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Common Mental Disorders among antenatal and postnatal mothers who received public health care, in Georgetown, Guyana

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Thesis presented to the University of de São Paulo at Ribeirão Preto College of Nursing to obtain the title of Doctor of Science, Program Public Health Nursing

Line of Research: Women's Health Care in the Life Cycle

Supervisor: Profa. Dra. Flávia Azevedo Gomes-Sponholz

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DEDICATION

The bountiful memories of childhood mercies, love, and dedication seen in the fragile grasp of my indigenous mom have forever shaped my perseverance beyond all borders of limitations. There was no place or time to accommodate failure to procrastinate. The pursuit of knowledge was a journey beyond all limitations, hardships, and inadequacies. My mom nourished her ten offspring to rank the acquisition of learning at life's zenith

This humble dedication stands in awe of Mom's steadfast commitment to availing meaningful learning experiences to all age groups in the rural community of West Watooka. I find my dedication to this project fulfillment of my accomplishment to engender knowledge through empowering those in need at the grassroots.

To Helena Amsterdam AKA Myrthleen Rogers-Jones and Helena O'Neal, this paper is a testament to your standards in extending your service to people at the grassroots level

Thank you, Mom!

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I shall not be blessed if I fail to express infinite gratitude to ***Dra. Flávia Gomes-Sponholz*** *guided me all the way. Her profound patience, delicate guidance, and expertise fueled my desire to embrace and complete this venture..*

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In an atmosphere of gratitude, I wish to thank all hose who in any way supported me during this venture.

Above all, I give God all the glory for giving me hope in the darkest moments of this journey!

ABSTRACT

RAZACK, W.A. **Common Mental Disorders among antenatal and postnatal mothers who received public health care, in Georgetown, Guyana.** 2022. 87p. Thesis (Doctorate) – Nursing School of Ribeirão Preto, University of São Paulo, Ribeirão Preto.

This study aimed to investigate the occurrence and factors associated with common mental disorders in pregnant and postpartum women treated in Georgetown, Guyana. This is an observational study, with a cross-sectional design, carried out with 200 women aged between 16 and 51 years and living in the city of Georgetown, Guyana, between February and September 2020. Data collection was carried out in the residences, in the places workplaces, clinics, and hospitals, using the SRQ-20, State Anxiety Inventory, and a structured questionnaire for sociodemographic, behavioral, and obstetric characteristics. Data analysis was performed using the Statistical Package for Social Sciences (SPSS), version 23.0. Frequencies and cross tabulation were done to determine patterns and central trends to see variability. Chi-square test and ANOVA were performed. The average age of participants was 26.6 years, with the youngest being 16 years old and the oldest 51 years old. High school was the most popular (24%) in this group. For overall marital status, 77% of mothers were in a union with their partners, while 79% of these mothers were employed. Cross-tabulation shows that the 21- to 25-year-old age group (43.5%) state anxiety scores ranged from 41 to 50. For all martial status categories (in union) 43% achieved anxiety scores above 41-50%. Chi-square indicated significant difference in spousal acceptance of pregnancy and anxiety p≤ 0.009, ANOVA ,p=0.001 and 0.099 for spousal acceptance of pregnancy and spousal support respectively. Mothers' cognitive capital (respect for children), ANOVA test shows a significant difference p= 0.19. The most prevalent somatic symptom was headache (51%) and for reduced energy 51.5% expressed easy tiredness, 55% expressed anxiety and depressive thoughts, while 36 (18%) had suicidal thoughts. More than half (52.5%) of these mothers are nervous and tense. It is evident that social and cognitive capital has a warning about mental disorders common in mothers during their maternity cycles.

Keywords: Mental Health. Depressive Disorder. Anxiety. Women's Health. Reproductive Health. Nursing. Public Health

RESUMO

RAZACK, W.A**. Transtornos mentais comuns entre gestantes e puérperas que receberam cuidados de saúde pública, em Georgetown, Guiana**. 2022. 87p. Tese (Doutorado) – Escola de Enfermagem de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto.

Este estudo teve como objetivo investigar a ocorrência e os fatores associados a transtornos mentais comuns em gestantes e puérperas atendidas em Georgetown, Guiana. Trata-se de um estudo observacional, com delineamento transversal, realizado com 200 mulheres com idade entre 16 e 51 anos e residentes no município de Georgetown, Guiana, entre fevereiro e setembro de 2020. A coleta de dados foi realizada nas residências, nos locais de trabalho, clínicas e hospitais, utilizando o SRQ-20, Inventário do Estado de Ansiedade e um questionário estruturado para características sociodemográficas, comportamentais e obstétricas. A análise dos dados foi feita através do Pacote Estatístico para Ciências Sociais (SPSS), versão 23.0. As frequências e a tabulação cruzada foram feitas para determinar padrões e tendências centrais para ver a variabilidade. Foram realizados teste qui-quadrado e ANOVA. A idade média das participantes foi 26,6 anos, sendo a mais nova 16 anos e a mais velha 51 anos. O ensino médio foi o mais popular (24%) neste grupo. Para o estado civil geral, 77% das mães estavam em união com seus parceiros, enquanto 79% dessas mães estavam empregadas. A tabulação cruzada mostra que a faixa etária de 21 a 25 anos (43,5%) os escores de estado de ansiedade variaram de 41 a 50. Para todas as categorias de estado marcial (em união) 43% atingiram pontuações de ansiedade acima de 41-50%. Qui-quadrado indicou diferença significativa na aceitação da gravidez pelo cônjuge e ansiedade p≤ 0,009, ANOVA ,p=0,001 e 0,099 para aceitação da gravidez pelo cônjuge e apoio do cônjuge respectivamente. Capital cognitivo das mães (respeito dos filhos), teste ANOVA mostra um diferença significativa p= 0,19. O sintoma somático mais prevalente foi cefaléia (51%) e para energia reduzida 51,5% expressaram cansaço fácil, 55% expressaram ansiedade e pensamentos depressivos, enquanto 36 (18%) tinham pensamentos suicidas. Mais da metade (52,5%) dessas mães estão nervosas e tensas. É evidente que o capital social e cognitivo tem um alerta sobre transtornos mentais comuns em mães durante seus ciclos de maternidade.

Palavras-chave: Saúde Mental. Desordem depressiva. Ansiedade. Saúde da Mulher. Saúde reprodutiva. Saúde pública

RESUMEN

RAZACK, W.A. **Transtornos mentales comunes entre gestantes y puérperas que reciben cuidados de salud pública, en Georgetown, Guayana**. 2022. 87f. Tesis (Doctorado) – Escuela de Enfermería de Ribeirão Preto, Universidad de São Paulo, Ribeirão Preto.

Este estudio tuvo como objetivo investigar la ocurrencia y los factores asociados con los trastornos mentales comunes en mujeres embarazadas y posparto tratadas en Georgetown, Guyana. Se trata de un estudio observacional, con diseño transversal, realizado con 200 mujeres con edades entre 16 y 51 años y residentes en la ciudad de Georgetown, Guyana, entre febrero y septiembre de 2020. La recolección de datos se realizó en las residencias, en los lugares de trabajo, clínicas y hospitales, utilizando el SRQ-20, Inventario de Ansiedad Estado, y un cuestionario estructurado para características sociodemográficas, conductuales y obstétricas. El análisis de los datos se realizó mediante el Paquete Estadístico para Ciencias Sociales (SPSS), versión 23.0. Se realizaron frecuencias y tabulación cruzada para determinar patrones y tendencias centrales para ver la variabilidad. Se realizó la prueba de Chi-cuadrado y ANOVA. La edad promedio de los participantes fue de 26,6 años, siendo el más joven 16 años y el mayor 51 años. La escuela secundaria fue la más popular (24%) en este grupo. Para el estado civil general, el 77% de las madres estaban en unión con su pareja, mientras que el 79% de estas madres estaban empleadas. La tabulación cruzada muestra que el grupo de edad de 21 a 25 años (43,5 %) tuvo puntajes de ansiedad de estado que oscilaron entre 41 y 50. Para todas las categorías de estado marcial (en unión), el 43 % logró puntajes de ansiedad superiores al 41-50 %. Chi-cuadrado indicó una diferencia significativa en la aceptación conyugal del embarazo y la ansiedad p≤ 0,009, ANOVA, p=0,001 y 0,099 para la aceptación conyugal del embarazo y el apoyo conyugal, respectivamente. Capital cognitivo de las madres (respeto por los hijos), la prueba ANOVA muestra una diferencia significativa p= 0,19. El síntoma somático más prevalente fue la cefalea (51%) y para la energía reducida el 51,5% expresó cansancio fácil, el 55% expresó ansiedad y pensamientos depresivos, mientras que 36 (18%) tenían pensamientos suicidas. Más de la mitad (52,5%) de estas madres están nerviosas y tensas. Es evidente que el capital social y cognitivo tiene una alerta sobre los trastornos mentales comunes en las madres durante sus ciclos de maternidad.

Palabras clave: Salud Mental. Desorden depresivo. Ansiedad. La salud de la mujer. Salud reproductiva. Salud pública

ansiedad-trazo y las con menor edad, mayor escore de los síntomas de ansiedad- trazo. Aquellas con mala convivencia con el compañero y mayor número de hijos presentaron mayor escore de los síntomas de depresión. Se resalta la importancia de la transformación de la práctica del trabajo en salud, incorporando acciones efectivas relacionadas a la salud mental y reproductiva de las mujeres rurales.

Descriptores: Salud Mental. Trastorno Depresivo. Ansiedad. Salud de la Mujer. Salud Reproductiva. Población Rural. Enfermería. Salud Pública.

TABLES LIST

LISTA DE ABREVIATURAS

AAS	Antepartum Anxiety Symptoms
ADS	Antepartum Depression Symptoms
CARMEN	Collaborative Action for Risk Factor Reduction and Effective Management of NCD
CARPHA	Caribbean Regional Public Health Authority
CBO	Community-based Organizations
CCHIII	Caribbean Cooperation in Health III
CEHI	Caribbean Environmental Health Institution
CFNI	Caribbean Food and Nutrition Institute
CMD	Common Mental Disorders
CPMD	Common Perinatal Mental Disorders
CRDTL	Caribbean Regional Drug Testing Laboratory
CWD	Caribbean Wellness Day
DALY	Disability Adjusted Life Years
DBI	Becks Depression Inventory
EERP-USP	College of Nursing at Ribeirão Preto University of Sao Paulo
FBO	Faith-based Organizations
FCTC	Framework Convention on Tobacco Control
GDP	Gross Domestic Product
GPHC	Georgetown Public Hospital Corporation
IDF	International Diabetes Federation
IIWCC	International Inter-professional Wound Care
USP	Universidade de Sao Paulo

SUMÁRIO

1 INTRODUCTION

1.1 Women and maternal health in Georgetown, Guyana

Globally, Guyana is ranked 164th in terms of population, and 157th in terms of population growth rate. The crude birth rate is 19.21 per 1000 people. Guyana is ranked 208th in terms of urbanization and the sex ratio as of 2021 was 101.34 males per 100 females. The percentage of the female population is 49.6 comparedare to 50.33% male population. Guyana is at 150th position out of 201 countries/territories in terms female-to-male ratio (UN, 2021).

Evidence suggests that women account for 50.2 % of Guyana's 746,955 population, for all age groups. Nevertheless, there are 547, 929 persons in the above fourteen years old category, 283, 955 females and 263,974 males (Statistical Bureau,2018, MOH,2013). The majority of these persons live in Region 4, Guyana, which houses 83,646 women of all ages with a majority of 14,274 in the 20-24 age range (Statistical Bureau, 2018).

The Guyanese woman has a life expectancy of 71.8 years. Life expectancy for Guyanese women about the age at birth is 69 years, while at 45 years the expectancy is 74.2 years. Their life expectancy is not an indicator of their quality of life. The modal age group (24-26) has 14,273 women (UN, Demographics of Guyana - UN World Population Prospects 2019, 2021); (UNICEF, 2017).

Guyana's gross reproductive rate (GRR) is 0.4950, while the general fertility rate (GER) is 3.0 and the total fertility rate (TFR) is 9.6 per woman. These facts suggest that Guyana has a moderate fertility rate (Bureau of statistics 2012). The mean age of the Guyanese woman at first birth is 20.8 years. This varies per region between 26.8 and 27.3.

Guyana's healthcare system has decentralized health services offered in its administrative regions. Rural, remote or interior classifications are given to regions 1, 7, 8 and, while regions 2, 3, 4, 5, and 6 are said to be coastal. Maternal and child health services are free. Region 10 lies just off the coastal region but shares a combination of urban, rural, and remote characteristics (MOH, 2015). Health services are offered in a five (5) level system (outpost, health centre, district hospital, regional hospital and the specialist referral hospital, to achieve the ALMA –Ata's Primary Health Care (PHC), the principle of accessibility of essential services within a five-mile radius of the population. Region four (which houses Georgetown, the capital city) has thirty-six public health facilities. Twenty- four of these facilities are in Georgetown (MOH, 2015).

Unlike other conditions, mental health offerings are largely primitive and lack regional adequacy. According to the National Mental Health Action Plan 2015-2020, the mental health Ordinance is outdated, its' services are largely centralized, protocols, guidelines, and standards for

psychotropic drugs and care are absent and mental health employees are not only few but lack specialty, training and experience. Nevertheless, the current National Mental Health Action Plan 2015-2020 sets out to improve all dimensions of mental health through board-based consultation, which includes local literary sources. Such movements resonate with the Pan American (2014), adoption of the Plan of Action on Mental Health, where its fourth strategic line accommodated scientific evidence and research on mental health (Etienne, 2018). Towards this end, that author reiterates the need for LMICs to develop culturally appropriate strategies for meeting mental health needs.

There is conclusive evidence that pinpoints the status of women's mental health from a global, regional and national standpoint. Hence, the fact was established that diverse mental conditions affect women of different age groups. In Guyana, there is no difficulty accessing scientific evidence about postpartum depression in women. Nevertheless, direct studies which provide evidence of the extent to which CMD affect mothers, during the perinatal cycles cannot be sourced readily. Therefore, an investigation of this nature may be a valuable asset to the body of knowledge surrounding this phenomenon).

1.2 Common Mental Disorders

According to the World Health Organization (WHO), one in four people will develop some mental disorder during life (WHO, 2001). Characterized by depressive symptoms, insomnia, fatigue, irritability, forgetfulness and difficult to concentrate and a set of nonspecific somatic complaints, common mental disorders (CMD) is higher in women than in men (GOLDBERG, HUXLEY, 1992; STEEL et al. 2014; GRAPIGLIA et al. 2021). These manifestations range from mild to moderate anxiety to post-traumatic stress disorder. These are conceptualized to include insomnia, fatigue, irritability, depresive moods, difficulty concentrating and somatic symptoms (Ali, Ryan, & Da Silva, 2016).

Prevalence of CMD

There are indications that CMD disorders among mothers in Guyana are noticeable, but documentation regarding this phenomenon may be either inadequate or obscure. Questions relating the diagnosis of other CMD affecting antenatal and postnatal mothers in Guyana remain unanswered by the health care providers. The local perception of staff indicates increases in the

incidence of PPD p=069. Multiple regression (Tukey) substantiates that the views of midwives (mean of 3.17) differed significantly from that of doctors, (mean 2.548); p0=.04, regarding the increases in the incidence of PPD. (Rogers, Razack & Persaud, 2018). Inherent in the National Mental Health and action plan 2015-2020 there is the notion that mental health services are inadequate, centrally locate and inaccessible to the vast majority of individuals. (MOH,2015).

Further, findings confirm that 36.6% of mothers experienced CMD. The most common symptoms are headaches (47.2%) and easily tired (49.9%). (Barsisa, Derajew, Haile, Mesafint, & Shumet, 2021) (Alipour, Zheirabadi, Kazemi, & Fooladi, 2018) Although studies suggest a 14.9% prevalence in adults more than 1:10 women (14%) report symptoms of antenatal depression (Hunduma, Girma, Digaffe, Weldegebreal, & Tola, 2017).

Anxiety

Anxiety is seen as a leading associate of disability globally. Notably, its greatest burden is exhorted on women during their reproductive age. It appears that a woman's susceptibility to anxiety increase during the perinatal period (Nguyen, Haroz, Mendelson, & Bass, 2016).There is evidence which supports the notion that the prevalence of anxiety in prenatal mothers cannot be pooled if the instruments used differ across studies, comparatively (Brown, MacNaughton, & Sprague, 2020). Findings also suggest that women in LMIC are at greater risk for perinatal anxiety (Nielsen-Scott, Fellmeth, Opondo, & Alderdice, Prevalence of perinatal anxiety in low- and middle-income countries: A systematic review and meta-analysis, 2022). Hatch et al (2016), concurs with these findings.

Depression

Depression exhorts the greatest global burden for disability in both low and high resource settings. It carries a weighted mean prevalence of 19.8 in the postnatal period for women in LIMCs. (Nguyen, Haroz, Mendelson, & Bass, 2016). Evidence confirms that pooled prevalence for depression was 31.4% as compared with 17.3% pooled prevalence of major depressive disorders. (Fellmeth, 2016). It appears that depression in the prenatal period reduces the neonate physical activity, vagal tone, auditory and visual orientation. Resultantly, the neonate born to a depressed mother may manifest increased irritability and poor interaction (Fisher, 2012). Evidence suggest that antenatal and postnatal depression is high in low-income settings

1.3 Rationale for research

There are indications that CMD among mothers in Guyana are noticeable but documentation regarding this phenomenon may be either inadequate or obscure. Questions relating the diagnosis of other CMD affecting antenatal and postnatal mothers in Guyana remain unanswered by the health care providers.

Evidence suggests that antenatal and postnatal mothers in Guyana suffer from mental disorders. Nevertheless, there is no scientific evidence to pinpoint the sociodemographic factors surrounding the common mental disorders in these mothers who receive antenatal and postnatal services in Georgetown.

Based on the above, we present the two following research questions: "*what are the most common mental disorders among women receiving public pregnancy and postpartum care in Georgetown?"; "What are the main characteristics of these women?"*

1.4 Literature review

The search for the body of scientific knowledge surrounding the prevalence of CMD in women who reside in Georgetown, Guyana during the perinatal period utilized resources from PubMed. EMBASE, Psycho Info, HINARI and EBSCO. Evidence in this review comprises and interplay with demographic, socio-economic and obstetrical attributes of women. Socio-economic factors include the total of circumstances associated with poverty, economic hardships, young age, ethnic minorities, marital status, education, employment and income and adverse events (Nguyen, Haroz, Mendelson, & Bass, 2016).

Individual social capital comprises demographics (age, marital status, children, academic history, employment and income) and substance use, alcohol, exercise and leisure (Morozumi, 2020; Barsisa, Derajew, Haile, Mesafint, & Shumet, 2021).

Age

The studies suggest that CMD are most prevalent in younger mothers, who experience difficulty with intimate partners and ethnic minorities (Estrin, et al., 2019), noting that major depressive disorder (MDD) in the US that often goes underdiagnosed and untreated (Shakeel, et al., 2015) Evidence confirms that antenatal depression is more common in the 20-39 age group (Duku, Avano, Bedass 2019). This age group is 2.7 times more likely to experience

mental disorders than the women below 20 years old (Kassada, Missado et al., 2015; Brown, MacNaughton, & Sprague, 2020) found that that depression was more prevalent among pregnant women, between the ages of 19-29 years who were married. In contrast, findings also suggest that for women in this age group, the risk of depression is reduced (Ayele, et al., 2016). Evidence also confirmed a higher prevalence of postpartum depression in older mothers, over 40 age group in their early postpartum period (Estrin G. , et al., 2019). A study confirmed that 21% of the younger mothers (below 30) experienced antepartum depression (Benedict, 2014). Malhotra and Shaw (2017) alluded to the fact that depression occurs more frequently in the last trimester and many authors have examined the phenomena of age, duration of pregnancy and the prevalence of CMD by exploring other possible associations. Other findings suggest that a moral value surrounding the age of the mother may be a crucial element which induces stress-related mental disturbances in the aged pregnant mother, whose ethnic group forbids, criticizes and chastises her (Wishart, et al., 2021). Albdu (2017), concurs with this finding and posits certain women ethnic minorities (coloured) and their offspring are more vulnerable aged-based health care stereotypes which marginalize their opportunities (Albdu 2017; Chang, 2016). Such morals create a distasteful paradigm which promote intolerance, discrimination and disrespect for older women who becomes pregnant in certain ethnic groups.

Marital status

Marriage is conceptualized beyond the union and ownership to accommodate interplay of power and family dynamics. It adds prestige to women of reproductive age, by determining the persons who influence the circumstances in their lives, sharing obligations, responsibility and rights. The paradigm regarding marriage may vary across legal and social domains. There is evidence which suggests that the marriage (24,907), and common (16,010) law unions are among the most common forms of unions in Georgetown (Bureau of Statistics 2018). This evidence is suggestive of the possible expected family patterns.

This can be reviewed according to the type of union and its effect on her mental health. Jacob (2019) cites a higher prevalence of CMD among people living alone and increase risk of anxiety and depression. Women who never married, separated, divorced and widowed are significantly more likely to experience MMD than those who are married and cohabiting, (Gausman, Austin, Subramanian, & Langer, 2020) express more depressive symptoms and further statistically higher multivariate analysis for divorced and widowed mothers were 3.46 times higher than married women (Barsisa, Derajew, Haile, Mesafint, & Shumet, 2021). These findings contrast with evidence that married couples appear to have more psychological distress (Reneflot et al 2012; Gourounti,

2014). He posits that cohabiting has fewer benefits for the psychological wellbeing than marriage yet the latter is a protective factor, noting less commitment as a protective factor against anxiety. Interestingly, there is association in cohabiting with more intimate partner violence and alcohol abuse (Melby, 2022). Evidence also suggest that women heading homes (except in cases of wealth) are prone to MMD. In Guyana, 50% of females are in charge of households of which falls in the 25 to 44 age group and 37.5% in the 45 to 64 age group. MOH (2018) notes that 547,928 Guyanese are over 15 years old (UN, Demographics of Guyana UN World Population Prospects 2019, 2018).

This fact raises questions regarding the existence of relationships malfunction and resultant effects on the mother's mental health. Malaray (2015) suggests that marital dissatisfaction is a most powerful predictor or emotional distress in pregnancy and stressful or torturing relationships by a spouse can exacerbate a woman's mental disorders during pregnancy. Higher partner satisfaction not only lowers anxiety but also protects the pregnant mother's psychological status.

Education

Malhotra et al (2017), assert that gender determines the deferential power and processes afforded to men or women over the socioeconomic determinants of health, mental health, their social position, status, treatment in the society and determines their susceptibility and exposure to mental health risk. Therefore, it may be inferred that paradigms relating to the exploration or mental health risk are based on gender since it is a crucial determinant of mental health and mental illness. Its effects on mental health are exhorted singularly or in collaboration with other variables (period of the pregnancy cycle or adverse life events during).

Interestingly, (Hermans, 2018) alludes to the need for positioning and democracy in the self to support mothers who engage in self-blaming and to compensate the lack of physical support the risk of psychological morbidity for pregnant mothers. (Malhotra et al, 2017) Another gender-based disadvantage is observed in the gender fashion approach to educational advancement for girls in some societies and the discriminatory paradigms regarding their equitable incorporation into the economic arena. The former may be accompanied by negative movement in the area of education of the young mothers. A dearth of studies reviewed by Lund et al (2010) indicated links between less education and CMD, Turkey, ($p=0.001$), also association between higher education and less CMD.

Numerous studies suggest that higher education is a protective factor against CMD. On the contrary, higher education in urban areas is a predictor of increased mental stress (Dzator,

Dzator, & Ahiadeke, 2016). Therefore, education appears to operate as a risk or protective factor and does not operate independently. Maybe the class of the society and its economic standing may exhort influences, which may place education as risk or protection as was examined by the studies which follow. Brena et al (2016) suggest that CMD are higher among women in lower- and middle-income countries.

Employment

Locally, there are striking differences in the paradigms surrounding gender status and employment. More men (7.5%) are perceived to be job owners as compared with 3.5% of women. Although 48% of mothers engage some form of informal occupation the employment rate is 5% as compared with 9.5% for men. (Bureau of Statistics, 2012). Such disparity influence Guyana's Human Development Index, (HDI) ranking 123/187 for gender inequality. (Ramjatan, 2017).

Although the employed population comprises 41.5%, it has a higher proportion of men (61.7%) as compared with 33.1% for women. Unemployment rate for men in Guyana is 36.46% and 62.9% for women. Studies of employment and CMD comprise unemployment and under employment and categories of employment (blue collar vs white collar) and employees.

Income and financial coverage

There is compelling evidence that CMD are linked to low income, (Brena et al 2016), even though, the impact of income is enhanced by other factors such as support. Evidence also suggest that recent decrease in income, independently, influences CMD, positively associates financial stress with CMD, and relates negative financial life events to major depressive episodes (Lund, et al., 2010). Hence, the urge is imminent to review the family since it influences both variables.

Substance use

The prevalence of substance abuse among pregnant and post-natal mothers varies. (Barsisa, Derajew, Haile, Mesafint, & Shumet, 2021) found that 54(6.9%) mothers in his study chewed Khat leaves, while (Hunduma, Girma, Digaffe, Weldegebreal, & Tola, 2017) sited almost 48.2 % of respondents in his study were chewing Khat and 36% using cigarettes. Studies have shown that most (97%) of antenatal high- risk mothers in Linden (Guyana) do not smoke, and 3.7% use marijuana (Razack,2018) This social pattern bears some similarities to the findings of studies conducted in Brazil which revealed that 73% of women did not smoke. (Parred, Goulart, Da Silva and Gomez- Sponholz, 2017).

Alcohol use

Evidence suggest that alcohol is used by pregnant and post-natal mothers, its frequencies vary among populations. Findings of one study suggest that 30.8 % of the mothers consumed alcohol (Barsisa, Derajew, Haile, Mesafint, & Shumet, 2021). Another study sited 10.5% (Hunduma, Girma, Digaffe, Weldegebreal, & Tola, 2017). A local study posits that 25% of these mothers drink alcohol, while 54% has no adequate recreation, (Razack, 2018). Evidence in the Nation Mental Health Action Plan 2015-2020 cites that 43 % of Guyana's population partake of alcohol, of which 28% are females which coincides with the findings of Razack, (2018).

Obstetrical and Gynecology Maternity Cycle (antenatal/postnatal)

Variations in the prevalence of CMD are also evident in the different phases of the pregnancy cycle. WHO (2008) notes a 10%-42% prevalence among pregnant women and 14%-50% in puerperal women. This finding concurred with previous evidence, (Maselk, et al., 2020), which suggested major depressive disorders affected 17%; 95% CI; p=0.00 expressed of mothers. Another study posits that approximately 1:6 antenatal mothers and 1:5 postnatal mothers experience CMD, citing that four in every five (81.3%) women scored positive for CMD. (Baretto 2018). To some extent, evidence suggest that 39.4% of pregnant mother manifest one or more psychological symptoms, such as fatigue, irritability, anxiety, and problems with sleep (George, 2018). There is some indication that anxiety increases in the prenatal period. Malhotra and Shaw (2017) alluded to the fact that depression occurs more frequently in the last trimester

Social Capital

It appears that, social capital buffers the impact of adversity of mental distress on mothers during the post-partum period (Hunduma, Girma, Digaffe, Weldegebreal, & Tola, 2017). Although social capital promotes the mental health of pregnant mothers (Morozumi, 2020) its quality may range between poor to moderate (Barsisa, Derajew, Haile, Mesafint, & Shumet, 2021). The quality of social capital is affected by situations that induce stressful relationships. Evidence has shown that women who are deprived of support and love and belonging from older relatives/older female friends, instructions on coping mechanisms, inadequate family and cultural resources often express symptoms of uncertainty, maternal incompetence and emotional distress, (Goguikian & Ratcliff, 2018). According to (Getinet, T, Boru, Shumet, & Worku, 2018), lack of social support and sex preference have independent associations with antepartum depression symptoms (ADS) and antepartum anxiety symptoms (AAS).

Social support from relatives and family

Family relationship stressors comprise a group of circumstances which include family conflict, low social support and many children, (Santos, Carvalho, & Araujo, 2016) (Nguyen, Haroz, Mendelson, & Bass, 2016) (Dzator, Dzator, & Ahiadeke, 2016), social inequalities, social stress, income, social status, gender-based violence and support (Alipour, Zheirabadi, Kazemi, & Fooladi, 2018) (Estrin C. , et al., 2019) (Davies, Schneider, & Lund, 2016). It appears that there are certain patterns of family conflict which resonate higher prevalence of CMD. Credence to this finding lies in current evidence which links CMD to separation of the pregnant woman from her mother and friends (Ratcliffe, Sharapova, & Saurdi, 2015), and the consequential loss of their support.

Spousal support in pregnancy

Relationships were established between quality of family dynamics and the increased prevalence of CMD. Namely, circumstances that include unhappy relationships with husbands, alcoholic husband, rejection of paternity, critical and quarrelsome patterns of communication (Fellmeth, 2016). Evidence suggest that psychological and physical Intimate Partner Violence (IPV) cause PPD and a high prevalence of postpartum depression in mothers who seek health care for IPV. (Dokkedahe, et al., 2019)

Cognitive social capital (CSC)

Cognitive social capital defines the mother's perception on her community, considering her participation in its affairs. (Gausman, Austin, Subramanian, & Langer, 2020). Neighborhood social capital is linked to capacity of network available to the mother and social cohesion. High neighborhood social capital is associated with older age, being married, having children, absence of disease or obstetrical complication, higher education and higher household income. Nevertheless, cognitive social capital to negligible effects on the physical health during pregnancy (Morozumi, 2020).

Ethnicity

This has profound meaning in pregnancy. Ethnicity goes beyond the mother conceptualization of the pregnancy to determine other crucial protective elements such as preparations for motherhood to include links to social groups, contextual cues, resources, and the cohesive family linkages, (Ratcliffe, Sharapova, & Saurdi, 2015). Culture manipulates the elements which affect a woman's adaptation to pregnancy. Evidence which suggests that non-white mothers have lower use of Mental Health Services (MHS), and lower social standing (Abdou, et al., 2010).

(Chang, Douglas, Scanlan, & Still, 2016). These factors are aligned to prenatal stress which hampers development in children, after exhorting negative pressures on pregnant mothers, especially black women. Although research has shown that CMD are prevalent among Asian women, it was lower in some ethnic groups (Japanese) but higher in women from India and China (Usuda, et al., 2016) who reasoned that unless CMD hampers the daily life of Japanese women they are less likely to report their symptoms. Further evidence appears to link ethnicity to migrant patterns in pregnant mothers. Comparatively the prevalence of depression is higher among self-reporting first generation pregnant women than aboriginal women by (Nelson et al, 2018), but aboriginal women report higher prevalence of PPD than their non-aboriginal counterparts, (2018). This evidence was explored further along psychosocial domains. (Mohebbi, et al., 2019).

Other risk for pregnant women of minority ethnic groups include inability of family members to answer their questions, which exposes them to predators, who are who guarantee privacy and support, (Chang, Fan, Zhang, Tang, & & Jia, 2022). The mother's disposition towards the handling of matters, relating to her pregnancy, appears to emanate from the ethnic authority ascribed to the female gender. Ethnicity also appears to exacerbate the risk of CMD among pregnant women subjected to gender-based pressures.

Nevertheless, applying this paradigm of ethnicity to pregnant mothers in Georgetown is not a simple task since, the urban culture coupled with mixed ethnicities complicate the disposition of mothers towards pregnancy. Irrespictive of religious convictions ,it is prudent to acknowledge the pressures of male sex preference seem to be dominant among many ethnic groups, (Joshi, Shrestha, & Shestha, 2019) (Coll, et al., 2017) (Rouhi, Sterling, Ayton, & Crisp, 2019) (Premji, et al., 2020).

Evidence confirmed that 16% of mothers and 34% of fathers desire to have male babies. However, no association was seen with this preference and antepartum depression, which they alluded to the mother-in-law's dissatisfaction with the baby's gender ($p<0.01$). (Cankorur, Duman, Taylor, & Stewart, 2017), Nevertheless, there are also findings which confirmed that maternal perception of male child preference was associated with antenatal depression, while husbands' male child preference exposed women to antenatal depression. Evidently, the degree of male sex preference is more potent in some countries (Nishil et al 2019; Iran, Rouhi, 2017); this influences lack of household male support, thereby increasing the vulnerability of pregnant women (Joshil et al 2019). A more practical measure of the mother's cultural impact and her choices in pregnancy is her religious standing, since its features are more stable in a variety of settings. Religion delineates the role of partners in pregnancy, the values which determine her responses to health care and her conduct during the post- partum period.

Religiosity

Other protective factors for the pregnant mother may result from the cultural ideologies regarding spirituality (religion) in which she operates and is resultant spiritual religious coping (SRC) benefits to her mental health. (Mokhlaryan, Yazdampanahi, Akbarzadeh, Amooee, & Zare, 2016) suggests that religious teachings can enhance relaxation in mothers. On the other hand, there is evidence which supports the notion that negative SRC of Brazilian women in high-risk pregnancies were associated with worsen mental health outcomes. Evidence to determine is religiosity prevents or promote CMD in pregnant mothers in Georgetown is not readily available.

Location (rural and urban)

The quality of life of the Guyanese woman depends largely on whether she resides on coastland or hinterland, rural or urban communities within administrative regions (UNICEF, 2017) or in a foreign country, abroad (UNICEF 2016). Evidence suggest that the geographic location in Guyana influences commodities and opportunities available to the Guyanese woman. (UNICEF, 2017)(UNICEF, 2017; UNICEF, 2016). Guyana is ranked 208th in terms of urbanization and the Sex Ratio as of 2021 (UN, 2021).

While privileges are offered to women on the coastline and urban centers, their counterparts in interior, hinterland (regions 1,3,7 and 9) rural settings are benefactors of disparities and inequities. Evidence suggests that CMD are more prevalent among pregnant women in rural areas, (Jha, 2021).Therefore risk or protection is linked to habitat of the pregnant woman. Notably, the tangible attributes of her location (where she lives) exhort distinct stressors, noting that the prevalence of CMD appear to be relative to the economic profile of states. (Baretto, 2018), cites that CMD prevalence in industrialized countries is higher in women (17%), when compared with men (12.5%). Apart from the national level, the prevalence in CMD may differ with the level of care. (Baretto (2018), cites that in Latin America and India, the prevalence of CMD is 50% in primary care settings and 20% in community settings. However, evidence suggest that the results may differ with the technique used to collect data. Significant differences were noted between the prevalence computed from self-reported symptoms (20%) and those derived from diatic assessments (16%). (Nguyen, Haroz, Mendelson, & Bass, 2016). Nevertheless, Yacob (2016) suggests that the prevalence of CMD is high.

Conclusion

Although myriad of investigations regarding CMD are conducted worldwide, the same

is not evident in Guyana. There are undisputed reports which support the notion that studies have been conducted on mental morbidities in Guyanese mothers during the pregnancy cycle. Nevertheless, the gamut of evidence reveals gaps in the body of knowledge required to align sociodemographic and obstetrical factors alongside the symptoms of CMD in mothers in all cycles of pregnancy. Hence, the social capital available to mothers have not been determined.

2. OBJECTIVES

2.1 General aim

- To investigate the occurrence and factors associated with common mental disorders in perinatal mothers receiving services in Georgetown.

2.2 Specific aims

- Characterize women regarding socioeconomic, economic, behavioral and reproductive variables.
- Identify the prevalence of two common mental disorders in women who use public antenatal and postnatal health services in Georgetown.
- Identify the depressive symptoms in women who use public antenatal and postnatal services in Georgetown
- Identify the scores of anxiety state and anxiety trait symptoms in women who use public health care services in Georgetown.
- .

3. METHOD

3.1 Design

This study has a mixed approach and an observational cross-sectional design, (Nasreem 2018; Lucchese 2017; Goyal 2016 & Johnson) to identify the prevalence of CMD in perinatal mothers who receive public health services in Georgetown.

3.2 Setting

This study was conducted in Georgetown, which houses the largest catchment of antenatal mothers in Guyana. Its inhabitants originate from the six ethnic groups. This city was selected because its population and cultural characteristics can provide a sample which is similar and representative of Guyanese mothers within their perinatal cycles. The nation referral Hospital (GPHC) is situated in Georgetown. This institution provides care for high-risk mothers who reside in Georgetown and the other administrative regions in Guyana. Hence, these mothers can provide information regarding issues affecting mothers across Guyana.

3.3 Population

The twelve (12) health centers in Georgetown comprise a population of 2,148 mothers (Ministry of Health Quarterly Report, 2019).

3.4 Inclusion and exclusion criteria

Inclusion Criteria

- Perinatal mothers who received health services in Georgetown, through the public facilities.
- They must be 16 to 50 years old and capable of identifying time, place and person.

Exclusion Criteria

- Those mothers diagnosed with psychiatric disorders prior to this pregnancy would be excluded from this study.

- Mothers whose babies were dead were not included in the study.

3.5 Sample technique and sample

The convenient sampling technique was utilized to acquire a sample of two hundred mothers. This technique was applicable to the timing of this investigation. Restrictions aligned to the pandemic were reviwed in this decision regrding the sample technique.

3.6 Recruitment

Demographic surveillance systems (quartly MCH reports) from the Ministry of Health was used to identify eligible pregnant women to be included in the study population. The timing recruitment (increases in Covid-19 infections) lead to alternative strategies for recruitment, in keeping with Covid-19 precautions. Pregnant mothers were accessed in their work environment, homes and through peer introductions. Clinic cards and or ultra sound were used to confirm the clinics they attended. Additionally, the clinic cards of the neonates /child were reviewed to validate the selection process.

3.7 Data collection

Following permission from all governing and ethical authorities, mothers who volunteer to participate in the study by means of complying with the passive consent requirements, were seated in a comfortable private area of the clinic, chosen area of the hospital or their homes where the questionnaire was administered in the presence of the principal investigator.

3.8 Variables

The independent variables are socio-demographic (age, ethnicity, marital status, religion, education), occupation, maternal income, value of individual income, financial standing and social activities, cognitive capital, social capital, group membership, leisure (behaviours like

physical exercise, drinking and smoking). The dependent variables include psychological stress, depression and anxiety.

3.9 Instruments and measures

This instrument comprises one hundred and thirty-five (135) questions in five (5) sections.

Namely, socio-demographic, social capital, cognitive capital, group membership, social support and employment.

The next section measures behaviors (physical activity, alcohol, substance use and leisure. It comprises 56 items in four scales. These are on a 0-4 scale (always often, seldom and never).

Psychosocial distress is measured using the SRQ-20 questionnaire which comprises 20 dichotomous items (yes and no). This is subdivided into anxiety and depression, somatic symptoms, reduced vital energy and depressive thoughts. This tool was developed by WHO for use in primary care settings to detect relevant psychic distress.

Anxiety is also measured using the 20 items Ideate –State. It is one of the most popular used inventory of anxiety assessment and consists of two scales. Each item on the two scales is assigned a score 1-4 and the total can range from a minimum of 20 to a maximum of 80. Their options are 1Not at all; 2 somewhat; 3- moderately so, and 4- very much so.

3.10. Analysis

Data was entered into statistical package SPSS version 23. Four sets of analysis were performed. Descriptive statistics (central tendencies) displayed patterns of distribution of data. . SRQ-20 scores were calculated, using cross tabulation (Nguyen, Haroz, Mendelson, & Bass, 2016). Means were compared alongside independent variables (ANOVA). Similar analyses were done on the Anxiety State Questionnaire.

4. RESULTS

Considering the proposed objectives and the information obtained, the results of the study are presented below.

The study consisted of 200 women.

4.1 Characterization of study participants

Sociodemographic and obstetrical characterization

In Table 1, we present the distribution of participants according to the place of care. A total of two hundred (200) mothers participated in this study 105 (52%), received services at the GPHC.

Table 1 - Distribution of participants, according to the place of care. Georgetown, Guyana, 2022.

Institution	**n**	**%**
GPHC	105	52,5
South Road	51	25,5
Festival city	14	7,0
Lodge	15	7,5
Campbaville	1	0,5
Agricola	9	4,5
Albouytown	4	2,0
Sophia	1	0,5
Total	200	100,0

In Table 2, we present the sociodemographic and obstetric characteristics of the 200 participants, according to the study variables.

Table 2 - Distribution of participants, according sociodemographic and obstetric characteristics. Georgetown, Guyana, 2022.

Variables	**n**	**%**
Age (years)		
16 - 20	33	16,8
21 - 25	69	35,0
26 - 30	42	21,3
31 - 35	36	18,3
36 - 40	13	6,6
41 - 45	2	1,0
46 - 50	2	1,0
Education		
Less than primary	3	1,7
Primary	5	2,8

Secondary	126	71,6
College	20	11,4
University	21	11,9
Employment (n=154)		
Not employed	60	30
Employed	79	39,5
Quit during pregnancy	15	7,5
Missing	46	23
Pregnancy cicle		
Antenatal	128	64,3
Postnatal	71	35,7
Missing	1	0,5
Parity		
Primípara	64	41,8
Multípara	89	58,2
Missing	47	23,5
Smoking habit (n=171)		
Yes	9	4,5
No	159	79,5
Quit during pregnancy	3	1,5
Use of alcohol		
Yes	29	14,5
No	130	65,0
Quit during pregnancy	18	10,2

The mean age is 26,6 years. The modal age range is 21-25.

According to education, 126(63%) of these mothers completed their secondary education; 41 (20.5%) have tertiary education. The mean education is 3.39, noting that 126 mothers completed secondary education. The mean employment is 1.74, (39%) of the mothers is employed.

The majority of mothers 128 (64%) in this study are in their antenatal cycles, 71 (53.5%) postnatal mothers who participated. 68 (34%) were in the third trimester.

Among the 153 mothers who stated their parity 89(44.5%) were multiparous. The majority of mothers in this study, 128 (64%), are antenatal, while 68 (34%) are in their third trimester. 29 (14%) of the mothers used alcohol during pregnancy, while nine (4.5%).

Considering employment, 154 (77%) mothers provided information on their employment, 79(39.5%) which were employed, 15(7.5) quitted working during this pregnancy.

About the use of alcohol, 14.5% of mothers use alcohol within their maternity cycles. Evidence suggest that 10.2 % quitted alcohol use during pregnancy. 159 (79%) of mothers did not smoke substances during pregnancy.

Capital characterization

Table 3 presents the capital characteristics of the 200 participants, according to the study variables.

Table 3 - Distribution of women, according to capital variables. Georgetown, Guyana, 2022.

Variables	n (%)	mean (SD)
Social capital (family support)		
Support from family members	146 (73,0)	3,67 (0,634)
Family acceptance of pregnancy	164 (82,0)	3,72 (0,691)
Spouse acceptance of pregnancy	173 (86,5)	3,74 (0,725)
Support of closest cicle of friends	108 (54,0)	3,24 (0,69)
Support of welfare state at the community	39 (19,5)	1,96 (1,19)
Support from specially-trained counsellors	37 (18,5)	2,09 (1,57)
Cognitive capital		
Mothers in my community respects me	121 (60,5)	3,46 (0,825)
Children in my community respects me	148 (74,0)	3,63 (0,758)
My community considers me to problem solving	60 (30)	2,76 (1,06)
My community permits my participation in activities	51 (25,5)	2,44 (1,76)
I am not afraid to volunteer my skills in the community	92 (46,0)	3,00 (1,38)
I am not afraid to avail myself for community leadership	67 (33,5)	2,96 (3,12)
Group Membership		
Religious group	77 (31,5)	2,67 (1,24)
PTA	42 (21,0)	1,91 (1,22)
Women's Group	21 (10,5)	1,58 (1,22)
NGO	17 (8,5)	1,42 (0,992)
Political group	10 (5,0)	1,26 (0,725)
Cooperative	17 (8,5%)	1,48 (0,25)

A grand majority of 145 (72%) of respondent relatives support them during crisis.There is a significant difference between the means of spouse assisting the mother to cope p≤ .001, support from closest friends in times of crisis p≤ .026. A grand majority of 145 (72%) of respondent relatives support them during crisis.

Significant differences exist between the means of mothers who are not afraid to volunteer p≤ .099 and mothers who feel respected by children in the community p≤ .019.

Results reveal significant differences in the means of membership of women's group, NGO and political groups, p≤ .079, p≤.001 and p≤ .007 respectively.

4.2. Psychosocial and mental health characterization

Table 4 presents the psychosocial characteristics of the 200 participants, according to the study variables.

Table 4 - Distribution of women, according to somatic symptons. Georgetown, Guyana, 2022.

Variable	Yes	No	Mean	SD
Uncomfortable feelings	89 (44.5%)	105 (52.5%)	1.54	.492
Headaches	92 (46%)	100(50%)	1.52	.490
Sleep badly	69 (34.5%)	122(61%)	1.64	.481
Digestion poor	29 (15.3)	160 (80%)	1.84	.361
Hands shake	47 (25.4)	144(72%)	1.74	.436
Digestion poor	29 (15.3)	146 (73%)	1.76	.425

Eighty-eight (89) (44.5%) of the respondents experienced uncomfortable feelings in their stomach. However, 99 (51.2) respondents experienced headache. Some 34.5% of the respondents sleep badly.

Table 5 - Distribution of women, according to reduction of energy. Georgetown, Guyana, 2022.

Variable	Yes	No	Mean	SD
daily work suffering	32 (16.6%)	164 (80.5%)	1.8	.366
fell tired all the time	71 (37.4%)	118 (59.4)	1.62	.474
easily tired	100 (51.5%)	93 (46.5)	1.47	.497
find difficult to make decisions	58 (29%)	135(67.5)	1.69	.451
find difficult to enjoy daily activities	61 (31.6%)	132(66.0)	1.68	.457
have trouble thinking clearly	46 (24%)	145(72.5)	1.76	.419

From total, 100 (51.5%) respondents claimed to be easily tired while seventy (3.5%) claimed to be tired continually.

Common mental disorders

We present, in this item, the results referring to the responses of the study participants to the CMD.

Table 6 - Distribution of women, according to depressive symptons. Georgetown, Guyana, 2022.

Factors	Yes	No	Mean	Std
lost interest in things	80 (40%)	144(57%)	1.58	.486
feel that you are worthless	29 (15.59%)	163(81.5%)	1.84	.351
unable to play useful part in life	42 (21.9%)	149(74.5%)	1.88	1.48
thought of ending life	36 (18.8%)	155(77.5%)	1.81	.383

Many (80/40%) of mothers lost interest in things. Further, 36 (18%) of these mothers

idealize suicide.

As for depressive symptoms and anxious thoughts, of the 200 participants, 105 (52.5%) felt nervous, tense and worried and 58 (29%) felt unhappy most of the time.

Table 7 shows the bivariate analysis of the variables marital status and activities of daily living.

Table 7 - Distribution of women, according to marital status and difficult to enjoy daily activities. Georgetown, Guyana, 2022.

Marital status	**Difficult to enjoy your daily activities**		
	Yes	**No**	
	n (%)	**n (%)**	**Total with missing**
Single in union	20 (36,4)	44 (38,9)	65 (38,0)
Single, not in union	20 (36,4)	40 (35,4)	61 (44,0)
Married in union	14 (25,5)	29 (25,7)	44 (27,5)
Married not in union	1 (1,8)	-	1 (0,6)

Results have shown that difficulty to enjoy daily activities is most prevalent among single mothers. Difficulties performing daily activities were most prevalent (25.5%) among the married mothers who are in union, in relationship with spouses.

Table 8 shows the bivariate analysis of the variables marital status and trouble thinking clearly.

Table 8 - Distribution of women, according to marital status and trouble of thinking clearly. Georgetown, Guyana, 2022.

Marital status	**Trouble of thinking clearly**		
	Yes	**No**	
	n (%)	**n (%)**	**Total with missing**
Single in union	16 (42,1)	47 (36,7)	65 (38,0)
Single, not in union	9 (23,7)	50 (39,1)	61 (35,7)
Married in union	13 (34,2)	30 (23,4)	44 (25,7)
Married not in union	-	1 (0,8)	1 (0,6)

Single mothers in union or not and married mothers in union have a greater prevalence of having trouble to think clearly. Findings have shown that difficulty to complete work is most prevalent among single mothers.

Table 9: Illustrating marital status and status of daily work crosstabulation.						
			Is your daily work suffering?			Total
			Yes	Missing	No	
Marital status	single in union	Count	11	2	52	65
		% within Is your daily work suffering?	39.3%	50.0%	37.4%	38.0%
	single, not in union	Count	8	0	53	61
		% within Is your daily work suffering?	28.6%	0.0%	38.1%	35.7%
	Married in Union	Count	8	2	34	44
		% within Is your daily work suffering?	28.6%	50.0%	24.5%	25.7%
	Married not in union	Count	1	0	0	1
		% within Is your daily work suffering?	3.6%	0.0%	0.0%	0.6%
Total		Count	28	4	139	171
		% within Is your daily work suffering?	100.0%	100.0%	100.0%	100.0%

Single mothers in both categories cited the higher prevalence of their daily work was suffering.

Table 10: Marital status and continual tiredness Crosstabtabulation						
			Do you feel tired all the time?			Total
			Yes	Missing	No	
Marital status	single in union	Count	22	3	40	65
		% within Do you feel tired all the time?	34.9%	42.9%	39.6%	38.0%
	single, not in union	Count	23	1	37	61
		% within Do you feel tired all the time?	36.5%	14.3%	36.6%	35.7%
	Married in Union	Count	17	3	24	44
		% within Do you feel tired all the time?	27.0%	42.9%	23.8%	25.7%
	Married not in union	Count	1	0	0	1
		% within Do you feel tired all the time?	1.6%	0.0%	0.0%	0.6%
Total		Count	63	7	101	171
		% within Do you feel tired all the time?	100.0%	100.0%	100.0%	100.0%

Findings suggest that the prevalence of continual tiredness was more prevalent among single women (in union or not).

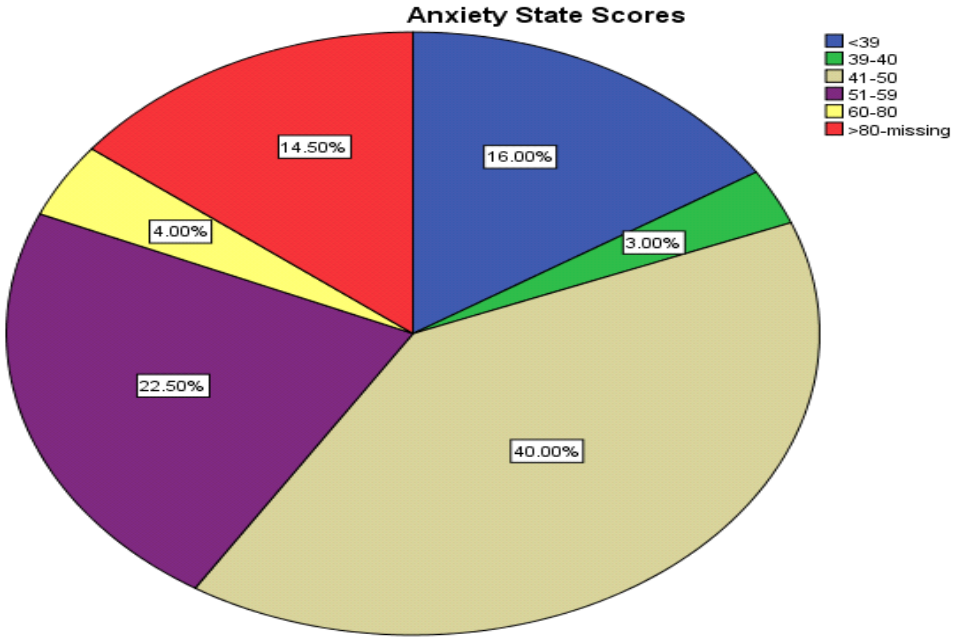
Table 11: Table illustrating marital status and tiredness ccrosstabb						
			Are you easily tired?			Total
			Yes	Missing	No	
Marital status	single in union	Count	32	0	32	64
		% within Are you easily tired?	36.4%	0.0%	40.0%	37.9%
	single, not in union	Count	37	0	24	61
		% within Are you easily tired?	42.0%	0.0%	30.0%	36.1%
	Married in Union	Count	18	1	24	43
		% within Are you easily tired?	20.5%	100.0%	30.0%	25.4%
	Married not in union	Count	1	0	0	1
		% within Are you easily tired?	1.1%	0.0%	0.0%	0.6%
Total		Count	88	1	80	169
		% within Are you easily tired?	100.0%	100.0%	100.0%	100.0%

Single women (in union /not in union) manifested higher prevalence of being easily tired. Results have shown a higher in single mothers who are not in union. Difficulty making decisions is most prevalent among the single mothers (in union/not in union). Findings show that in all three categories the majority of mothers did not find it difficult to enjoy daily activities.

Table 12: ANOVA Psychosocial problems				
		df	F	Sig.
Is your appetite poor?	Between Groups	49	1.771	.005
Do you sleep badly?	Between Groups	49	2.256	.000
Are you easily frightened	Between Groups	49	2.539	.000
Do your hands shake?	Between Groups	49	2.338	.000
Do you feel nervous tensed and worried?	Between Groups	49	3.164	.000
Is your digestion poor?	Between Groups	49	2.742	.000
Do you feel unhappy?	Between Groups	49	4.329	.000
Do you have trouble thinking clearly?	Between Groups	49	3.704	.000
Do you cry more than usual?	Between Groups	49	3.685	.000
Do you find it difficult to enjoy youir daily activities?	Between Groups	49	2.480	.000
Do you findnit difficult to make decisions?	Between Groups	49	3.088	.000
Is your daily work suffering?	Between Groups	49	2.129	.000
Are you unable to play a useful part in life?	Between Groups	49	1.715	.007
Have you lost interest in things?	Between Groups	49	2.254	.000
Do you feel that you are worthless?	Between Groups	49	1.787	.004
Have the taught of ending your life been on on your mind?	Between Groups	49	2.637	.000
Do you feel tired all the time?	Between Groups	49	2.341	.000
Do you have uncomfortable feelings in your stomach?	Between Groups	49	2.134	.000
Are you easily tired?	Between Groups	49	1.846	.003
Do you have headaches?	Between Groups	49	2.298	.000

Anxiety State alongside sociodemographics and obstetrical Characteristics of the mother

Figure 1:Chart depicting anxiety ststa scores in mothers



Findings have shown that the majority (67.50%) of mothers scored above 39 on the anxiety state inventory. The modal range is 41-50

Table 13: Anxiety score and Location of mothers (institution within catchment)

Institution * Anxiety State Scores Crosstabulation

			Anxiety State Scores						Total
			<39	39-40	41-50	51-59	60-80	>80-missing	
Institution	GPHC	Count	18	5	34	22	4	21	104
		% within Institution	17.3%	4.8%	32.7%	21.2%	3.8%	20.2%	100.0%
		% of Total	9.0%	2.5%	17.0%	11.0%	2.0%	10.5%	52.0%
	South Road	Count	7	1	25	10	2	7	52
		% within	13.5%	1.9%	48.1%	19.2%	3.8%	13.5%	100.0%

		Institution							
		% of Total	3.5%	0.5%	12.5%	5.0%	1.0%	3.5%	26.0%
	Festival city	Count	4	0	6	3	1	0	14
		% within Institution	28.6%	0.0%	42.9%	21.4%	7.1%	0.0%	100.0%
		% of Total	2.0%	0.0%	3.0%	1.5%	0.5%	0.0%	7.0%
	Lodge	Count	1	0	10	4	0	0	15
		% within Institution	6.7%	0.0%	66.7%	26.7%	0.0%	0.0%	100.0%
		% of Total	0.5%	0.0%	5.0%	2.0%	0.0%	0.0%	7.5%
	Campbeville	Count	0	0	0	1	0	0	1
		% within Institution	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
		% of Total	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.5%
	Agricola	Count	1	0	3	4	1	0	9
		% within Institution	11.1%	0.0%	33.3%	44.4%	11.1%	0.0%	100.0%
		% of Total	0.5%	0.0%	1.5%	2.0%	0.5%	0.0%	4.5%
	Albuystown	Count	1	0	2	0	0	1	4
		% within Institution	25.0%	0.0%	50.0%	0.0%	0.0%	25.0%	100.0%
		% of Total	0.5%	0.0%	1.0%	0.0%	0.0%	0.5%	2.0%
	Sophia	Count	0	0	0	1	0	0	1
		% within Institution	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
		% of Total	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.5%
Total		Count	32	6	80	45	8	29	200
		% within Instituti	16.0%	3.0%	40.0%	22.5%	4.0%	14.5%	100.0%

	on							
	% of Total	16.0 %	3.0 %	40.0 %	22.5 %	4.0%	14.5 %	100.0 %

Results show that 32 (18.7%) of the 171 respondents to the Anxiety State items scored below 39. Score ranges of 41-50 and 51- 60 were seen in 80(46.8%) and 45(26.3%) respectively.

With respect to location according to clinic with a total of 52 respondents 25 (48%) gained anxiety scores of 41-50 while 10(19%) gained 51-60.

Demographic

Table 14: table illustrating Age &anxiety crosstabulation

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
Age	16-20	4	2	13	7	3	4	33
	21-25	10	2	30	13	1	13	69
	26-30	6	1	16	13	1	5	42
	31-35	8	0	12	9	3	4	36
	36-40	2	0	7	2	0	2	13
	41-45	1	0	1	0	0	0	2
	46-50	1	1	0	0	0	0	2
Total		32	6	79	44	8	28	197

Cross tabulation reveals that 30(43.5%) mothers in the 21-25 age range anxiety gained anxiety state scores of 41-50. This represents 79(40%) all age ranges in this study. 0nly 32(18.9%) mothers attained scores below 39.

Education

Table 15 :Table illustrating highest level of education and anxiet scores crosstabulation

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
Highest level of education	Less than primary	0	1	1	1	0	0	3
	Primary	2	1	1	1	0	0	5

	Secondary	17	4	50	26	4	25	126
	College	3	0	9	5	2	0	19
	University	3	0	10	6	2	1	22
	Missing	0	0	0	1	0	0	1
Total		25	6	71	40	8	26	176

Results revealed close similarities in the proportions of anxiety in a mother who have had educational preparation above the primary levels. Scores of 41-50 were accounted for by 71(40.3%) of all mothers and 51-60 was seen in 40(22.7%). Within mothers with secondary education 50(39.7%), tertiary 9(47%) and university 10(45.5%) attained the former score. The latter score was attained by mothers at these educational levels 26(21%), 5(26%), 6(27.3%) respectively.

Employment

Table 16 : Bar graph depicting employment and anxiety state scores crosstabulation

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
Employment	Not employed.	12	3	24	13	2	6	60
	Employed	11	3	30	19	3	13	79
	Quit during pregnancy	2	0	5	5	0	3	15
Total		25	6	59	37	5	22	154

Results revealed that higher the most popular score range (41-50) for anxiety was attained by 59(38.3%) of respondents. This evidence shows that 24(40%) of unemployed mothers experienced this level of anxiety.

Marital status and anxiety

Table 17 : Depicting marital status & anxiety state scores crosstabulation

			Anxiety State Scores						Total
			<39	39-40	41-50	51-59	60-80	>80-missing	
Marital status	Single in union	Count	8	1	33	10	3	10	65
		% within Marital status	12.3%	1.5%	50.8%	15.4%	4.6%	15.4%	100.0%
		% of Total	4.7%	0.6%	19.3%	5.8%	1.8%	5.8%	38.0%
	Single,	Count	12	0	24	18	2	5	61

	not in union	% within Marital status	19.7%	0.0%	39.3%	29.5%	3.3%	8.2%	100.0%
		% of Total	7.0%	0.0%	14.0%	10.5%	1.2%	2.9%	35.7%
	Married in Union	Count	7	2	16	10	1	8	44
		% within Marital status	15.9%	4.5%	36.4%	22.7%	2.3%	18.2%	100.0%
		% of Total	4.1%	1.2%	9.4%	5.8%	0.6%	4.7%	25.7%
	Married not in union	Count	0	0	1	0	0	0	1
		% within Marital status	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
		% of Total	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.6%
Total		Count	27	3	74	38	6	23	171
		% within Marital status	15.8%	1.8%	43.3%	22.2%	3.5%	13.5%	100.0%
		% of Total	15.8%	1.8%	43.3%	22.2%	3.5%	13.5%	100.0%

For all categories of marital status 74(43%) of the mothers scored in the 41-50 levels of anxiety state. 33 (50.8) the single mothers are in this category.

Alcohol

Table 18: Table illustrating alcohol & anxiety state scores crosstabulation

			Anxiety State Scores						Total
			<39	39-40	41-50	51-59	60-80	>80-missing	
Alcohol	No	Count	23	6	52	27	4	18	130
		% within Alcohol	17.7%	4.6%	40.0%	20.8%	3.1%	13.8%	100.0%
		% of Total	13.0%	3.4%	29.4%	15.3%	2.3%	10.2%	73.4%
	Yes	Count	3	0	11	9	2	4	29
		% within Alcohol	10.3%	0.0%	37.9%	31.0%	6.9%	13.8%	100.0%
		% of Total	1.7%	0.0%	6.2%	5.1%	1.1%	2.3%	16.4%
	Quit during	Count	1	0	10	3	1	3	18

	pregnancy	% within Alcohol	5.6%	0.0%	55.6%	16.7%	5.6%	16.7%	100.0%
		% of Total	0.6%	0.0%	5.6%	1.7%	0.6%	1.7%	10.2%
Total		Count	27	6	73	39	7	25	177
		% within Alcohol	15.3%	3.4%	41.2%	22.0%	4.0%	14.1%	100.0%
		% of Total	15.3%	3.4%	41.2%	22.0%	4.0%	14.1%	100.0%

Smoking

Table 19:Smoking & Anxiety State Scores Crosstabulation								
		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
Smoking	No	24	6	62	37	6	24	159
	Yes	4	0	11	5	2	5	27
	Quit during pregnancy	0	0	3	0	0	0	3
Total		28	6	76	42	8	29	189

Results have shown that 88% of the mothers did not smoke cigarettes in the last 12 months.

Obstetrics and Anxiety

Table 20. Parity & Anxiety State Scores Crosstabulation								
		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
Parity	Primirpara	7	3	31	14	1	8	64
	Multparity	16	2	31	21	5	14	89
Total		23	5	62	35	6	22	153

Results have shown that almost half (31/48.4%) of the primipara mothers anxiety scores ranged from 41-50.

Table 21: Illustrating pregnancy cycle & Anxiety State Scores Crosstabulation							
	Anxiety State Scores						Total
	<39	39-40	41-50	51-59	60-80	>80-missing	

Pregnancy cycle	Antenatal	24	2	50	28	5	20	129
	Post natal	8	4	30	17	3	8	70
Total		32	6	80	45	8	28	199

Findings have shown that more post-natal mothers 30/70 (42.8) attained the 41-50 anxiety score as compared with 50 /129(38.8) of the antenatal respondents.

Table 22: Illustrating gestational age /gestational age of baby and anxiety cross tabulation

Gestational age/age of baby	Anxiety State Scores						Total
	<39	39-40	41-50	51-59	60-80	>80-missing	
1-13 ; First trimester	3	0	10	4	1	7	25
14-28: Second trimester	10	1	18	11	2	6	48
> 28 : third trimester	11	2	27	18	2	9	69
1 week old	2	0	7	4	3	0	16
2 weeks old	1	1	5	2	0	2	11
3 weeks old	1	0	3	3	0	2	9
4 weeks old	4	2	10	3	0	2	21
Total	32	6	80	45	8	28	199

The 41-50 ,80 (40.2%) anxiety score was most popular 10/25(40%) in mother in the first 13 weeks of gestation

Social capital and anxiety scores

Table 23: Depicting Willingness of relatives to assist the mother in times of crisis and anxiety scores

		Anxiety State Scores						Total
		<39	41-50	51-59	60-80	>80-missing	39-40	
My relatives are willing to assist me in times of crisis	Never	2	0	0	1	0	0	3
	Seldom	3	4	2	0	1	0	10
	Often	2	17	7	0	6	1	33
	Missing	4	2	1	0	1	0	8
	Always	21	57	35	7	21	5	146
Total		32	80	45	8	29	6	200

The 41-50 Anxiety score was most prevalent 17/35 (51.5%) among mothers whose relatives were often willing to aid as compared with those whose relatives were always willing to

assist 57/146(39%), Chi Square test indicated statistically significant differences for relatives willing to assist in times of crisis and prevalence of anxiety at p ≤ .099.

Table: 24: Illustrating spouse acceptanse of my pregnancy and helping mother to cope. &Anxiety State Scores Crosstabulation

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
My spouse accepts my pregnancy and helps me to cope.	Never	1	0	2	2	0	3	8
	Seldom	3	1	2	3	0	1	10
	often	2	0	3	0	0	0	5
	Missing	0	0	2	0	2	0	4
	Always	26	5	71	40	6	25	173
Total		32	6	80	45	8	29	200

Findings have shown that 173 (86.5%) spouses always accepted the pregnancy of the respondent. Of the 80/171 (46.8%) of mothers who scored 40-51 on the anxiety State scale 71/80(88.75). Chi Square test indicated statistically significant differences for spousal acceptance of pregnancy and prevalence of anxiety at p ≤ .099.

Table 25: Illustrating mother ability to access help from close friends in times of crisis

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
I can approach my closest circle of friends for support in times of crisis	Never	2	1	9	5	2	1	20
	Seldom	5	0	6	4	1	5	21
	Often	5	3	15	9	1	9	42
	Missing	5	0	3	0	0	1	9
	Always	15	2	47	27	4	13	108
Total		32	6	80	45	8	29	200

Findings show that anxiety scores of 41-50 was most prevalent in mothers 9/20(45%) of the mothers who cannot rely on support of friends during crisis. Of the 80 mothers in this category (41-50) 47/80 (58.75) could always rely on their circle of friends for support during crisis. Chi Square test indicated statistically significant differences for prevalence among friends support and prevalence of anxiety at p ≤ .012

Table 26:Illustrating Mothers access to welfare support in times of need & anxiety stste scores crosstabulation								
		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
The welfare personnel in my area provided me the support I needed.	never	16	3	42	26	5	13	105
	Missing	6	0	5	3	1	2	17
	seldom	3	1	6	4	0	4	18
	Often	3	1	10	5	0	2	21
	Always	4	1	17	7	2	8	39
Total		32	6	80	45	8	29	200

17(21,5%) of the 80 women who with anxiety state scores ranging from 41-50 always received support from welfare. This group also dominated in the 51-60 and the 60 to 80 categories also.

Access to counsellors

Table 27: Illustrating mothers access to specially trained counsellors in time of need & anxiety state scores crosstabulation.								
Specially trained counsellors gave me the support I needed		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
.	Never	13	3	31	23	3	16	89
	Seldom	3	1	11	5	0	2	22
	2.10	8	0	8	1	2	2	21
	Often	4	1	12	7	1	6	31
	Always	4	1	18	9	2	3	37
Total		32	6	80	45	8	29	200

Results have shown that mothers who did not received needed support from trained experience more intense levels of anxiety state 41-51 & 51-59 ranges ,31(38.7%) and 23 (51.5%) respectively.

Cognitive capital

Table 28: Illustrating mother's perception of being accepted in the community & Anxiety State Scores Crosstabulation		
I feel that the mothers in my	Anxiety State Scores	Total

community accepts me.		<39	39-40	41-50	51-59	60-80	>80-missing	
	Never	1	0	4	1	0	4	10
	Seldom	1	0	7	1	0	6	15
	Often	7	1	17	7	0	4	36
	Missing	6	0	6	3	1	2	18
	Always	17	5	46	33	7	13	121
Total		32	6	80	45	8	29	200

Cross tabulation has shown that anxiety scores of 41- 50 were more dominant 4(40%) among mothers who felt that they were never accepted by mothers in the community. Notably those who felt they were always accepted by mothers 33 (73.3%) dominate the 51-60 category of anxiety state. Chi Square test indicated statistically significant differences for prevalence among community acceptance of mothers and prevalence of anxiety scores at $p \leq .097$.

Table 29: Depicting respect for mothers by children in my community & Anxiety State Scores Crosstabulation

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
I am respected by the children in my community.	Never	2	0	4	2	0	1	9
	Seldom	1	0	5	1	0	1	8
	Often	6	1	12	1	0	7	27
	3.60	2	0	5	1	0	0	8
	Always	21	5	54	40	8	20	148
Total		32	6	80	45	8	29	200

54(67.5%) of mothers gained 41-50 anxiety state scores. Nevertheless, this category of mothers also dominated in the 51-59 anxiety state range, claiming 40/45(88.9%). Chi Square test indicated statistically significant differences for mothers' sense of being respected by children and prevalence of anxiety at $p \leq .053$.

Table 30: Illustrating mothers'contributions to problem solving in my community being considered & Anxiety State Scores Crosstabulation

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
My contributions to problem solving in my community are considered.	Never	4	1	14	9	1	7	36
	Seldom	5	0	14	5	0	6	30
	Missing	7	0	4	2	1	1	15
	Often	11	2	22	13	3	8	59
	Always	5	3	26	16	3	7	60
Total		32	6	80	45	8	29	200

The category of mothers who seldom contributed to problem solving in the community 14/30(46.6%) dominated the 41-50 anxiety state score.

Community permitting mothers to participate

Table 31: Illustrating Community members permitting mothers to participate in activities & Anxiety State Scores Crosstabulation

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
Community members permit me to participate in activities.	Never	11	1	26	14	2	10	64
	Seldom	4	0	7	5	1	7	24
	Missing	6	0	6	4	1	0	17
	Often	5	2	19	11	3	4	44
	Always	6	3	22	11	1	8	51
Total		32	6	80	45	8	29	200

64(36.9%) felt that community members will not permit them to participate in activities 26 (40.2%) and 14 (29.1%), attained 41-50 and 51-59 respectively. Of the 51 mothers who felt that community members permit them to participate in activities scored 22/51(43%) in the 41`-50.

Table 32: illustrating not afraid to volunteer skills in my community & Anxiety State Scores Crosstabulation

	Anxiety State Scores						Total
	<39	39-40	41-50	51-59	60-80	>80-missing	

I am not afraid to volunteer my skills in my community.	Never	7	0	20	6	1	3	37
	Seldom	6	0	4	4	1	3	18
	Often	3	0	16	11	3	11	44
	Missing	2	0	6	1	0	0	9
	Always	14	6	34	23	3	12	92
Total		32	6	80	45	8	29	200

Cross-tabulation reveal that 37(19.3%) of mothers never volunteered skills in their community, never the less 20 (54.1%) scored 41-50. Further 92 mothers always volunteered for community work 34 (36.9%) scored 41 to 50 while 23(25%) scored 51-59.

Chi Square test indicated statistically significant differences for mothers volunteering without fear and prevalence of anxiety state score at $p \leq .060$

Group membership

Table 33: Cross tabulation between membership of a corporative & Anxiety scores

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
I have been a member of a cooperative.	Never	21	5	60	31	6	13	136
	Missing	5	1	11	2	1	6	26
	Seldom	1	0	4	2	0	3	10
	Often	2	0	3	2	1	3	11
	Always	3	0	2	8	0	4	17
Total		32	6	80	45	8	29	200

Results have shown that 136(78.1%) are not members of cooperatives. This group includes 60(75%) of mothers who attained 41-50 anxiety state score. In the 51-60 score range, this group accounts for 31(68.8). Chi Square test indicated statistically significant in linear-by- linear association between membership to cooperatives and prevalence of anxiety state at $p \leq .055$.

Religious affiliation

Table 34: Crosstabulation between religious affiliation and anxiety state

I have been a member of a religious group.		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
	Never	8	3	22	11	3	11	58

	Seldom	3	1	8	5	1	3	21
	Missing	7	1	4	2	0	0	14
	Often	4	0	17	5	0	4	30
	Always	10	1	29	22	4	11	77
Total		32	6	80	45	8	29	200

186 mothers have religious affiliations. Of the 77(41.3%) who always maintain membership 29(37.6%) scores 41-50. Comparatively, 58(31.%) have no religious affiliation at this time. 22 (37.9%) scored 41-50 and 11(19%) scored 51-60. Chi Square test indicated statistically significant in linear-by- linear association between membership to religious group and prevalence of anxiety state at $p \leq .083$.

Membership to women's group

Table 35: Cross tabulation between membership of a women's group and Anxiety State Scores

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
I have been a member of a women's group.	Never	21	4	51	32	6	17	131
	Missing	3	1	10	3	0	2	19
	Seldom	1	0	8	5	1	1	16
	Often	0	1	6	3	0	3	13
	Always	7	0	5	2	1	6	21
Total		32	6	80	45	8	29	200

131(72.4%) women were not members to any women's group 51(39%) scored 41-51 while 31(23.7%) scored 51-59. On the other hand, 21(11.6%) always are belong to a group. The 41-50 anxiety score and the 51-59 affected 5(23.8%) and 2 (9.5%) mothers respectively.

Membership to Non- governmental organization

Table 36: Cross tabulation of Membership to a governmental organization and Anxiety

I have been a member of a non-governmental organization (NGO).		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
	Never	22	4	58	36	6	21	147

	Missing	4	2	7	1	0	2	16
	Seldom	1	0	4	5	0	2	12
	Often	2	0	4	0	0	2	8
	Always	3	0	7	3	2	2	17
Total		32	6	80	45	8	29	200

141(76.6%) mothers were never members of any governmental organization. Of the 17 mothers who always have membership 7(41%) possess anxiety state scores ranging from 41-50.

Table 37: Self employment & anxiety state scores crosstabulation

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
I am self employed.	Never	13	3	41	31	7	13	108
	Missing	10	1	17	3	1	6	38
	Seldom	1	0	5	1	0	1	8
	Often	3	1	1	4	0	1	10
	Always	5	1	16	6	0	8	36
Total		32	6	80	45	8	29	200

Kappa test indicated statistically significant association between self-employment and prevalence of anxiety state at $p \leq .083$

Table 38: depicting mothers employed full - time & Anxiety State Scores Crosstabulation

I have a full - time job		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
	Never	9	5	21	14	4	5	58
	Seldom	2	0	4	1	0	1	8
	Missing	8	1	13	4	0	5	31
	Often	1	0	4	3	1	1	10
	Always	12	0	38	23	3	17	93
Total		32	6	80	45	8	29	200

Table 39: Illustration have a part-time job and Anxiety State Scores Crosstabulation

I have a part-time jobs.		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
	Never	15	4	41	28	5	19	112
	Missing	11	1	19	6	0	6	43
	Seldom	1	0	8	2	0	0	11
	Often	3	1	3	4	2	1	14
	Always	2	0	9	5	1	3	20
Total		32	6	80	45	8	29	200

In Guyana women may work more than one jobs to make needs.41(36.6%) and 28(62.2%) of mothers who don't have part time jobs scores 41-50 and 51-60 anxiety state scores respectively.

Table 40: Underemployment & Anxiety State Scores Crosstabulation								
I am underpaid for the work I do.		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
	Never	15	2	36	19	4	14	90
	Missing	9	0	29	11	0	10	59
	Seldom	2	1	4	7	0	2	16
	Often	1	1	4	4	3	1	14
	Always	5	2	7	4	1	2	21
Total		32	6	80	45	8	29	200

90(45%) of the working mothers are never underpaid. These make up 36(45%) of the 41-45 anxiety score. While 19(42.2%) accounted for the 51-59 anxiety scores. Further, 4(50%) those mothers who scored 60-80. Chi Square test indicated statistically significant association between mothers being underemployed (underpaid) and prevalence of anxiety state at $p \leq .074$.

Table 41: Student without a job & Anxiety State Scores Crosstabulation								
I am a student without a job		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
.	Never	14	4	43	30	7	17	115
	Missing	14	1	25	12	0	11	63
	Seldom	2	1	4	2	1	1	11
	Often	1	0	0	0	0	0	1

	Always	1	0	8	1	0	0	10
Total		32	6	80	45	8	29	200

The majority of student mothers 115 (57.5%) did not has jobs. Of the 10 (5%) that always jobless 80% attained 41-50 anxiety state scores as compared with 37% those student mothers who were never jobless. Nevertheless 30(26.6%) of those who always had jobs gained anxiety scores of 51-59. Chi Square test indicated statistically significant in linear-by- linear association between unemployed students and prevalence of anxiety state at p ≤ .088. Kappa p ≤ .078.

Table 42 : Mother's income pays all of her bills. & Anxiety State Scores Crosstabulation

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
M income pays all of my bills.	Never	7	3	20	20	3	6	59
	Seldom	7	0	5	6	0	3	21
	Missing	7	1	17	3	1	6	35
	Often	5	0	9	8	1	4	27
	Always	6	2	29	8	3	10	58
Total		32	6	80	45	8	29	200

Chi Square test indicated statistically significant in linear-by- linear association between membership to religious group and prevalence of anxiety state at p ≤ .083.

Table 43: Illustrate spouse pays all of the mother's bills and Anxiety State Scores Crosstabulation

My spouce pays all of my bills		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
.	Never	5	0	11	12	2	7	37
	Seldom	4	1	9	3	2	3	22
	Missing	5	0	17	2	0	6	30
	Often	4	1	15	7	0	4	31
	Always	14	4	28	21	4	9	80
Total		32	6	80	45	8	29	200

Spouse and mother paying bills

Table 44: Mother and her spouse pay bills jointly and anxiety state scores crosstabulation

My income and allowances from my spouce pay all of my bills		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
.	Never	7	3	20	19	1	6	56
	Seldom	3	0	11	0	1	3	18
	Missing	9	1	15	3	0	8	36
	Often	4	0	10	2	1	2	19
	Always	9	2	24	21	5	10	71
Total		32	6	80	45	8	29	200

Chi Square test indicated statistically significant association between the mother and her spouse paying bills and the prevalence of anxiety state at $p \leq .098$ and a likelihood ratio of .021.

Table 45: Parents paying mother's bills and anxiety state scores

My parents pay my bills.		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
	Never	15	5	31	32	4	15	102
	Missing	9	1	18	4	0	8	40
	Seldom	2	0	10	6	1	2	21
	Often	3	0	8	3	0	2	16
	Always	3	0	13	0	3	2	21
Total		32	6	80	45	8	29	200

Table 46 : My friends and relatives assist in paying mother's bills & Anxiety State Scores Crosstabulation

		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
My friends and relatives assist in paying my bills.	Never	17	4	49	33	7	15	125
	Missing	10	1	18	3	0	8	40
	Seldom	2	1	5	5	0	2	15

	Often	1	0	3	3	0	2	9
	Always	2	0	5	1	1	2	11
Total		32	6	80	45	8	29	200

Chi Square test indicated statistically significant in association between parents paying mother's bills and prevalence of anxiety state at p ≤.048. This also indicated a likelihood ratio of .009

Relatives assist mother in paying bills

Table 47: I receive social assistance to assist in paying my bills &Anxiety State Scores Crosstabulation								
		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
I receive social assistance to assist in paying my bills.	Never	23	5	56	40	7	18	149
	1.20	8	1	16	2	0	8	35
	Seldom	0	0	0	1	0	1	2
	Often	1	0	3	0	0	2	6
	Always	0	0	5	2	1	0	8
Total		32	6	80	45	8	29	200

All (8) of the who always received social assistance to pay bills produced anxiety state scores 41-50 (5/62.5%); 50-59 (2/25%) and 60-80 (1/12.5%). Chi Square test indicated statistically significant association between means of paying bills and prevalence of anxiety state at p ≤ .070.

Table48: Illustrating participating in activities and anxiety state scores.								
I participate in activities such as walking,running, jogging,aerobics or physical exercise		Anxiety State Scores						Total
		<39	39-40	41-50	51-59	60-80	>80-missing	
.	Never	8	0	13	7	4	7	39
	Seldom	10	0	18	12	1	7	48
	Missing	2	0	3	0	0	3	8
	Often	9	2	19	11	1	2	44
	Always	3	4	27	15	2	10	61
Total		32	6	80	45	8	29	200

Mothers who always participated activities 27(44%) exhibited higher anxiety state scores. Chi Square test indicated statistically significant association between participation in activities and prevalence of anxiety state at p ≤ .039

5. DISCUSSION

5.1 Characterization of study participants

This quantitative observational study was conducted with two hundred (200) antenatal and post-natal mothers who receive care at seven (7) of the twelve (12) public health centers in Georgetown. This response was directly a result of the timing of the investigation. Election campaign instability coupled with the COVID 19 prevention restrictions invited precautions to collecting data in areas identified as epicenters.

This investigation proposed to find out the sociodemographic and obstetrical characteristics of mothers who receive who receive antenatal and postnatal services, at public facilities in Georgetown.

Mothers were assessed for depressive thoughts and anxiety, somatic symptoms, reduced energy and depressive thougnts. Although most mothers (mean 1.4) felt nervous tensed and worried the majority (mean 1.69 felt happy). Regardless of the environmental crisis, which could have attributted to the these symptoms, sadness did not dominate. Headache (mean 1.52) emerged as the leading somatic syptom among these mothers. This finding concurs with those of Jullian(2011) that placed the prevelence of headaches as the most prevelent feature in this category. Eventhough the majority of the sample were highrisk mothers, it is difficult to relate this finding to the general physiology of pregnancy related complications. Their varied diagnosises could not have sommoned headaches. Hence this finding must be view in its origional context. Examining the construct of reduce enrgy attest to the fact that tiredness was the dominant feature (mean 1.47).

Again the environmental setting where these mothers where mingling and public activities were largely restricted, except for job related commitments, mothers were mainly in doors.Hence, this finding relates to depression.Felmenth (2016) notes a prevalence of depression as 36%. The evidence garnered in this study suggest a higher prevelence. Although most mothers had not lost interest in things (depressive thoughts), the presentation of suicide idelation in 36(18%) of these mothers is alarming. These findings different from those of Jullian (2011) who cited high prevalences of depressive thoughts were evident but suicide idelation was not mentioned as a dominant feature.

Age

Nguyen et al (2016) reiterates that anxiety is most prevalent in women in the reproductive ages.Our findings suggest that modal category of mothers affected by anxiety shows those within their mid 20s.Evidence suggest that that mothers in the 21-26 age range experience

the highest levels of anxiety.

Marital status

The type of union in which the mother strives can degrade her mental stability. We find that higher levels of Psychosocial problems (reduced energy) in single mothers who have partners (in union). Nevertheless, difficulties clear thinking was most prevalent mother single and married women who are in union. failure to enjoy daily activities among single women (in union or not). Evidence also confirmed that single mothers encounter difficulties with their daily activities. This fact was not established in married women who are not in union because of the small numbers of respondents. Although these findings concurred with the notion of high levels of psychosocial distress among married couples (Reneflot et al.,2012; Gourounti,2014) it resonates with our previous findings single mothers in union status has less benefits for the mother's psychological wellbeing (Reneflot,2012). This coincides with notions that serves marital dissatisfaction as a powerful stimulating for emotional distress in pregnancy.

Obstetrics and anxiety

Anxiety is most prevalent among the post-natal mothers in this study. Barreto (2015) notes that 1:5 post-natal mothers experience CMD. Evidence further suggest that anxiety increases with age of the baby.

The mothers experience the great burden of anxiety at the beginning of the second trimester (13th week). Our finding coincides with the notion that anxiety increases in the prenatal period (George,2018).

Conveniently, mothers with the support of relatives, did not exhibit lower anxiety than those who relatives did not assist. This questions whether serve as a protective or risk factors. P≤ .009. This finding contravenes positions that women deprived of support from relatives often express emotional distress (Guinian & Ratcliff,2018). Previous studies suggest that social capital buffers unfavorable mental impacts (Hunduma,2017) and promotes the mother's health (Morozumi,2020). Our findings seek credence in former evidence that the quality of family dynamics relates to the increase prevalence of CMD (Fellmeth,2016).

The response of the mother's partner towards the pregnancy is proven to be vital towards the psychological wellbeing of the mother. We find that spousal support of the mother did not resonate with low levels of anxiety (p≤ ,099). This finding contravenes the sentiments regarding associations between lack of support and AAS (Getinet, et al,2018 & Goguikian,2018).

More likely our findings tend to be aligned with findings that which purports the gamut

of responsibilities and expectations of the pregnant mother, within the relationship with the supporting spouse, which can unleash stress in the mother (Chang et al,2022; Joshil et al 2019; CanKorur,et al, 2017 & Joshel et al, 2019).

This stronger anxiety in a mother who has the support of her spouse must also be viewed in the light that higher paternal satisfaction lowers anxiety and protects the mother's psychological status, while dysfunctional relationships with spouse can exacerbate her mental disorders in pregnancy (Dokkedahe al 2019) Moreover, the environment in which the investigation was conducted harbored political instability (post-elections) chaos and pandemic restrictions. These findings must be viewed in the light of these circumstances.

Higher anxiety scores were seen in mothers who received support from welfare (often and always). Notably anxiety scores were lower among mothers who received counselling in times of need.

Cognitive capital

The degree to which the mother is esteemed by persons in her living environment impacts her mental wellbeing directly. Notable the mothers who felt varying degrees of rejection by mothers in the community exhibit proportionately higher scores on the anxiety scale. Hence there is an association anxiety and the acceptance by mothers in the community.

Respect from children in the community resonates with the anxiety levels in antenatal and post-natal mothers. This evidence confirms that low respect goes with higher levels of anxiety in these mothers. Further Higher levels of anxiety were seen in mothers who felt that their contributions were rejected by the community.

Although lower levels of anxiety were seen in mothers who are allowed to participate in their communities, there were lower prevalence of higher anxiety scores (41-80) in mothers who volunteer their skills to their communities. $p \leq .033$.

The response of the partner towards the pregnancy contributes to the mental status of the mother. We find that spousal support of mother did not resonate with lowered levels of anxiety, $p \leq .099$. The status of could have been to some extent stem from covariates such as marital status and the patterns of their unions. Moreover, the environment in which the investigation was conducted harbored political instability (post-elections) chaos and pandemic restrictions. These findings must be viewed in the light of these circumstances.

Group membership

The vast majority of mothers in this study are not affiliated to any group. These

mothers attained anxiety scores below 41. Our findings concur with that of Gausman, (2020) which suggested that group had a negative influence on a woman's mental health.

It is evident that religiosity in this setting, does not appear as a protective factor for anxiety. Scores for the higher levels of anxiety were apparent among those mothers who maintained more constant religious contact. This conflicts the evidence that religious teachings enhance relaxation in women. However, our findings concur with evidence that negative SRC of Brazalian women in high risk pregnancies were associated with worsen mental outcomes. Our finding must be seen in the light that the majority of mothers were attended at the GPHC. This facility is designed to serve high-risk mothers.

Patterns of anxiety according to employment status

Higher levels of anxiety scores were least prevalent among mothers who engaged in self-employment. Kappa $p \leq .083$ on the other hand higher levels of anxiety are resonated with who have full time employment.

Sometimes, part time employment is carried by some women alongside their regular jobs to facilitate budgetary demands. High level anxiety scores are least prevalent in mothers who employed constantly (often & always) on a part-time basis. Evidence suggest that mothers who are underpaid often garner higher anxiety scores.

Mothers who are students and jobless. Moreover, higher levels of anxiety scores are most prevalent in mothers who are students, who are employed constantly and those who are constantly jobless. A significant linear-by-linear association exist between the job status of student mothers and the prevalence of anxiety.

Income and bills

Mothers who always generated all the income to pay their bills experience the highest prevalence of higher levels of anxiety scores. A significant linear-by-linear association exist between mothers paying all of their bills and the prevalence of anxiety. Also, higher level anxiety scores are less prevalent in mothers whose bills are never paid by their parents experience anxiety state scores, and those whose relatives and best friends never assisted mother to pay bills (80%) and a few (8) who friends and relatives assist them to pay bills, the higher levels of anxiety scores were attained.

Higher level of anxiety was experienced by mothers (78.6%) who never received social assistance. Notably all of the mothers (35.7%) who always received social assistance expressed high levels of anxiety. Brena et al (2016) associates CMD with low income. Largely

mothers work to gain income. Noticeably, of statistical significance /linear importance exist between high anxiety scores paying bills (self and parents)

Participation in activities

The mothers with consistent physical activities manifested higher anxiety scores suggest higher level This is statistically significant exist P≤ .039.

The burden of anxiety scores 41-50 is more prevalent among the non-users of alcohol, even when compared with the smaller categories in the samples it appears to be slightly larger.

Anxiety and alcohol use

Although alcohol is not consumed by the vast majority of mothers, it is a characteristic of those who attained anxiety scores 41-50 and 51-60, and mothers who quit consuming alcohol during pregnancy.

Findings suggested that non-users of alcohol generally had lower anxiety state scores (≤ 39). Scores ranging from 41- 50 are highest among users of alcohol carried the but non-smokers. This burden tops their categories for the 41- 50 and the and the 50 – 51 ranges of anxiety scores.

6. CONCLUSION

The support mothers gained from the spouses, relatives and welfare did lower their levels of anxiety and depressive tendencies. In this situation the prevalence of suicidality and headaches affected far too many mothers. Generally, mothers who were not affiliated to groups experienced less anxiety. Prosocial conducts such as exercises and refraining from alcohol use attracted the higher anxiety scores. Sources of paying bills, full time employment and underemploymen

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8. APPENDIX

APPÊNDIX A – CONSENT FORMS

Dear Madam,

Re: Informed consent

I am a lecturer at the University of Guyana currently reading for Doctorate in Nursing (public health) University of Sao Paulo, Brazil. As partial fulfilment of this programme the area of research is titled "The prevalence and sociodemographic characteristics of Common mental disorders (CMD's) in antenatal and postnatal mothers who receive health services in Georgetown" .the purpose of this research is to provide evidence of the forms of CMDs in perinatal mothers receiving health services in Georgetown, in relation to the sociodemographic patterns of prevalence, so as to contribute evidence to the current dialogue regarding further exploration of this phenomena for policy, Programme and practice.

I am asking you to volunteer to participate in this study. If you volunteer, you will be requiring to be interview. You can refrain from answering any question, which you are not comfortable with. To can withdraw your participation at any time. There will be no penalties. Participation will take between 10 to 35 minutes entails responding to the questions on the questionnaire to determine her sociodemographic status and if she possesses symptoms of CMD(s).

The interview will be conducted at the health centre, at the pediatric clinic or at the home of your daughter. Her participation will be treated with strict confidence and the data will not be trace to her since her identification will not be collected with the data. You can ask any questions relating to this study and I am prepared to provide you with an honest response. If you refuse for your daughter to participate there will be no penalties. Your permission is voluntary.

If you need time to consider granting permission, a period of two weeks can be granted, after which you can indicate your response.

Thank you.

Yours sincerely

Winifred Mardenborough -Razack

Passive consent form

Those who agree to participate will do so verbally so as to prevent records of the identity of participants. If you refuse to participate please fill out the information needed in the spaces below.

I ----------, understand the nature and conduct of this study. All of my queries were answered; however, I shall not participate in this study.

Signature

Yours sincerely

_____

Ms. Winifred Mardenborough -Razack

Principal investigator (PI),

Tele#: (592) 692-5276

Email:Winifred_razack@yahoo.com

APPENDIX B - PERMISSION LETTER TO THE MANAGEMENT OF GPHC.

Dr. Fawcett Jeffrey
Director of Medical & Professional Services,
Georgetown Public Hospital Corporation,
New Market Street,
Georgetown

Dear Dr. Jeffrey,

Re: Request for Permission to conduct research at Georgetown Public Hospital Corporation

I am a lecturer at the University of Guyana currently reading for Doctorate in Nursing (public health) University of Sao Paulo, Brazil. As partial fulfilment of this programme I am conducting a research titled "The prevalence and sociodemographic characteristics of Common mental disorders (CMD's) in perinatal mothers who receive health services in Georgetown". Therefore, antenatal and post - natal mothers who are served at ten health centres (Agricola, Albouystown, Campbaville, David rose, Dorothy Baily, East Le penitence, Festival City, Industry, Kitty, Lodge, North East and Sophia) are required to volunteer as subjects. Towards this end, I beg your indulgence in granting me permission to gain access to these facilities. These facilities are the primary settings of the study Hospital as one of my settings of this study. The duration of this activity October 2019 to April 2020. Once I am granted the opportunity to conduct this study I shall honour all the research protocols of your institution. Your institution will be furnished with a copy of the findings of this study. Thank you for your kind consider of this request.
Sincerely

_____

Winifred Mardenborough -Razack MPh, BSN, HST, RM, RN, RN.
Lecturer, BSc. Nursing Programme,
Department of Public Health,
Faculty of Health Sciences,
University of Guyana
Tele#: (592) 692-5276
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APPENDIX C - INSTRUMENT

Common Mental Disorders among Antenatal and Postnatal Mothers in Georgetown, Guyana

Questionnaire # ------- Clinic/hospital #__

Section 1: Sociodemographic (1-53) 1. Place of residence_____

1. Age _____

2. Marital Status	Single	Married	Separated	Divorced	Cohabiting	Widowed

3. Living with partner Living without a partner

4. Highest learning	Illiterate	Literate	Primary	Secondary	Technical	University

5. Religion	Christian	Muslim	Hindu	Hebrew	Rastafarian	None

Obstetrics

6. Antenatal Post- natal

7. Nunber of weeks pregnant _____ Age of baby_____

8. Number of pregnancies_____ Number of babies delivered at term_____

#	**Social :8-13**	Always 4	Often 3	Seldom 2	Never 1
	Social capital: Persons supporting mothers in last 12 months				
9	My relatives are willing to assist me in timed of crisis				
10	My family members accept my pregnancy and help me to cope.				
11	My spouse accepts my pregnancy and helps me to cope				
12	I can approach my closest circle of friends for support in times of crisis.				
13	The welfare personnel in my area provided the support I needed				

14	Specially trained counselors gave me the support I needed.				
	Cognitive capital: mothers' perception of Acceptance by community members :14-20				
15	I feel that mother in my community accepts me.				
16	I am respected by the children in my community.				
17	My contributions to problem solving in my community are considered.				
18	Community members permit me to participate activities.				
19	I am not afraid to volunteer my skills in the community.				
20	I am not afraid to avail myself for community leadership.				
	Group membership; Organizations to which the mother belongs in the last 12 months: 21-26				
21	I have been member of a religious group				
22	I have been member of the PTA.				
23	I have been a member of a women's group				
24	I have been a member of a Non-governmental Organization (NGO).				
25	I have been a member of a political organization.				
26	I have been the member of a cooperative (includes box)				
	Employment: mother's work patterns in the last 12 months 27-32				
27	I usually have a permanent job.				
28	I am self-employed.				
29	***I am satisfied with my job.***				
30	***I cope well with the task which I do at work.***				
31	***My supervisor encourages me to be relax and comfortable***				
32	***I am unemployed.***				
	Financial coverage in the past 12 months 33-38				
33	My income ***pays for*** all ***of*** my expenses.				
34	My spouse pays for all of my financial expenses.				
35	***I receive public assistance every month.***				
36	***My parents/guardian pay(s) all of my expenses***				
37	***I receive finance from relative who live in foreign countries.***				
38	***I have debts to pay and find it difficult to get the cash.***				

#	**Behavioural**	Always 4	Often 3	Seldom 2	Never 1
	Physical activities in the last 12 months :39-44				
39	I participate in activities such as walking, running and jogging, aerobics or physical exercises.				
40	I exercise at least three (3) times per week				
41	Each session of my physical activity takes 30 minutes.				
42	I enjoy my sessions of physical activity				

43	I complete my exercises without difficulty.	□	□	□	□
44	Exercising make me feel better about myself	□	□	□	□
	Smoking tobacco and marijuana (45-50) **In the last 12 months I smoked:**				
45	cigarettes.	□	□	□	□
46	more than 1 pack of cigarette per week.	□	□	□	□
47	marijuana.	□	□	□	□
48	marijuana daily in the last 12 months	□	□	□	□
49	one piece of marijuana (joint) occasionally	□	□	□	□
50	many pieces (joints) of marijuana whenever I do.	□	□	□	□
	Consuming alcoholic beverages (51-56) In the last 12 month I drank:	□	□	□	□
51	at least one glass of wine occasionally.	□	□	□	□
52	selected alcoholic beverages in times of festivities.	□	□	□	□
53	at least 3 glasses of alcohol occasionally.	□	□	□	□
54	at least three glasses of alcoholic beverages weekly.	□	□	□	□
55	more than two glasses of alcoholic beverages monthly.	□	□	□	□
56	at least three glasses of alcoholic beverages daily.	□	□	□	□
	Leisure activities 57- 62)	□	□	□	□
57	I have sufficient time for leisure activities.	□	□	□	□
58	I enjoy a variety of leisure activities.	□	□	□	□
59	I can afford the finances to cover my leisure activities.	□	□	□	□
60	My leisure activities are mainly indoor.	□	□	□	□
61	I participate leisure in activities with my family circle	□	□	□	□
62	I participate in leisure activities with public groups	□	□	□	□

Section 2: Psychosocial problems SRQ -20 (63-82)

#	**SRQ -20**	Yes	No
1	Do you often have headaches?		
2	Is your appetite poor?		
3	Do you sleep badly?		
4	Are you easily frightened?		
5	Do your hands shake?		
6	Do you feel nervous, tensed and worried?		
7	Is your digestion poor?		
8	Do you have trouble thinking clearly?		
9	Do you feel unhappy?		
10	Do you cry more than usual?		
11	Do you find it difficult to enjoy your daily activities?		
12	Do you find it difficult to make decisions?		
13	Is your daily work suffering?		
14	Are you unable to play a useful part in life?		
15	Have you lost interest in things?		
16	Do you feel that you are worthless?		
17	Has the thought of ending your life been on your mind?		
18	Do you feel tired all the time?		
19	Do you have uncomfortable feelings in your stomach?		

20	Are you easily tired?		

Instruction: Answer all of these questions.

Section 3: Anxiety (Spielberger Anxiety state trait inventory

#	**Spielberger Anxiety State/ Trait inventory**	No 1	Little 2	Quite 3	A lot 4
1	I feel calm				
2	I feel secure.				
3	I am tensed				
4	I am strained				
5	I feel at ease.				
6	I feel upset.				
7	I am presently worrying.				
8	I feel satisfied				
9	I feel frightened.				
10	I feel comfortable.				
11	I feel self- confident				
12	I feel nervous.				
13	I feel jittery.				
14	I feel indecisive.				
15	I am relaxed.				
16	I feel content				
17	I feel worried				
18	I feel confused				
19	I feel steady.				
20	I feel pleasant				

APPENDIX D - SCHEDULE OF ACTIVITIES TO BE DEVELOPED

	2018 Sep.-Dec		Dec 2018 April 2019	April June 2019	June July 2019	Aug Oct 2019	Oct. 2019 Jan 2020	Feb 2020	Septem to November 2022	December 2022	
Activities	1 Sem	2 Sem	Private Period	1 Sem	Private Period	2 Sem	Private Period	Private Period		1 Sem	2 Sem
Literature review	X	X	X	X							
IRB approval				X	X						
Pretesting and piloting of instrument					x	X					
Data collection procedures							XXXX			X	
Data Analysis							X	XXXXX		X	x
Thesis writing						x	X	xx	Xxxxxxx	x	X
Attendance at conference and other scientific events		x	X		x	xxx				x	x
Final Editing of thesis and preparation of IRB report										x	x
Defense											x

Appendix x : Budget

Activity	Item	Quantities	Unit cost	Total
IRB	Proposals	7	3000	21,000
Pretesting	Questionnaires	20	100	2,000
Pilot testing	Questionnaires	40	100	4000
Data collection	Questionnaires	250	100	25,000
Transportation	Daily trips	30 visits	4000 per visit	120,000
Analysis	-	-	-	0
Report	Document	3	5000	15,000
Total				187,000

Appendix Xi: Pretesting of in instrument

#	Age	Antenatal	Postnatal	Duration (minutes)
1	31	x		6
2	30		x	19
3	35		x	14
4	32	x		16
5	24	x		21
6	31		x	10
7	26	x		NA
8	21	x		28
9	22	x		17
10	34		x	13

11	37		x	29
12	36		x	NA
13	33		x	34
14	24	X		NA
15	29		x	45
16	19	x		NA
17	24	x		NA
18	Not	Used		
19	Not	Used		
20	Not	Used		