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RESEARCH ARTICLE

Impact of Bad Habits, Health Condition, Education, Birth Control, Religion, Career on Pregnancy Success Using Big Data Analysis

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ABSTRACT

Pregnancy is an important contributor to the impact on the demographic and economic situation of countries. However, worldwide statistics reported a drastic drop in the number of pregnancy. This study used the ICPSR National longitudinal study of young adults (aged 24-32) datasets to analyze the influence of self-status on the number of adult pregnancy in the U.S. Two datasets are merged, cleaned and transformed (N=4345). SPSS is used to analyze the correlation between self-status from perspectives (37 bad habits variables, 47 health conditional variables, 7 educational variables, 21 birth control variables, 6 religion variables, 41 career variables busyness) and the amount of pregnancy. The results of the Pearson correlation show that 26 variables of bad habits, 4 health condition variables, 4 variables of education level variables, 6 variables of birth control, 2 religion variables and 8 variables of work activity are significantly related to the amount of pregnancy. This study is important in providing information for future research on the construction of predictive modeling of adolescent self-status and their pregnancy number to increase the drastically decreasing pregnancy rate in the recent years to maintain the stability of demographic, improve the human capital in society, and economic sustainability.

INTRODUCTION

Pregnancy number is the number of pregnancies for an adult in a relationship. The pregnancy number is important as it plays a role in delivering the birth rate. The birth rate is an indicator of population growth and determines the age structure of populations, which has various implications for the economy and society (*Reproduction of 'The Puzzle of Falling US Birth Rates since the Great Recession'*, 2022). Over the past 10 years, the US has recorded a steadily low pregnancy number in 2020 due to the dropping birth rates at an all-time low of 55.8 per 1,000 women. Therefore, many researchers conducting studies to identify the factors that will affect the number of pregnancy, including family involvement (Hawkins *et al.*, 2021), disease (Plowden *et al.*, 2020), bad habits (Yuan, Liu, and Larsson, 2021), duration of work hours (Rangel *et al.*, 2021), education (Cornette, 2020), religion (Sundararajan *et al.*, 2019a), family planning (Troutman, Rafique, and Plowden, 2020a). The main objective of the previous research is to discover and expand a healthy relationship between all factors among adults and to resolve the decline in population. Therefore, this research presents a research gap in each of the factors' details. For example, in the demographic factor, most articles focus on certain regions, sex, and age. Therefore, to address the gap, secondary data derived from the National Longitudinal Study of Adolescent Health (Add Health) public-use data wave IV was used

to investigate the details in each factor related to pregnancy number with different viewpoints such as an adult's economic status, household history, birth control, and more possible factors which are not covered in the previous studies. This current study focuses on answering a main research question. What are the detailed covariates ((bad habits, health condition, education level, religion, and work-life balance) of the pregnancy number.

2 Related Works

The birth rate is crucial because it serves as a gauge for population growth and establishes the age composition of people, which has repercussions on the economy and society. Whether the birth rate is too high or too low, it has an impact on all subgroups of the population in different ways. For example, a high birth rate will put a strain on the adult population to care for them, and as this group becomes elderly, governments will have to support them. In fact, birth rates have been continuously declining over the past 10 years, reaching an all-time low of 55.8 per 1,000 women in 2020 (Anifah *et al.*, 2018). This problem might be due to the low number of pregnancies, which is caused by the greater take-up of highly effective contraception, the high cost of raising children, the improved occupational opportunities for women, and the high amount of student debt carried by young adults. All these problems have led to the economic problems of the United States. However, the number of pregnant women among young adults has recently aroused social attention due to the issues of super-aged society and the shortage of labour force recently. United Nations projections show that the current birth rate for the world in 2021 has declined by 1.13% from 2020(17.873 births per 1000 people in 2021 and 18.077 births per 1000 people in 2020) (Kearney, Levine, and Pardue, 2007). These issues have led to a decline in the world population. Therefore, it is essential to conduct research on the self-status of young adults to ensure the maintenance of the global growth rate.

This study has grouped the number of factors that affect pregnancy among adults from a list of literature. Table 1 shows the articles and studies that explain the factors in sociocultural, economic, health, individual, etc. For example, women with higher education and social standing have a lower pregnancy number (Cornette, 2020). Bad habits like smoking, drinking alcohol, and taking drugs are also contributing to the declining pregnancy number, as they will negatively affect the reproductive system negatively. Furthermore, family factors, psychological health, disease, and birth control are also factors that affect the number of adults' pregnancy. This study will replicate some of the factors proposed in Table 1.

Table 1. Related Works and Contributions

Covariates	Detailed Variables	Previous Studies
Career	Working Hour	(Rangel *et al.*, 2021)
	Alcohol	(Lee *et al.*, 2020) , (Sebastiani *et al.*, 2018) , (Wang *et al.*, 2022)
	Drug	(Ajayi and Akhigbe, 2020)
Disease and Health Condition	Autoimmune disease	(Plowden *et al.*, 2020)
Education	Educational Level, Social Standing	(Cornette, 2020) , (Mohr, Carbajal and Sharma, 2019) , (Isuku, 2020) , (Stancliffe *et al.*, 2020)
Birth control	Family planning, contraceptive methods	(Troutman, Rafique and Plowden, 2020a) , (Gonie *et al.*, 2018)
Religion	Spiritual, Religion Belief, Religion Tradition	(Sundararajan *et al.*, 2019b) , (Tigabu *et al.*, 2018) , (Ohaja, Murphy-Lawless and Dunlea, 2019)
Parenting	Parental counseling and guidance,	(Hawkins *et al.*, 2021) , (Anifah *et al.*, 2018) , (Yakubu and Salisu, 2018) , (Rouse *et al.*, 2021) , (Xue *et al.*, 2018) ,

	parental neglect, sexuality education, level of family involvement level (low/ high)	(Tabei *et al.*, 2021) , (Odimegwu and Mkwananzi, 2018) , (Fr, Nzasibenvo and Francis, 2020)

Heger et al. research showed that smoking has a negative impact on the success of IVF (in vitro fertilization) and ICSI (Intracytoplasmic Sperm Injection) procedures (Yakubu and Salisu, 2018). Smoking mothers can result in lower fertility rates, pregnancy rates, live birth rates, and a higher risk of miscarriages or ectopic pregnancies. There are 4000 chemicals in tobacco smoke that have been identified through chemical analysis and all negatively affect the female reproductive system in different ways. Furthermore, the study by Lee et al. (Lee *et al.*, 2020), investigates whether ethanol use prior to conception could harm the mother or the fetus. The result shows that maternal alcohol consumption will lower pregnancy rates and harm fetal growth, cause hepatic steatosis during pregnancy, cause liver inflammatory reactions and aberrant prenatal development, and maternal metabolic problems. In addition, excessive alcohol consumption can make it harder for the body to absorb and use certain nutrients. As a result, many alcoholics, heavy drinkers, may have malnutrition to varying degrees (Yuan, Liu, and Larsson, 2021).

On the other hand, Ajayi and Akhigbe (2020), suggest that drugs affect male fertility in several ways, including hormonally through the hypothalamic-pituitary-testicular axis and non-hormonally. The results show that low testosterone levels and concomitant hypogonadism are caused by excessive opioid dosages. Increased prolactin levels and inhibition of pituitary gonadotropin secretion are contributing factors in this. Androgen levels do not have an influence on the hypogonadism observed. Leydig and germ cells are where endogenous opioids are made. The entire testes have these receptors. These opioids inhibit Sertoli cell receptors, which affect the release of androgen-binding protein, which is necessary for androgen intratesticular transit. In addition to affecting testicular function, morphine has been shown to increase aromatase expression in the brain and testes. Exogenous opioids have been shown to cause DNA fragmentation and decreased semen quality. Therefore, we assume that adults should prevent all kinds of bad habits, such as smoking, drinking, and taking drugs, to increase the amount of pregnancy.

According to previous studies (Plowden *et al.*, 2020), autoimmune conditions have unfavorable effects on an adult's reproductive outcome. autoimmune disease causes the adult's immune system to lose its ability to control and affects the body systems required for reproduction. These conditions occur more frequently in women than in men. Women who have previously experienced pregnancy loss had a first-degree relative with an autoimmune disease and will experience a higher pregnancy loss and a lower likelihood of live birth compared to women who had no experience of pregnancy loss. These conditions have a negative effect on reproduction and often occur within family members. The studies were evaluated among 12 different autoimmune diseases to have a deeper investigation of the health condition of women and the reproductive condition. The immune system, which controls the overall health condition of an individual, is believed to play an important role in a woman's ability to lead a life. Furthermore, studies have shown that autoimmune conditions involve a hyperactive immune system. When a female immune system is hyperactive, her ability to tolerate fetal-expressed paternal antigens is significantly affected and possibly leads to immune-mediated fetal injury and pregnancy complications. Therefore, we assume that an adult's health condition has a significant negative impact in increasing the pregnancy numbers, as the diseases stated above have the chances to cause pregnancy loss.

Cornette et al. (Cornette, 2020) research has shown that educated women have fewer children, but it is important to emphasize that in many nations, fertility decrease appears at all levels of education, though it is most pronounced among the highly educated. However, higher levels of education among women are strongly correlated with decreased fertility rates. This means that the more educated a woman is, the less children she is likely to have, and this effect can be seen in many nations and cultures. Women who obtain education, especially those with higher education levels, have fewer pregnancies than women who have not attended any formal schooling, according to observations made around the world. This is because education has improved social status, gender equality, and relationship selection. The quantity-quality trade-off, where women who have more formal education tend to have fewer children overall, but devote more

resources in each child they have, seems to be the most promising mechanism. In addition to that, research of Mohr et al. (Mohr, Carbajal, and Sharma, 2019) found that the education levels of girls affect the proportion of teenage pregnancies, with young girls leaving school to care for their unborn children and during and after their pregnancies. Thus, in low- and lower-middle-income countries, this creates a loop that keeps teen pregnancies and lower levels of schooling alive. Therefore, we assume that the higher educational level can affect the mindset in order to get as few children as possible. But they will treat their children well if they have a child.

On the other hand, Gonie et al. (Gonie *et al.*, 2018) indicated that to anticipate and have the desired number of children, as well as the spacing and timing of their births, individuals and couples are creating their own family plans. All these goals by implementing contraceptive methods. The overall prevalence of contraception was 41.5%. The most common forms of contraception used by the researchers were injectables which contributed 48.1%, implants had 22.6% and 20.0% were occupied by pill usage. In addition to that, the study by Troutman et al. (Troutman, Rafique, and Plowden, 2020b) illustrates that unwanted pregnancies are a major problem in the world, especially for low-income women and members of specific racial and cultural groups. These unexpected pregnancies can have a detrimental effect on women's health, emotions, and finances. Access to long-acting reversible contraception may be made easier, which can undoubtedly help resolve this public health concern. Doctors and other healthcare professionals must ensure that they provide comprehensive treatment, have received appropriate training in cultural sensitivity and contraception, and provide appropriate care. By this channel, the number can be reduced effectively. In other words, birth control will absolutely affect the number of births. Therefore, we assume that adults who wish to have the desired number of children can use the birth control method.

Based on an earlier study by Sundararajan *et al.* (2019b), there is a complex and variable relationship between religion and the number of women. As some of the birth control methods are prohibited in some Christianity churches such as the Roman Catholic Church. However, for Muslims, their Quranic tradition and religion do not have a specific clarification on the forbidden usage of the birth control method. There are many rumors that circulate among the religious community about the side effects of using birth control methods, such as the birth control method can cause gynecological cancer. One of a Christian man also concerns that the birth control method will produce children with birth defects as the contraceptive pill may give birth to a child who may not even have fingers or a child who is not fully developed and handicapped. Muslim and Christian expressed the belief that using the birth control method will interfere with God's plan by denying the children's right to be born in this world. According to Ohaja et al. (2019), research reveals that even though the development of scientific-oriented maternity care is getting better and available today, most people still believe in God and rely on God as the ultimate care provider to help them deliver new life. Therefore, we assume that adults who are active in religious activity have higher chances of increasing the number of pregnancy due to the belief that birth control opposes their religious faith.

The study by Rangel et al. (Rangel *et al.*, 2021) evaluates the prevalence of infertility and pregnancy difficulties among female surgeons in the United States and pinpoints environmental factors that enhance risk compared to a nonsurgical group with similar socio-demographics. According to national surveys, pregnancy-related stigma, unchanged work schedules throughout pregnancy, uneven and short maternity leave options (often 6 weeks or less), and minimal support for postpartum childcare and breastfeeding needs are common among US surgical residents. Because of this, most women surgeons wait until training is over before starting a family. When a woman reaches the age of 35 and receives the diagnosis of advanced maternal age, her chances of becoming infertile and having a difficult pregnancy increase drastically. Furthermore, surgeons who work for more than 12 hours a week during pregnancy also had an increased risk of pregnancy problems. Therefore, women surgeons are more likely to have children. Therefore, we can assume that adults who are busier will have a lower number of pregnancy. In fact, they should balance their work and life, not only focus on their career, to reduce the delay in pregnancy and childbirth.

3 MATERIALS AND METHODS

The National Longitudinal Study of Adolescent Health (Add Health) Public Use Data Waves 1–4 is the secondary source for this study. The Add Health study investigated a nationally representative sample of US adolescents who were followed as they transitioned into adulthood (Harris and Udry, 2022). Data collection was carried out as an in-school questionnaire and an in-home interview during the 1994–1995 school year. The survey contains five waves in total. The recruited respondents were in grades 7 to 12 for Wave I, 8 to 12 for Wave II, aged 18 to 26 years for Wave III, 24 to 32 years for Wave IV, and aged 33 to 43 for Wave V. Add Health using systematic sampling methods and implicit stratification to select the schools to ensure that the sample was representative of US schools, and their protocol was approved by the Institutional Review Board (IRB) at the University of North Carolina at Chapel Hill, North Carolina. We used the public-use data set (wave IV =5114) from in-home interviews to evaluate our research objectives.

Two ICPSR datasets (DS25-Pregnancy, DS22-Demographics) are merged and cleaned with the help of SPSS. A total of 240 variables were confirmed in the final data set for analyzation, as shown in Table 2. The main dependent variable is the Pregnancy Number within Relationship (PRGNO) in company with other variables in the dataset. Due to the large number of variables in the Demographics data set (920 variables), only relevant variables will be filtered first and then analyzed and cleaned throughout this study.

Table 2. Variables used in the analysis

Name	**Total Variables**	**Detail**		
AID	1	Respondent ID		
PRGNO	1	Pregnancy number within relationship		
PTNR ID	1	Partner ID		
BIO SEX	1	Biological Sex		
DS22 Demographic	236	How is the general health	Global job satisfaction	Past 12 mths birth control implant
		Weight-lbs	curr/mst recent job goal descry	Past 12 mths diaphragm
		What do you think of your weight	Family responsibilities interfere w/work	Past 12 mths - IUD
		Dest describe curr/health Ins	Oft cut hrs/refuse to b/c family	Past 12 mths-ntrl family planning
		Last routine check-up	Family time often decrease b/c work	Past 12 mths-withdrawal method
		Past12 month psycho/counselling	Total household inc/06/07/08	Past 12 mths-rhythm method
		Limit: moderate activities	Income pers earning 06/07/08	Past 12 mths-vaginal sponge
		Use brace, cane, wheelchair	Own/mortgage current residence	Past 12 mths spermicide crm
		Ever been diagnosed(DX) cancer/leukemia	Fin gift/loan to buy/imprv res	Past 12 mths-ring

		High cholesterol/lipids/trig	Best est tot combined assets	Past 12 mths-contraceptive patch
		Ever DX w/high blood pressure	Best est total coll hshld debt	Past 12 mths contraceptive film
		Ever been DX with diabetes	Net status if assets liquefied	Past 12 mths- emerg iud insert
		Ever been DX heart disease	Past 12 mon no phone service	Past 12 mths-partners vasectomy
		Ever been DX asthma/CR brn/Emph	Past 12 mon no mortg payment	Past 12 mths-tubal ligation
		Ever been DX migraines	Past 12 mon evicted from house	Past 12 mths-other contraceptive
		Ever been DX with depression	Past 12 mon no util payment	Past 12 mths no method used
		Ever been DX PTSD	Past 12 mon util turned off	Sex w/more 1 ptnr same time
		Ever been DX panic/anxiety DIS	Past yr worried food depleted	TX paid for sex/was paid sex
		Ever been DX w/epilepsy/seiz	Rec welfare/pub assist	Romantic attract to females
		Ever been DX Add/ADHD	Where resp is on ladder	Romantic attract to males
		Ever been diagnose Hep C	Present religion	Sexual self definition
		Serious Injury past year	Have attended church/mosq/syng	Ever non phys forced sex
		Motor vehicle accident within past year	Participated church activities	Ever phys forced to have sex
		Gum dis/lost tooth last month	How important relig faith	Ever diagnosed-chlamydia
		Active infection last month	How often pray in private	Ever diagnosed-gonorrhea
		Sustain injury last month	How often turn relig for probs	Ever diagnosed-trichomoniasis
		Acute illness last month	Interrupted during 90 sec recall	Ever diagnosed-syphilis
		Surgery last month	Words on list recalled 90 sec	Ever diagnosed-genital herpes
		Hay fever symptoms last month	Words not on list named 90 sec	Ever diagnosed-genital warts

		None of illness above	Words on repeated 90 sec	Ever diagnosed hepatitis B
		Flu symptomps – past 2 weeks	How often feel isolated	Ever dx-human papilloma virus
		Fever-past 2 weeks	Last mnth unable control things	Ever dx pelvic inflame disease
		Night sweats-past 2 weeks	Last mnth conf handle pers prob	Ever dx-cervicitis or mpc
		Diarr/nausea/vomit past 2 weeks	Last mnth things going your way	Ever dx-urethritis(NGU)
		Boldly stool – past 2 weeks	Last mnth difficulties overwhelm	Ever dx diagnosed vaginitis
		Polyuria past 2 weeks	Compared to oth how intelligent	Ever diagnosed-any other STD
		Skin rash past 2 weeks	Compared to other how attractive	Ever had STD
		None of above symptoms	Number of kids intent to have	Ever smoked entire cigarette
		Aspirin/asa-containing prod	Interrupted during 60 sec recall	1st smoke entire cigarette
		Using other NSAID(S)	Words on list recalled 60 sec	Ever smoked cigs regularly
		Total blindness one/both eyes	Words not on list named 60 sec	Age smoked cigs regularly
		Use glasses or contacts	Words repeated 60 sec	Num days smokd cigs lst 30 days
		Ever worn hearing aid	Number string/2-4	Ever smoke more than current
		Best describes unaided hearing	Number string/6-2-9	Smoked cigar/pipe 20 times
		Stuttering stammering problem	Number string/3-2-7-9	Used chewing tobacco 20 times
		Experienced tinnitus w/I past year	Number string/1-5-2-8-6	Drink alcohol > 2-3 times
		Voice problems w/I past year	Total score on number recall task	Age 1st drink alcohol
		High school graduation status	Past 7 days bothered by things	Past 12 mon #days drink alcohol
		Most recent degree/certification	Past 7 days shake off blues	Past 12 mon avg # drinking time

		Current/Attenfing col/univ/voc school	Past 7 days felt as good others	Past 12 mon many days/5+ drinks
		Relative prov finance asst last yr	Past 7 days felt trouble concentrating	Past 12 mon # days been drunk
		Achieved desired educational level	Past 7 days felt depressed	Num days had drink pst 30 days
		Highest educational level ever expected	Past 7 days felt too tired	Time when drank more than now
		Work for pay > 35hr/week not stud	Past 7 days felt happy	Time drank mst num days drank
		Total number of jobs between 200/lst yr	Past 7 days enjoyed life	Drank mst num drinks each time
		Number of TX fired between 2001/lst yr	Past 7 days felt sad	Spend lot time drinking
		Age start 1st paid full time job	Past 7 days felt disliked	Often drink more than intended
		Still work first pay job ever	Feel treated w/less respect	Ever tried to quit drinking
		Another job since 1st >10hours/week	Thought about suicide past year	Exper withdrwl sympt not drink
		Type work 1st full time job	Family/friends attempt suicide	Kept drink causd health prob
		Months worked 1st F/T job	Ever have vaginal sex	Stop activities interfr w/drink
		Years worked 1st F/T job	Number partners vaginal sex	3+ exp happen 12 mth period
		Goal description 1st F/T job	Ever had oral sex	Took prescript drug not prscrb
		Currently work 10hours/week	Age 1st time had oral sex	Ever used steroids
		Year pay job started	Ever had anal intercourse	Ever used marijuana
		Type of work recent job	Number male partner ever had	Ever used cocaine
		Number hrs/week current pay job	Number male partner before 18	Ever used crystal meith
		Best desc hrs worked curr job	Number female partner ever had	Ever used other illegal drugs
		Employer provides – health ins	No female partner before 18	Used marijuana 5+ times

		Employer provides – retire benefits	Number sex partner only 1 occasion	Num days used marij pst yr
		Employer provides – pd vac/sick	Past 12 mths-use condoms	Time use marij more than now
		Spend most time stand/seat work	Past 12 mths-use female condom	Time use marij most how much
		Decision – making freedom work	Past 12 mths-mos-oral birth control	Spent lot time use marij
		How often repetitious tasks	Past 12 mths-birth ctrl inject	Often use more marij intend
		Describe of supervisory role	Past 12 mths emerge cntrcptn	Before 18 oft felt hurt/unloved
		No times attempt suicide pst yr	before 18 times hit/kick/thrown	Before 18 often-touch sexual way
		Highest edu level achieved to date	Jobs currently work/10hrs/wk	
DS25 Pregnancy	4	Pregnancy outcome	Live birth from pregnancy	
		birth control before pregnancy	Want child before pregnancy	

To merge and cleansing the dataset, the detailed steps are shown in Figure 1 (Ting et al., 2024). After merging, cases with more than 70% variable containing missing values will be removed. The remaining cases will be cleansed based on the missing value of the variable. If a variable contains more than 30% missing data, the variable will be filtered out. For a variable containing less than 30% missing data, the The missing value will be replaced with the mean value of the respective variable, another appropriate value or "0". For example, the missing value of the variable labeled "number of male partners ever had for the respondent" will be replaced with the mean value of the variable. Another variable labelled "Ever diagnose with Diabetes?" missing value will be replaced with "0" which means not diagnosed before. Data was statistically analyzed using SPSS software. After ensuring that the dataset was replaced with appropriate data and no missing value available, the data is then analyzed with Pearson correlation.

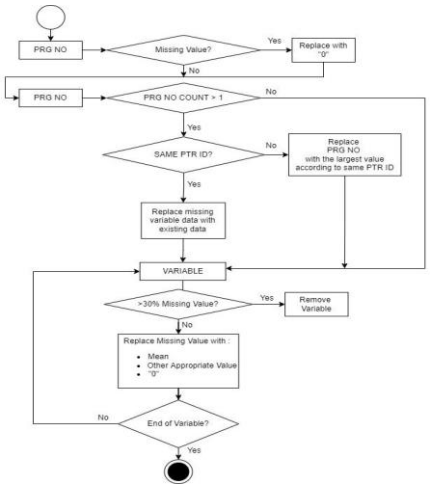

Figure 1. Workflow to transform the merged dataset.

4 DISCUSSION

Table 3 showed the relationship between the bad habits and pregnancy number. All variables in the table are negatively correlated. It has been proven in this study that smoking will reduce fertilization rates, pregnancy numbers, live birth rates and increased chances of miscarriages or ectopic pregnancies (Heger *et al.*, 2018), alcohol consumption prior to conception could harm the mother or the fetus (Lee *et al.*, 2020), and drugs will also affect male fertility hormonally through the hypothalamic-pituitary-testicular axis and nonhormonal (Ajayi and Akhigbe, 2020). In addition, Pearson's correlation of the variable 'use glasses or contacts" is negatively correlated while the other variables are positively correlated. It has been justified that several autoimmune conditions have adverse effects on reproductive outcomes, but the relationship between family history of autoimmune disease in women without these conditions and pregnancy is uncertain (Plowden *et al.*, 2020). Another finding in Table 3 is that all the variables in the education level section are negatively correlated. According to Cornette (Cornette, 2020) research, women with higher education levels are more likely to have a lower pregnancy rate compared with those who have not received formal schooling. This has supported the result of this current study.

Table 3. Pearson correlation of bad habits and Pregnancy Number

Variables	Pearson Correlation	Sig. (2-tailed)
Bad Habits		
Ever Smoked the entire cigar	-.034*	.023
Age 1st Smoked Entire Cigarette	-.037*	.014
Ever Smoked Cigs Regularly	-.067**	.000
Age Smoked Cigs Regularly	-.042**	.006
Num Days Smoked Cigs Last 30 Days	-.041*	.006
Ever Smoke More Than Current	-.039**	.010
Used Chewing Tobacco 20 Times	-.041**	.007
Past 12 Mon # Days Drink Alcohol	-.060**	.000
Past 12 Mon Average # Drinks Time	-.039*	.010
Past 12 Mon Many Days/5+ Drinks	-.052**	.001
Past 12 Mon # Days Been Drunk	-.055**	.000
Num Days Had Drink Past 30 Days	-.057**	.000
Time When Drank More Than Now	-.031*	.042
Time Drank Most Num Days Drank	-.051**	.001
Spent Lot Time Drinking	-.058**	.000
Often Drink More Than Intended	-.069**	.000
Ever Tried to Quit Drinking	-.043**	.005
Experienced Withdraw Symptom Not Drink	-.031*	.039
Kept Drink Caused Health Prob	-.049**	.001
Stop Activities Interfere W/Drink	-.032*	.036
3+ Experienced Happen 12 Month Period	-.061**	.000
Took Prescriptive Drug Not Prescribe	-.040**	.009
Ever Used Other Illegal Drugs	-.044**	.004
Used Marijuana 5+ Times	-.050**	.001
Time Use Marijuana More Than Now	-.049**	.001
Time Use Marijuana Most How Much	-.052**	.001
Health Condition		
What you think of your weight	.061**	.000
Best describe current/health ins	.077**	.000
Ever been diagnosed with diabetes	.034*	.025
Use glasses or contacts	-.035*	.019

Education Level		
Highest Edu Level Achieved To Date	-0.49**	.001
Most Recent Degree/Certificate	-.045**	.003
Current/Attending Col/Univ/Voc School	-.032*	.036
Highest Educ Level Ever Expected	-.031*	.043
Birth Control		
Past 12 Months-Use Condoms	-.088**	.000
Past 12 Months-Oral Birth Control	-.088**	.000
Past 12 Months-Withdrawal Method	-.031*	.043
Past 12 Months-Contraceptive Film	.036*	.019
Past 12 Months-Tubal Ligation	.041**	.007
Past 12 Months No Method Used	.035*	.021
Religion		
Have Attended	.046**	.002
Church/Mosque/Synagogue	.047**	.002
Participated Church Activities		
Busyness in Career		
Tot No Jobs Between 2001/Last Year	-.051**	.001
Year Pay Job Started	-.039**	.010
Best Desc Hours Worked Current Job	-.034*	.023
Family Resp Interfere W/Work	-.075	.000
Oft Cut Hrs./Refuse OT because of Family	-.047**	.002
Fam Time Oft Decrease because of Work	-.048**	.002
Own/Mortgage Current Residence	.053**	.000
Rec Welfare/Pub Assist	.054**	.000

In the birth control section, the variables 'past 12 months use condoms", "past 12 months oral birth control" and "past 12 months withdrawal method" are negatively correlated, while the other variables are positively correlated. We can conclude that not all birth control is effective in terms of reliability. Based on Gonie et al. (Gonie *et al.*, 2018), the contraceptive methods including injectable, implants, and pills are used for family planning to achieve the desired number of children and the spacing and timing of their births, and this reduces the number of pregnancy. However, this study has shown that not all contraceptive methods are effective in the number of pregnancy. On the other hand, according to Ohaja et al. (Ohaja, Murphy-Lawless, and Dunlea, 2019), the study results showed that, despite the transition to more scientifically oriented, practitioners in southern Nigeria still rely on God as their ultimate giver of care. This means that religion will have an impact on pregnancy. This is true with statistic support from Table 3 section Religion in which religion will positively affect pregnancy number. Lastly, in the section on Career section, the Pearson correlation of variables "no jobs between 2001 / year','year pay job started" ,"best desc hrs worked in the office','family resp interfere w/work", "oft cut hrs / refuse to work b / c fam', 'fam time of all decrease b / c work' are negatively correlated while variable 'own / mortgage current residence' and "rec welfare/pu b assist" are positively correlated. However, according to Rangel et al. (Rangel *et al.*, 2021), most female surgeons wait until training ends before starting a family as they are too busy in their career. And results show that those who work more than 12 hours per week during pregnancy will increase the risk of having pregnancy problems.

There is an interesting finding on adult bad habits and pregnancy number. With the help of Pearson's correlation, it was found that the pregnancy numbers showed a negative correlation with all the variables related to bad habits. The negative correlation could be because some of the adults cannot control their daily dosage or limit their bad habits which become an addiction when prolonged for a long period of time. After a prolonged time of addiction, adults will experience adverse health effects. This effect is believed to have a significant influence on the number of pregnancy in an adult. Further analysis is carried out to prove that an adult's health condition is related to bad habits (Table 4).

Table 4. Correlation between Bad Habits and Health Condition

		What do you think of your weight?	Best describe current/health insurance	Ever being diagnosed with diabetes?	Use glasses or contacts
Num days smoked cigarette last 30 days	Pearson Corr Sig	-.063** .000	-.026 .086	.004 .796	.040** .009
Num days had drink past 30 days	Pearson Corr Sig	-.080** .000	-.122** .000	-.069** .000	.048** .002
Time use marijuana most how much	Pearson Corr Sig	-.053** .000	-.028 .068	-.048** .001	.030** .045

5 CONCLUSIONS

This study is participated by respondents from the United States who aged 24 to 32. Their responses are collected to analyze the factors of self-status that will positively or negatively affect the number of pregnancy. Although this study includes factors which are similar to previous studies, it provides a more detailed breakdown of factors to enhance the understanding between the relationship of independent variables and dependent variables. For example, bad habits are one of the factors that influence the number of adults with pregnancy, and can be divided into smoking, drinking, and taking drugs. Most researchers may only include a specific type of bad habits in their study. With this detailed breakdown, the study will be able to show a clearer picture of the influence of this factor on the amount of pregnancy. This study includes six factors in total, and most of them are negatively correlated with the number of pregnancies, except for the religion factor. This research bridges the gap by collecting responses from people from different places in the United States. However, this study is only limited to respondents in the US; hence, the research results may be biased and less accurate for people from other countries.

Due to the limited time frame allocated, there are still many factors that are not included in this study. It is recommended to allocate an appropriate time frame to enhance research with variables from multiple aspects using machine learning algorithms (Chaw et al., 2024). Researchers who would like to carry out further studies on this topic may add other factors like parenting, family status, mental health, etc., to generate higher quality and more comprehensive research. In addition, they may expand the area for data collection, including people from different continents such as Asia, Africa, Europe which includes people from different ethnicities to compose better, more accurate and reliable data for further research and analysis.

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