potentially serious complications (Gold, 2005).

Research evidence reveal that there is certainly no medical-scientific consensus in favor of implantation-based definitions of “conception” or “pregnancy.” and this is very important because this will guide decision making and care by health professionals involved with obstetrics and gynecology such as pharmacists, physicians, gyneco-obstetricians, embryologists etc. Furthermore, the fertilization-based perspective is predominant in the medical dictionaries hence revealing much support from the medical-scientific community (Gasek, 2009). Thus, politically, adolescent pregnancy is can be defined as a state in which there is a developing human being within an individual aged 10-19 years from time of conception; with conception beginning from fertilization or implantation based on different states or countries.

Sociology

A clear-cut standard social definition of adolescent pregnancy to the best of the researcher’s knowledge may be difficult find. This is because the adolescent pregnancy concept is a phenomenon that has a social construct which varies with different society. According to Sax (2010), researchers of social phenomena including adolescent pregnancy are always faced with the problem of simplification. Author added that the complexity of life must somehow be reproduced and analysed. Any analysis of reproductive behaviour relies on the reduction of complicated processes, actors and contexts to understandable data.

However, the event of pregnancy encompasses many other aspects that require culturally accurate concepts. Rather than focusing solely on the pregnant adolescent and her decision-making process, researchers need to consider the cultural context of the pregnancy (Sax, 2010). In addition, the prevailing concepts of virginity, virility, the female body and prevention should be reconsidered: what believes do social actors have about how female gets pregnant?; after what point is she considered pregnant? And how can pregnancy be stimulated or prevented? (Sax, 2010). Eg some Brazilian cultures considers virginity to mean absence of pregnancy; thus to them, even in the presence of cadinal pregnancy signs and symptoms; as long as the pregnancy has not been medically diagnosed by a health care professional, the child is still considered a virgin. To author, the discussion of ADOPA will greatly benefit from careful use of emic understandings of reproduction and the kinship systems that emerge as a result.

Age seem to play a great role in the concept of ADOPREG. According to Heilborn Brandaˇo and Da Silva Cabral (2007), the strategy of adopting "youth as process" rather than "youth as age group"' was central to the strategy of evaluating how "adolescent" pregnancy unfolds in actors lives'. Their analysis shows that age plays much less of a role in reproductive behaviour than does education and gender. An overemphasised focus on age boundaries allows for less detailed exploration of this experience.

Ultimately according to Prout (2000), ADOPREG which cannot be considered an isolated event, is part of the wider experience of 'being and becoming' a person. To author, attempt to socially define ADOPREG phenomenon should greatly consider varied key social and cultural aspects that consider it both as a state, a process and an experience; this varying with different cultures and society. Conclusively, in the context of this work, adolescent pregnancy is defined as the state in which there is the development of a human being in an individual aged 10-19yrs (adolescent) from time of conception; thus aligning with the embryologic definition.

Defining Attributes of Adolescent Pregnancy

According to Walker and Avant (1994) this is the fourth step and "heart of concept analysis", i.e. determining the defining attributes or defining characteristics of the concept. This is actually mean the expression of the concept and its different meanings (Nuopponen, 2010).

Prevalence of Adolescent Pregnancy

World Prevalence

An estimated 21 million girls aged 15 to 19 years in developing regions become pregnant every year, and approximately 12 million of them gave birth. (Darroch et al, 2016). Estimates also suggest that 2.5 million girls aged under 16 years give birth every year. (Ramraj et al, 2018) An estimated 3.9 million girls aged 15–19 undergo unsafe abortions every year. (Darroch et al, 2016). In low- and middle-income countries, complications from pregnancy and childbirth are a leading cause of death among girls aged 15–19 years. (WHO, 2016)

Prevalence of Adolescent Pregnancy in Africa

There is great variation in the rate of adolescent pregnancy in different sub-regions of Africa with the highest in East Africa (21.5%) and lowest in Northern Africa (9.2%). (Yakubu, 2018; Pradhan et al, 2015). According to Kassa et al (2018), Adolescent pregnancy has a greater tendency for occurrence in poor countries and those with deficient of quality education & employment opportunities. He added that the prevalence of Adolescent pregnancy in Africa is about 20% while that of SSA is about 18.8%; with prevalence highest in the East Africa with 21.5% and lowest in Northern Africa with a rate of 9.2%. Despite several in curbing ADOPREG, the global rate of adolescent pregnancy and birth rate remains high (UNFPA,

2013). Authors add that ADOPREG has been on the rise since 2016 to 2018, standing at 20.5% compared to before 2015 which was 18.2%.

This rise could be due to comparatively faster and more accessible tests today (Ayele et al, 2018; Sungwe, 2015; Izugbara, 2015; Kupoyuli et al; 2013). According to WHO (2015), increase in ADOPREG is said accountable for high maternal and child morbi-mortality in Africa with a 99 % of maternal deaths of women aged 15 to 19 years occuring in LMIC, particularly in Sub Saharan Africa. WHO (2018) asserts that the reasons for high prevalence of ADOPREG in Africa are inacceessibility of contraceptive services, unfavorable attitude of the community towards the adolescent contraceptive use, poor knowledge of adolescents of the SRH issues and widespread sexual violence in developing countries.

Prevalence of Adolescent Pregnancy in Cameroon

In Cameroon, adolescent pregnancies and deliveries has a great health burden as it its plaqued with high prevalence (Tebeu et al, 2010) which however varies with the different regions.(Tebeu et al, 2010). And stands at 9.3–9.9% (Tamambang et al, 2018; Fouelifack et al, 2014; Fouelifack et al, 2015). In several urban settings rates are high as as in the north with 26.5% and some rural areas where there is the cultural practice of early marriage (Agbor et al, 2017; Tebeu et al, 2006).

According to Njim et al (2020), there is high prevalence of ADOPREG thereby demanding policies in favour of ADOs to curb this rate. Moreover, Authors founs in their systematic, a pooled prevalence of 14.4%, with that of early ADOs being 2.8%, against 12.5% for their late adolescent counterparts. They added that the prevalence of adolescent deliveries in urban areas; 13.1% was similar to that in semi-urban areas; 14.1%. Kassa et al (2018) revealed a general prevalence of ADOPREG in Cameroon of 16.31 from a metanalytical systematic review in Africa. Moreover, in Cameroon and as of 2011, the rate of of 15-19 year olds currently married or in union is 20%, births/1000 girls 15-19 year 116 while girls 15-19 year who are already mother or are primigravidas is 4.3% (UNICEF-SOWC, 2017; UN DESA Population Division.; The joint mission from UNICEF and WHO Africa Regional Office, 2017; WHO Global health observatory, 2018; The World Bank ,2018; WHO Global health estimates 2015, 2016).

Adolescent Pregancy and Antenatal Care

Adolescent fertility has declined from 56 births per 1000 adolescent women in 2000 to 45 births in 2015 and 44 births in 2019 (Sustainable Development Goals Knowledge Platform, 2019). The majority of ADO births occur in low and middle-income countries with highest ADO birth rates in West and Central Africa and the lowest in East Asia (UNDESA, 2017). According to WHO (2018), modern ANC for adolescents and especially the poor is insuffienct both in develop and developing countries thus strongly recommend recommended. Late ANC commencement especially in the third trimester is said to be accountable for most pregnancy that end in complications. (WHO, 2018, WHO, 2011).

Helping the pregnant ADOs go through the system is an important function for all team members to be aware of and participate in, including being aware of the roles of other team members, the services available, and in particular client-centred issues, to assist patients to access needed services (Brownell et al, 2011). Assistance with varied parenting structures to reduce parenting stress and child dysfunction is of great importance including consideration of intergenerational cultural influences.

Effects of Antenatal Care on Adolescent Pregnancy Outcome

Generally, Adolescent pregnancy predisposes the ADOs to increased medical and obstetric complications while a decrease of others (Mann et al, 2020) with preterm birth and low birthweight more associated to sociodemographic disadvantage and substance abuse during (Wong et al, 2020). Therefore, expedient need for support from a multidisciplinary team throughout pregnancy ideally including GP, midwife, obstetrician and social workers (Mann et al, 2020; CANPAGO Committee, 2015). In both developing and developed countries, quality of ANC affects birth weight with five or fewer antenatal visit strongly associated to LBW (Mann et al, 2020; WHO, 2004).

According to WHO (2018), ANC of adolescents in many countries is inadequate as they often begin in the second or third trimester or they do not receive care at all. Factors accountable to this inadequacy include financial barriers, embarrassment, attempts to hide the pregnancy, dissatisfaction with provider practices eg clinic waiting times, lack of privacy and unfriendly attitudes among caregivers (WHO, 2018, WHO,2004). According to authors, in some regions of the world, especially those countries where early marriage is traditional, pregnancy in a young girl is planned, or not unexpected while others on the otherhand seek abortion instead once aware of their pregnancy. Many ADO pregnancies end in induced abortion; an estimated 3.9 million girls aged 15–19 undergo unsafe abortions every year (Darroch et al, 2016).

Adolescent Pregnant Care and the Issue of Consent and Confidentiality

According to (CANPAGO, 2015), in caring for pregnant ADOs, their ability to consent within their relationship and the possible need to report the relationship to child protection authorities if it violates or violated the law should be considered. They add that in Canada for example by law, the general age of consent for sexual activity is 16, with age-related exceptions for adolescents aged 12 to 16 with partners ranging from up to 2 years older to 5 years older depending on their own age while for exploitive sexual activity, the age of consent is 18 (CANPAGO, 2015). Issues of confidentiality are likely to arise with care of very young adolescents, care in a small community, and care of other family members in the clinic and potentially even within team care (CANPAGO, 2015). When considering options for pregnant adolescents in countries it is important to consider the age of consent especially in countries like Canada. eg there is no specific age of consent for medical treatment in Canada. Moreover, by law in Quebec, however, parents have the right to access the medical records of children under the age of 14 (Canadian Medical Protective Association, 2010).

Recommendations for Effective Antenatal Care for adolescents

Many madates /recommendations/guidelines have been made for effective ADO ANC which most often varies and were made based on specific context which may may not be adapted to the others. Thus need serious consideration.

WHO Recommendations for Effective Antenatal Care for Adolescents

In 2011, WHO gave special recommendations regarding care for adolescents during pregnancy and adds that the other aspects of care be same as that of adult pregnant women (WHO, 2011). In 2018, WHO published its 2016 ANC model for a positive pregnancy experience and recommends that it be used for both adult and adolescent pregnant women (WHO, 2018). These specifications and the 2016 model are as summarised below. WHO (2011) gave the following guidelines for clinical care of the pregnant adolescent in his training course in sexual and reproductive health research and recommends that relatively little should be done differently in the care of the pregnant women from care of the adult pregnant women. Regarding ANC, WHO

(2011) recommend special emphasis should be laid on provision of early ANC for ADOs, assistance with preparing for birthing preparations related emergencies, special attention to counseling and nutritional supplementation and treatment and management of malaria in pregnancy and access to PMTCT services and prioritization early detection and management of violence.

In addition to the areas of emphasis on adolescent prenatal care, WHO (2018) in its 2016 ANC model for positive pregnancy experience, gave recommendations for ANC for all adult pregnant women and recommends this be same for the pregnant adolescent. The 2016 WHO ANC model aims to provide pregnant women with respectful, individualized, person centred care at every contact and to ensure that each contact delivers effective, integrated clinical practices (interventions and tests), provides relevant and timely information, and offers psychosocial and emotional support by practitioners with good clinical and interpersonal skills working in a well-functioning health system. Given the evidence that perinatal deaths increase with only four ANC visits and that an increase in the number of ANC contacts, regardless of the country, is associated with an increase in maternal satisfaction, WHO recommends a minimum of eight contacts (WHO, 2018). The author assumes that each country will tailor the new model to its context based on the country's defined core package of ANC services and consensus on what care is provided at each contact, who provides ANC care (which health cadre), where care is provided (which system level), and how care is provided (platforms) and coordinated across all eight ANC contacts.

In the 2016 model according to WHO (2018), the recommendations below were made. Recommendations outline key elements of an essential core package of routine ANC needed by women and adolescent girls throughout the pregnancy period and are integrated and include clinical ANC health promotion and nutritional interventions as well as prevention and early detection of selected pregnancy-related conditions and concurrent diseases including malaria, HIV, and TB. Many authors have proposed guidelines for care of ADOs during pregnancy. Not withstanding, they the need to be contextualized. Some guidelines are as given below.

Canadian Paediatric and Adolescent Gynaecology and Obstetricians (CANPAGO) Committee Care Guidelines Recommendations

As recommendation to ameliorate intra-partum adolescent care, the CANPAGO Committee (2015) recommend that it should be recognized that adolescents have improved vaginal delivery rates and a concomitantly lower Caesarean section rate than their adult counterparts, their in-hospital care should be multidisciplinary, and their cultural believes must be respected. Specific recommendations were also given supported by the law.

Postpartum Care for Adolescents

The specific recommendations below should guide adolescent post partum care include those of adult pregnant women.

WHO Postnatal Care for Adolescents Recommended Guidelines Recommendations

In addition to the care given to adult postpartum care, special recommendations by WHO (2011) include provision of special attention to breastfeeding promotion, and provision of special measures to prevent too-early second pregnancy.

Canadian Paediatric and Adolescent Gynaecology and Obstetricians (CANPAGO) Committee Care Guidelines Recommendations (2015)

Postpartum care should include a focus on contraceptive methods, especially long-acting reversible contraception methods, support breastfeeding, improve ADO parental SRH knowledge on ASRH (CAMPAGO, 2015).

Postpartum and beyond Care Guidelines Recommendations by Mann et al (2020)

As post-partum care, mann (2020) recommends encouragement of home visits, school return, adequate nutrition and support for cessation of smokin as need be. He added that a act to reduce the risk of unintended adolescent pregnancy, explore pregnancy intentions, encourage long-acting reversible contraception, encourage and support consistent and appropriate condom use and ameliorate knowledge on emergency contraception.

Components of a Teenage-Friendly Healthcare

According to mann et al (2020), components of a teenage-friendly health care include welcoming environment, easy access to services, ensuring confidentiality, respectful and inclusive care, information accessibility, ADO empowerment, and implication of fathers. A summary of the components proposed by Mann et al is as presented on the table below.

The Health Care Practitioner's Role in Reducing Teenage Pregnancy

Mann et al (2020) recommends 4 main role of the health practitioner: sensitive inquiry on pregnancy intention, encouragement of LARC, check about condom use and check on use of emergency contraception.

Antecedents (Cause/Risk Factors) of Adolescent Pregnancy

Many factors are associated to adolescent pregnancy both in the developed and developing worlds and at varying degrees. Some are specific to settings while some are comment all settings. In Africa in particular, Kassa et al (2018), from a systematic review with meta-analysis revealed that factors associated with adolescent pregnancy include rural residence, ever married, not attending school, no maternal education, no father's education, and lack of parent to adolescent communication on sexual and reproductive health (SRH) issues. The major risk factors of adolescent pregnancy are Socio-economic factors, situated in many broad areas including biological factors, demographic factors and socio-cultural and, Health Related Factors , non-constitutive family factors, and socio-political factors.

Considering biological factors:

- Early puberty: associated to ealy coitarche and pregnancy (Deardorff, 2005).
- Gene and environmental interaction: childhood obesity and sex dizygotic twin pairs are associated to early menarch (Cherry and Dillon, 2018)
- Puberty and age of menarch: early puberty and menarch is more common in developed countries (<than 14years) compared to developing countries (>14years); consequenlty early coitarche and pregnancy (Cherry and Dillon ,2018),
- Residence at age of menarch: menarch is earlier in urban dwellers than rural dwellers (Cherry, 2014).
- Belsky–Draper Hypothesis of Menarche; this hypothesis says that girls who start menarche at a younger age have adequate resources or economic advantage over girls who start menarche later in their adolescents (Cherry and Dillon, 2014).

Looking at Socio-cultural and demographic factors: comparatively ethnic Differences such as balcks race (Cooper et al, 1995), social deprivation such as poverty (Kirby, 2001), marital status

such as nerver married or early marriage (Avci et al, 2018; CANPAGO, 2015; WHO & hrp, 2019), early coitach (Atanga, 2015), peer pressure (Guttmacher institute, 2003), sexual abuse such as childhood abuse (WHO and hrp, 2019; Madigan et al, 2014), dating violence (Florida State University Center for Prevention & Early Intervention Policy, 2005) and female genital mutilation (WHO, 1998.

Moreover, non-constitutive Family Factors such as poor childhood environment with domestic violence and family dysfunction (Mann et al, 2020; Tamkins, 2004); teenage pregnancy among family members (Ayele et al,2018); low family educational status (Kassa et al, 2018) and ineffective parent-child communication on SRH (Yibrehu and Mbwele, 2020; Krugu et al, 2016; Beyene et al, 2015; Atanga et al, 2015; Vivancos, 2013; Chin et al, 2011; Guilamo-Ramos et al, 2018) will negatively influence the SRH decision and behaviuors of adolescents. Furthermore, regarading socio-economic compared to other counterparts, adolescents affected by factors such as poor economic incentives such as poverty (Mann et al, 2020, WHO and hrp, 2019); low level of employment (Alemayehu et al, 2010), and lower economic status (Ayele et al, 2018); low educational Status of Adolescent (Pradhan and Fisher , 2015; Australian Human Rights Commission, 2017; Kim, 2014) and rural residence (Loaiza & Liang, 2013) are more vulnerable to social risks and early pregnancy.

In addition, compared to their conterparts, adolescents with inadequate contraception (WHO & hrp, 2019; Daroch et al, 2016); knowledge defficency on SRH WHO & hrp, 2019; Beyene et al;) and those exposed to unfriendly Adolescent Health Care Centers (Mekonnen et al, 2019; Malek et al, 2019; Jonas et al; 2018; Jonas et al, 2017), are more likely to become poor, vulnerable and indulge in risky SRH behaviours and consequently pregnancy. Sociopolitical factors such as Controversial/paradoxical law on adolescent sexual and reproductive health issues and abortion (WHO,2011) poor restriction of abortifarcts **(**Sherris et al, 2005, Ngowa et al, 2015) and insufficient infrastructure and lack of Political will (Socpa and de Koning, 2018); a weak governance and health system (WHO, 2018), and non-prioritization of ASRH (Essome et al, 2020; Tamambang et al, 2018), contribute to high prevalence of adolescent pregnancy, unsafe abortion and complications both in rural and urban settings.

Consequences of Adolescent Pregnancy

Adolescent pregnancy is still responsible for high rates of maternal and child mortality, and to long-lasting illness and poverty that cuts across generations (Kiani et al, 2019). Some consequences of ADOPREG are increased frequency of neonatal and maternal complications and lower prevalence of cesarean delivery (WHO, 2019; Azevedo et al, 2015, WHO, 2004). The major maternal complications: as antenatal maternal consequences are abortion (Darroch et al, 2016), pregnancy-induced hypertension, hemorrhagic syndromes, urinary infection, depression (Hodgkinson et al, 2014), and premature rupture of fetal membranes, undernutrition, (Azevedo et al, 2015, WHO, 2004), pre-term delivery (Khashan et al, 2010), fistulas, anemia and malaria CANPEGO Committee, 2015); violence and coercion (CANPAGO Committee, 2015), alcohol and drug abuse (CANPEGO Committee, 2015; Flemming et al, 2013) and mood disorders such as depression (Logsdon et al, 2010; CAMAPEG Committee, 2015). ADOPREG is associated to neonatal complications with the main ones being prematurity, low or very low birth weight, & perinatal mortality (Azevedo et al, 2015), SGA (Logsdon et al, 2010) However, it is important to point out that the data are controversial as to the occurrence of pre-eclampsia (Azevedo et al, 2015, WHO, 2004).

Perinatal consequences include preterm delivery (Khashan et al, 2010), obstetrical fistula (WH0,2014), undernutrition with associated consequences such as malaria and anemia,

inadequate contraception (Marvin-Dowle et al, 2016), CANPAGO Committee, 2015), Pre-eclampsia and eclampsia (WHO,2004), mental health problems such as post partum depression (Reid & Meadows-Oliver, 2007). Major long-term consequences of ADOPREG are socio-economic, health and political. Socio-economic consequences for unmarried pregnant adolescents may include stigma, rejection or violence by partners, parents and peers, (UNFPA, 2015), jeorpardy of education and employment opportunities (Norton et al , 2017; Merrick et al, 2015). Health consequences include rapid repeat pregnancy (Baldwin & Edelman, 2013), mental health problems; suicide, depression. Political consequences include: drain on taxpayers (James and Ashid ; 2013)

Empirical Referents

Empirical referents are classes or categories of actual variables that, by their existence, demonstrate the presence of the concept and they are significant in clarifying abstract concepts and their critical attributes.(Walker & Avant, 2005; Walker & Avant, 1985). According to Nkoum (2019), the construction of a concept consists in determining its dimensions (components), then, the indicators of each of the dimensions. Author added that, some concepts may not have clear-cut indicators; in this case, it is necessary that the researcher content himself with getting a trace, sign, expression, opinion or any phenomenon that can give more information on the concept. In was in this light that in this concept of adolescent pregnancy, we used clear physical indicators for aspects of the concepts that can be quantified and main manifestations/characteristics for qualitative aspects of the concept without clear-cut quantitative indicators.

In this work, the concept adolescent pregnancy was explored and two main dimension identified; risk factors/causes and consequences of adolescent pregnancy. Finally, each of the components had indicators or manifestations/characteristics based on whether they can be quantified or not and indices as were possible. The table below is a summary of the analytical model of adolescent pregnancy.

Table 1: Summary of the Adolescent Pregnancy Concept Analysis Revealing Its Major Dimensions, Indicators and Indice

CONCEPT	DIMENSIONS	COMPONENTS	SUB-COMPONENTS	INDICATORS/ MANIFESTATIONS	INDICE
Adolescent Pregnancy	Causes/Risk factors of adolescent pregnancy	Biological Factors	Early puberty	Gene-environment interplay	Twins, body mass index (obesity)
				Age of menarche	<10-12yrs
				Residence at age of menarch	Rural residence, Urban residence
				Belsky–Draper Hypothesis of Menarche	Poverty, riches
		Socio-cultural and demographic Factors	Ethnic Differences Social Deprivation	Black, white Poverty, Riches	
			Marital status	Ever-married, non-married, early marriage (<18years)	
			Age of First sexual intercourse (Coitarch)	<16years	
			Peer Pressure	Sexual intercourse before age 20, Increase STIs, increase Teenage pregnancy	

		Sexual abuse/Violence and Coercion	-Childhood sexual abuse -Dating violence -Female genital mutilation	Mental health problems, physical health problems, risky sexual behaviors
		Use of drug and alcohol	-Risky sexual behaviors, Teenage pregnancy, mental health problems.	
		Media influence	Early coitarch, early sexuality, early teenage pregnancy (<20years).	
		Non-constitutive Family Factors:	-Childhood environment: domestic violence, family dysfunction, child abuse	Risky behaviours (use of alcohol, drug etc), early sexual activity, Early adolescent pregnancy, early adolescent fatherhood, low educational level.
			-Teenage pregnancy among family members	-low educational status, early marriage, early sexual activity and teenage birth of siblings of teenage mother or family member, early fatherhood of sibling to teenage mother
			-Family educational status	Early adolescent pregnancy.
			-Parent to adolescent communication on sexual and reproductive health (SRH) issues	High risk behaviours, consistency and correct use of condom, adolescent pregnancy
	Socio-economic factors	Economic incentives	Poverty	Early child work, teenage pregnancy, low educational level, low employment level, STIs
		Educational status of adolescent	Attending school, level of education, early marriage, early childbearing, use and correct and consistent use of contraception	
		Residence/Urbanization	Rural, Urban	Level of education, poverty, use

					and consistency of use of contraception, early childbearing
		Health-related factors	Inadequate contraception	Poor use of SRH centers, adolescent pregnancy, STIs,	
			Knowledge gaps on SRH issues	Poor use of SRH centers, adolescent pregnancy, STIs,	
		Socio-political Factors	Controversial/paradoxical law on adolescent sexual and reproductive health issues and abortion	Early marriage/child marriage, adolescent pregnancy, gender violence, unsafe/clandestine abortion, impunity of practitioners of unsafe abortion.	
			Unfriendly adolescent health care centers	Poor use of SRH centers, adolescent pregnancy, STIs.	
			Insufficient infrastructure and lack of political will	Adolescent pregnancy, unsafe abortion, few funding structures and opportunities for research, few adolescent sponsored programs	
Consequences of adolescent pregnancy	Consequences on the adolescent mother	Antenatal consequences	Maternal mortality Maternal abortion(unsafe) HIV and Other STIs Hypertensive disorder of pregnancy Inadequate nutrition Iron deficiency Anemia Malaria Violence and coercion Risky behaviours: smoking, substance abuse, alcohol use Mood disorder		Depression.
		Perinatal Consequences Postnatal consequences	Obstetrical fistula undernutrition Inadequate breastfeeding Anemia Pre-eclampsia and eclampsia Inadequate contraception Mental health problems: post partum depression		
		Long-term Consequences: -Health, -Socio-economic	Rapid repeat pregnancy, mental health problems (depression, suicide), Jeopardy of education opportunities. Jeopardy of employment opportunities Sigma, rejection and violence		
	Consequences on Child of Adolescent	Short-term consequences	Perinatal mortality and increased NICU admission rates Preterm-birth		

		Low-birth-weight and very-low-birth-weight infant Small-for gestational-age infant Congenital anomalies Intrauterine growth retardation	Low-birth weight, small for gestational age
		Neonatal tetanus Inadequate breastfeeding	Poor child growth for age, frequent childhood GIT problems
	Long-term Consequences	Poor child psychological development	Poor language development, poor academic performance, child delinquency.
		Poor academic performance	Poor school grades, secondary school drop outs
		undernutrition	Poor language development, behavioral problems
		Child delinquency	Teenage pregnancy, imprisonment of teenage sons.
Consequences on Adolescent Father	Adolescent fatherhood	Early marriage	Short-gun wedding
Consequences on the State	Political	Tax payer drain	Cost on care for non-insured adolescent and her child
	Economic	Economic breakdown/poverty	Low educational level, school drop outs, unemployment

Discussion

Within all scientific disciplines, practitioners, researchers and educators are concerned with concepts that are important to the development of knowledge and theory within their field (Risjord, 2009). However, in the domain of healthcare, professionals are often confronted with concepts that are abstract or pooly defined. Thus for the establishment of disciplinary knowledge that enhances or improves practice, conceptual clarity is required. The phenomenon of adolescent pregnancy; eventhough dating right back to ancient times raises much attention in present day due to its public health and social concerns. As stipulated by (Durbin, 2006), the nature of medical practice in the 21st century has been changed from individual practitioners to interdisciplinary teams of health care providers, thus a need for common grounds of understanding for efficient care. As stipulated by Geraldine and Joice (2016), while concept labels may be the same across disciplines, its perspective may differ, thus it is important to distinguish any specific disciplinary perspective on the concept. Once this disciplinary

perspective is made explicit, it will guide further development of nursing research and professional practice.

Adolescent pregnancy is lived by diverse society and cultures and with diverse representations, including its very meaning, nature, how it is lived and its associated consequences. Irrespective of the social representations of the phenomenon of ADOPREG, much attention and debates on the phenomenon is rampant today as with rapid globalization and the advancement in technology, it has ramification effects that is not just limited to any particular society or culture, but also across life span and generations.

A concept analysis is a formal and rigorous process by which an abstract concept is explored, made transparent, defined, and differentiated from similar concepts to be used in theory formulation and communication about it (walker & avant, 2005; McKenna, 1995). To better understand the concept of ADOPREG and most importantly, better prevent ADOPREG and or care for pregnant adolescents given its nature of multidisciplinary intervention among wide range of care stakeholders, there is the dire need for a common ground of understanding regarding ADOPREG among concerned stakeholders in the care. Analysing the concept of ADOPREG has both theoretical and practical implications.

Theoretically, by breaking adolescent pregnancy to its components, as stipulated by Walker and Avant (2005), its understanding and elucidability is increased, thereby laying a foundation for operational definitions and common grounds of functioning. Theoretically, absence of effective concepts on ADOPREG can hinder the ability to determine, and conduct studies pertinent to research, education and clinical practice. Moreover, determining the attributes and the empirical referents to each attribute of ADOPREG can lay a great ground work for practice, thereby limiting ambiguity and debates vis-avis ADOPREG and approach to care regarding ADOPREG at all levels and contexts of care thus promoting care efficiency.

Practically, efficient care, instruction and training, needs a precise and concise definition of adolescent pregnancy, its clarification and efficient assessment tools; and the analysis of this concept enables the realisation of this. An efficient assessment tool for ADOPREG can be developed via the creation of items using empirical referents that reflect each defined attribute that can enable us measure or recognise (walker & avant, (2005). This tool will give a common ground of functioning among stakeholders, irrespective of their background and context including social, cultural, economic, and political, thereby enabling efficient care for all adolescents and issues related to their health and pregnancy.

4.0 CONCLUSION AND RECOMMENDATIONS

Conclusion

Adolescent pregnancy; a complex phenomenon and concept remains a subject of great interest and concern due to its public health and social concerns. The concept analysis of adolescent pregnancy represents a great stide in the understanding and amelioration adolescent health, sexual and reproductive health in particular and the enablement of adolescents attain their full potential. While health discipline views adolescent pregnancy as abnormal, this is not the case in some disciplines and contexts. With respect to research, the body of knowledge from the analysis of the concept of ADOPREG will serve as a database of conceptual and operational foundations for consultation by other scientists and professionals to better inform both theory and practice. There will also be further refinement of the concept as gaps on the concept are identified that may lead to development of theories for better practice. Moreover, the attributes and their associated empirical referents and related concepts identified from this work will also

inform nursing educators and clinicians make informed decision in service rendering. Nursing managers would also be able to design better assessment and management tools based on the knowledge from this analysis and also advocate better policies regarding adolescents and ADOPREG. It will also better inform policy makers for better decisions in favour of adolescent SRH. It could be recommended that the Neuman's system model be used for future research and better elucidation of the concept of adolescent pregnancy.

Implications of the Study

Theory: it is stronlgly believed that the results of this work will enrich the data base of scientific literature for use by other researchers and professionals. It will also open more gaps for futher research from which theories could also be developed.

Practice: professonals in the health and related fields is believed will through the findings of this study better understand the dimensions of the concept of adolescent pregnancy an its different attributes which will help them ameliorate their care of adolescents. It will also open avenues for better advocacy in favour of the health of adolescents.

Policy makers: findings of this study will if judiciously used, ameliorate adolescent health, enhance economic growth & reduce wasteful expenditures, as policy makers will be better informed on the status and stakes of adolescent pregnancy for better decision making regarding governing laws on adolescnets, their pregnancies and care, and also on better avenues for investment in favour of adolescent health; hence better future.

Limitations of the Study

- The concept of adolescent pregnancy analysed by this work, like every other concept or knowledge is dynamic and liable to change giving changing times and contexts should be considered when applying the concept and which may not be mastered at present by the researchers.
- The analysis did not explore the socio-cultural and emotive context of the concept; thus be culturally sensitive to appropriately appraise the use of the concept and provide efficient operational definition.

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