

Common Mental Disorders in Antenatal and Post Natal Mothers Who Receive Public Health Services in Georgetown, Guyana

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ABSTRACT

This study was designed to determine the sociodemographic, obstetrical and behavioural characteristics alongside psychosocial social distress, anxiety and depression in antenatal and post natal mothers who received public health maternity services in Region four (Guyana). This is a quantitative observational study (cross-section), that sampled 200 mothers between the ages of 16 and 51, from February to September 2020.

Interviews were done in homes, at work sites, clinics and hospital, using the SRQ-20 a structured questionnaire for sociodemographic, and obstetrical characteristics. Data Analysis was done through the Statistical package for Social sciences (SPSS), version 23.0. We computed descriptive Statistics to determine patterns and central tendencies to see variability. Odds ratio and Pearson's correlation were done .All ethical standards were upheld. Reliability were assured through the application of Cronbach alpha index of 0.7 and above. Sensitivity,0.64 and specificity 0.84 complemented the face and construct validity of these findings.

The mean age of subjects is 26.6 years, the youngest being 17 years and the modal age group is 21-25 age The four (4) most prevalent SRQ-20 symptoms experienced by antenatal and post natal mothers are feeling nervous, easily tired, headaches, and lost of interest, 52.5, 51.5, 44.5, and 40% respectively. While the four lest prevalent SRQ-20 symptoms experienced by mothers are thoughts of ending life, daily working suffering, feeling worthless and poor digestion, 18.8, 16.6, 15.6, and 15.3% respectively.

The overall prevalence for CMD is 23.6%. Cross-tabulation has shown that positive CMD is most prevalent in antenatal mothers in the 21-25 age range(16 (10.5 %),third trimester 14(14.4%), multipara (12%), single mothers (in union 20.8%; not in union 14%), post natal mothers 28 (26.9%) antenatal and 8 (16%) and multipara mothers 15(26.7%).

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Introduction

Issues relating to sustaining a woman's ability to cope effectively, in the roles of nurturing, protecting and promoting her family have been addressed through the Alma Ata's article VII (provision resources, personnel and services), the Millennium Development Goal 5 (improve maternal health and the Sustainable Development Goals (SDG's) 3-target 1(reduce the global maternal mortality ratio to less than 70 per, 100 000 live births [1]. The Alma Ata's definition of health accounts for women's claim to physical, social and mental completeness. Additionally, the SDG highlighted mental health as a crucial component of maternal mental health status. These global directions have evoked continual surveillance of indicators of the well-being of women. State of the World Midwifery report cites that 289, 000 women died from complications of child's birth, while 3000, 000 neonates died. This indicator invites governments to manipulate the local circumstances to promote the well-being of women. Towards this end, Guyana, one of the smallest countries on the South American continent has responded to this challenge.

Its population has a global ranking of 164. Its growth rate ranks 157 and the crude birth rate is 19.21 per birth 1000 people. As of 2021, Guyana's sex ratio is 101.34 males to 100 females.Of 210 countries/territories Guyana is at positioned at 150th in terms of in terms of male- to- female ratio [2].

Women in Guyana, Who Are They?

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 [3]. 83,646 women of all ages reside in the Region 4(the most populatedof Guyana's 10 administrative region). Their modal age range 20 to 24 comprises 14,274 of these women [3].

The Guyanese woman has a life expectancy of 71.8 years. Life expectancy for Guyanese women appears to be age related, at birth it is 69 years while at 45 years the expectancy is 74.2 years.

Even though, it is higher than their male counterparts this may not signal that women enjoy a better quality of life [4].

Guyana's Gross Reproductive Rate (GRR) is 0.4954, while the general fertility rate (GER) is 3.0 and the total fertility rate is 9.6 per woman. Therefore Guyana has a moderate fertility. Further, the mean age of the Guyanese woman at the first birth is 20.8 years. This varies per region.

The Health Care System in Guyana

Guyana's health care system has decentralized health services are offered in the ten administrative regions. Rural, remote or interior classifications are given to regions 1, 7, 8 and 9, while regions 2, 3, 4, 5, and 6 are said to be coastal. Region 10 lies just off the coastal region but shares a combination of urban, rural and remote characteristics.

Health Services in Guyana

Health services in Guyana are offered by public and private sectors and to a lesser extent by international agencies and non-Governmental organizations. The services offered by the private sector comprises consultations, diagnostic, inpatient, outpatient, emergency, maternal and child health (MCH), specialist, hospice and pharmaceuticals. Patients pay for these services through insurance, employment health schemes, public health support, and in most cases from their finances. This sector also provides contractual services (magnetic resonance imaging, MRI) to the public health care system.

In addition to providing those services mentioned above, the public health system offers a referral link for patients to access the care they need, if it is not offered at the facility where they are assessed, admitted or treated. Further, it acts as the gatekeeper for implementation of policies that determine the institutions suitable to care for high-risk patients (all high-risk prenatal mothers are cared for at the hospital which has the facilities)

Structure of the Health Care System

In Guyana, the public health system is decentralized, from the central point at the Ministry of Health, which is located in Georgetown. Except for Region 6's regional health authority, the control of health lies in the hands of the regional health officers. The health system is composed of five (5) levels of care. These are level 1 or outpost is often run by a community health worker, while some are enhanced by a medex and auxiliary staff. This level cares for common illnesses and offer maternal and child health (MCH) surveillance programmes.

The level 2 (community health centre) is staffed by midwives who are complemented by a doctor, nurse assistants and auxiliary staff. Staffing of some health centres may include counselors, social workers and visiting phlebotomist. Services include outpatient clinic, chronic disease clinics, MCH, Prevention of mother to child transmission (PMTCT), vaccination counselling and referrals.

Level 3 (district hospital) is staffed with doctors, registered nurses, midwives, nurse assistant, patient care assistants, technicians, physiotherapist, social workers, dentist, and auxiliary staff. Services include those offered at level 2 and inpatient services, antenatal, intrapartum and post-natal care, minor surgeries, dental care, physiotherapy, laboratory investigations, imaging (X-rays) and referrals. These three levels are not equipped to offer specialized care for clients with mental or psychological disorders.

Level 4 (regional hospitals) are staffed by doctors, specialist (gynecologists, obstetrician) all categories of nurses, technologist (laboratory and imaging), nutritionist, visiting specialist and a psychologist. This level is geared to provide diagnostic care in addition to the services offered at level 3.

Level 5 (Specialist/Referral). This is the highest level of care offered in Guyana. The specialist institutions employ the cadre of personnel that are congruent with the services that they offer e.g., the ophthalmology and psychiatry hospitals in Region 6. Additional to the specialist institution in the Georgetown Public Hospital corporation which also serves as the national referral hospital for Guyana. In this function, it caters for the gamut of conditions that cannot be managed at subordinate levels of care. It is also the only teaching institution in Guyana that offers rotation and internship for medical students, nurses, technologist and a range of speciality. This hospital has a department that offers diagnostic, treatment and follow-up care for clients with mental and psychological illnesses. The specialist extends a visiting service to the other regions to provide surveillance and maintenance of care to all patients.

Health Services in Georgetown

Health services in Georgetown are offered by the private and public sectors. Its organization is different from that of other regions, in that services maternal and child health services are managed by the Ministry of Public Health (MOPH) and the Ministry of communities. Level 2 care in Georgetown is offered at the 12 health centres. Three of these facilities Lodge, Dorothy Bailey and festival city are the management of the municipality which reports to the Ministry of Communities, while the Kitty, Campbellville and Industry are managed by the GPHC board. The Agricola, Albuystown, North East La Penitence, Sophia and David Rose are managed directly by the Ministry of Health.

This system is monitored by a cadre of health visitors (specialized public health nurses) who conduct quarterly caucus with public health nurses of the 10 regions. Presentations include reports on antenatal and post-natal mothers, the Expanded programme of Immunization (EPI) and issues. Midwives play a dominant role in the delivery of reproductive health services, especially intrapartum and post-partum care.

Role of the Midwife

There are three categories of midwives (single trained, domiciliary and registered nurse midwife) in Guyana. The single trained midwives are a certified nurse assistant training and midwife. the domiciliary midwife are certified after 18 months of training and the staff nurse midwife who is a registered nurse with midwifery certification. Those assigned to obstetrical units provide perinatal services, family health, care of the neonate, family planning, assessment of mothers and babies. The staff nurse midwife assumes managerial responsibilities.

All midwives in obstetrical units play a role in complementing the immunization programme regardless of the level of care to which they are assigned. Further, they assess the health status of mothers. Nevertheless, evidence suggests that midwives require more knowledge to evaluate pregnant and post-natal mothers for alterations in their mental status [5].

Inherent in the goals of the Ministry of Public Health (MOPH) are directions towards healthy living, eating, exercise and knowledge on sexual reproduction. The resultant objectives reflect, nutrition

and medical issues. Nevertheless, there is no mention of directions to promote mental health. Even the five strategic priorities and output did not mention mental health.

Mental Health in

Mental health is hypothesized as the extent to which an individual harmonizes as he or she responds to effects of negative positive circumstance. The World Health Organization (WHO) sees mental health as an absolute factor. It describes an individual who is aware of his/her strengths and limitations and of capable of enduring routine challenges, while engaging in productive activities for the betterment of the community.

WHO's comprehensive mental health action plan 2013-2020, as adopted by the 66th World Health Assembly, calls for a change in the attitudes which disseminate stigma and discrimination and further which isolated people with mental disorders WHO. Albeit, 1:10 of women in the world has a mental disorder only 1% of the world's workforce labour in mental health. There is less than 1 psychiatrist per 10,000 people further, in lower- and middle-income countries (LMICs) rates fall below 1: 100 000 while in high income countries the ratio is 1:2000. Evidence suggest that 10-15% (78,000-114,500) has a mental disorder. 3%- 5 % (20,000) of Guyanese suffer from severe mental illness. Ministry of Health. This report also specifies that depression is the 5th leading factor to suicide which is the third leading cause of death in Guyanese fifteen to forty-four age group. Such evidence has birth invited investigations of the mental issues affecting individuals of the reproductive age group, especially women.

According to the World Health Organization (WHO), one in four people will develop some mental disorder during life. 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. These manifestations range from mild to moderate anxiety to post-traumatic stress disorder. These are conceptualized to include insomnia, fatigue, irritability, depressive moods, difficulty concentrating and somatic symptoms [6].

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 $p=0.69$. Multiple regression (Tukey) substantiates that the views of midwives (mean of 3.17) differed significantly from that of doctors, (mean 2.548); $p=0.04$, regarding the increases in the incidence of PPD. (Rogers, Razack & Persaud n.p). 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. Further, findings confirm that 36.6% of mothers experienced CMD. The most common symptoms are headaches (47.2%) and easily tired (49.9%). Although studies suggest a 14.9% prevalence in adults more than 1:10 women (14%) report symptoms of antenatal depression [7-9].

Anxiety

Anxiety is seen as a leading associate of disability globally. Notably, its greatest burden is exorted on women during their

reproductive age. It appears that a woman's susceptibility to anxiety increase during the perinatal period. 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 [10]. Findings also suggest that women in LMIC are at greater risk for perinatal anxiety [11].

Depression

Depression exorts 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 LMICs [12]. Evidence confirms that pooled prevalence for depression was 31.4% as compared with 17.3% pooled prevalence of major depressive disorders. It appears that depression in the prenatal period reduces the neonate physical activity, vagal tone, auditory and visual orientation. The neonate born to these mothers depressed mother may manifest increased irritability and poor interaction. Evidence suggest that antenatal and postnatal depression is high in low-income settings.

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 Pub Med, EMBASE, Psycho Info, HINARI and EBSCO. Evidence in this review comprises and interplay with demographic, and obstetrical attributes of women. Sociodemographic factors include age and marital status [12]. Individual social capital comprises demographics (age, marital status) and support from relatives and family members [7, 13].

Age

The studies suggest that CMD are most prevalent in younger mothers, who experience difficulty with intimate partners and ethnic minorities, noting that major depressive disorder (MDD) in the US that often goes under-diagnosed and untreated [14]. Evidence confirms that antenatal depression is more common in the 20-39 age group. This age group is 2.7 times more likely to experience mental disorders than the women below 20 years old [10].

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. Evidence also confirmed a higher prevalence of postpartum depression in older mothers, over 40 age group in their early postpartum period. A study confirmed that 21% of the younger mothers (below 30) experienced antepartum depression.

Malhotra and Shaw 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. Albdy, 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 [15]. 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 an 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.

These can be reviewed according to the type of union and its effect on her mental health. Jacob 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, express more depressive symptoms and further statistically higher multivariate analysis for divorced and widowed mothers were 3.46 times higher than married women [7]. These findings contrast with evidence that married couples appear to have more psychological distress. He posits that cohabiting has fewer benefits for the psychological well-being 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. 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 notes that 547,928 Guyanese are over 15 years old [16]. This fact raises questions regarding the existence of relationships malfunction and resultant effects on the mother's mental health. Malaray 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

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. 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 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 [9]. Although social capital promotes the mental health of pregnant mothers its quality may range between poor to moderate [7, 13]. 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. According to, 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, social inequalities, social stress, income, social status, gender-based violence and support [8, 12, 17]. 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, and the consequential loss of their support [18].

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. 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.

Friends Support

Friends dependency, comfort and trust are mentioned as vital to preventing CMDs in pregnant mothers, nevertheless there is a paucity of information regarding friends characteristic.

General Aim

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

Specific Aims

Characterize women regarding socioeconomic, and reproductive and social capital variables.

Identify the prevalence of somatic, reduced energy, depressive thoughts depressive and anxiety symptoms in women who use public antenatal and postnatal services in Georgetown

Identify the scores CMDs symptoms in women who use public healthcare services in Georgetown.

Method

Design

This study has a mixed approach and an observational cross-sectional design, to identify the prevalence of CMD in Antenatal and post natal mothers who receive public health services in Georgetown.

Setting

This study was conducted in Georgetown, which houses the largest catchment of antenatal and post natal 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.

Population

The twelve (12) health centers in Georgetown comprise a population of 2,148 mothers. The central health centre is located in the GPHC.

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.

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 reviewed in this decision regarding the sample technique.

Recruitment

Demographic surveillance systems (quarterly 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 approached 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.

Data Collection

Following permission from all governing and ethical authorities, mothers were informed of the nature or conduct study. Those who volunteered 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. Mothers who expressed suicidal tendencies, symptoms of confusion and severe distress were asked the permission to disclose their condition to the midwife-in-charge, so that they will be referred appropriately.

Variables

The independent variables are socio-demographic (age, marital status, social capital and variables include psychological stress, depression and anxiety.

Instruments and Measures

This instrument comprises Thirty -one (31) questions in three sections. Namely, Section 1 comprises 2 sociodemographic items (age and marital status). Section 2 comprises 3 obstetrical (antenatal, postnatal parity and gravida) and social capital (support from family, relatives, spouse, friends, counsellor and welfare), while the third section comprises 20 items based on the SRQ-20 questionnaire.

Age is Measured by One Question that requires the number of years. Marital status is also measured by one question, composed of married single divorce, widowed, separated in union and not in union, in order to give mothers the opportunity to supply their alternatives [12]. This was re-coded as married in union 4, single in union 3 married out of union 2 and single out of union 1

Social Capital in this study is defined as the the support the mother received from her family, relatives, spouse, friends, counsellor or welfare. This was measured by always, often, seldom and never, coded 0-4 [12].

Psychological Distress in perinatal mothers defines the somatic, reduced energy depressive and anxiety symptoms that constitutes CMDs. Its SRQ-20 questionnaire which comprises 20 dichotomous items (yes and no), which are subdivided into four scales, 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.

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. Odds ratio (binary outcomes) (no/yes). SRQ -20 scores was calculated using cross tabulation [12]. Hypothesis testing was done using correlation and ANOVA Sensitivity and specificity analysis was conducted.

Results

A total of two hundred (200) mothers who received services at eight public facilities (GPHC and the health centres at South road, Festival City, Lodge, Campbellville Agricola, Albouystown and Sophia) participated in this study. One hundred and five (52%) received services at the Georgetown Public Hospital maternity clinic. The mean age is 26,6 years. The modal age range is 21-25. Findings have shown that 66 (38.4%) of these mothers are single and a total of 62 (36.1%) and not in a relationship with (not in union) with their partners. 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 multipara.

Table 1

Variable	N	Frequency	Mean	Std. Deviation	Variance
My relatives are willing to assist me in times of crisis.	199	197	3.67	.635	.404
My family members accept my pregnancy and help me to cope.	200	195	3.72	6.91	.478
My spouse accepts my pregnancy and helps me to cope.	200	189	3.75	.726	.526
I can approach my closest circle of friends for support in times of crisis.	200	181	3.23	.998	.997
The welfare personnel in my area provided the support I needed.	200	95	1.96	1.18	1.40
Specially trained counselors gave me the support that I needed.	200	15	2.09	1.16	1.34

Source: data

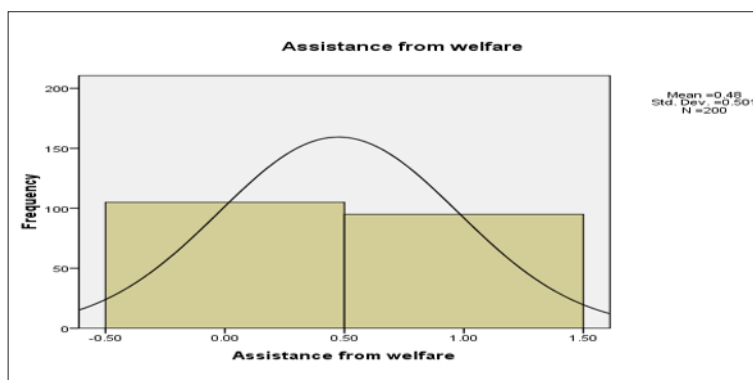


Figure 1: These means indicate that most mothers accessed support from their relatives, family members spouses and close friends. Support of relatives, 197 (98.5%), with a mean of .98, SD. 121 and a variance of .015 was the most popular form of social capital accessed by these mothers. The least accessible form of social support was welfare, which was utilized had by 97 (47.5%) mothers, mean .475, SD .501 and variance .251.

Table 2: The most prevalent symptom somatic, reduced energy depressive thoughts and depression and anxiety symptoms in antenatal and post natal mothers

Variable	Outcomes	N	%	Mean	SE	Sd	Variance
Depressive thoughts and anxiety	Do you feel nervous, tensed and worried?	200	52.5	1.44	0.34	.484	.235
Somatic	Are you easily tired?	199	51.5	1.48	.035	.495	.245
Somatic	So you have headaches?	200	44.5	1.52	0.34	.491	.241
Depressive thoughts	Have you lost interest in things?	200	40	1.58	.034	.487	.327
Depressive thoughts	Thoughts of ending life?	200	18.8	1.81	.027	.383	.147
Reduced energy	Is your daily life suffering?	200	16.6	1.83	.026	.366	.134
Depressive thoughts	Do you feel that you are worthless?	200	15.6	1.85	.025	.352	.124
Somatic	Is your digestion poor?	200	15.3	1.84	.025	.351	.123

The four (4) most prevalent SRQ-20 symptoms experienced by antenatal and post natal mothers are feeling nervous, easily tired, headaches, and lost of interest, 52.5, 51.5, 44.5, and 40% respectively. While the four lest prevalent SRQ-20 symptoms experienced by mothers are thoughts of ending life, daily working suffering, feeling worthless and poor digestion, 18.8, 16.6, 15.6, and 15.3% respectively.

Prevalence of CMDs

The overall prevalence of CMDs in antenatal and post natal mothers who receive public services in Georgetown is 23.4% (n154).

Table 3: Prevalence of CMDs and the Sociodemographic, and obstetrical characteristics of mothers

Factor	Frequency	%
Age (range):21-25	16	10.5
Antenatal	8	16
Post natal	28	26.9
3rd trimester	14	14.4
Multipara	15	26
In Union		20.8
Not in Union		14%

Cross-tabulation has shown that positive CMD is most prevalent in antenatal mothers in the 21-25 age range (16 (10.5 %) ,third trimester 14(14.4%) ,multipara (12%), single mothers (in union 20.8%; not in union 14%), post natal mothers 28 (26.9%) antenatal and 8 (16%) and multipara mothers 15(26.7%).

Odds Ratio

The overall prevalence of CMD's among antenatal and post natal mothers is 23.4 % n 154. The odds ratio revealed that a total of 36 mothers tested positive for CMDs. Odds ratio =1.8 .We find the odds ratio between antenatal mothers in relation to support from relatives and positive CMDs 1.8 at 95% confidence interval for odds ratio [.928-1.57]. There is no significant difference in the odds of manifesting CMD in the presence of absence of support from relatives (OR=1.56, 95% CI [101, .040].

Hypothesis

Pearson's product moment test was done to assess the hypothesis

1. Ho: There no relationship between demographic variables and CMD symptoms
2. Ho: There is no relationship between obstetrical variables and CMDs in antenatal and post natal mothers.
3. Ho: There is no relationship between the social capital available to the antenatal and post mothers and Somatic symptom.
Ho: there is no relationship between depressive symptoms and spousal acceptance of pregnancy.
4. Ho: there is no relationship between depressive symptoms and spousal acceptance of pregnancy.
Ho: There is no relationship between the mothers' depressive and anxious thoughts and their social capital

Demographic and Obstetrics

The results of Pearson's correlation test has shown a relationship between the mother's depressive and anxious thoughts and the age p. 0.004 and sig. 001 for the mother's, parity and CMDs p=0.05, sig0.01.

Somatic Symptoms

There is a relationship between somatic symptoms and mothers who are supported by friends p=.002, sig at 0.00; mother supported by their spouses, p = .047. sig at .002.

Depressive Sysmtoms

There is a relationship between **depressive symptoms and** women whose spouses accepted their pregnancies p = .015 (sig.0.05). There is also a relationship between support from closest friends p = 0.18. We find a significance at 0.01 in relationships between symptoms of depressive thoughts in women who received assistance from their family members p.=and spousal acceptance of pregnancy, p = .000.

Depressive and Anxious Thoughts

Results reveal that relationships exist between **depressive and anxious** thoughts in mothers with spousal support, p.015. Significance at 0.001 families are acceptance and support p = .000; assistance from relatives, p= .000; mothers receiving welfare, p = .008 and the services of specially trained counselors, p=0.040.

CMDs and antenatal and post natal mothers.

Discussion

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 and the GPHC central maternal and child health clinic. This response was directly a result of the timing of the investigation. The general election campaign insecurities coupled with the COVID 19 prevention restrictions invited precautions to collecting data in areas identified as epicenters.

This study proposed to find out the sociodemographic and obstetrical

Characteristics of mothers who receive who receive antenatal and postnatal services, at public facilities in Georgetown.

A close examination of the demographic variables invites us to look closely at age marital status in relation to union. Nguyen et al reiterates that anxiety is most prevalent in women in the reproductive ages [12]. Evidence suggest higher prevalence of CMDs in mothers in the 21 -26 age group. This finding coincides with ours which confirms that the 21-25 age range is most carries the greatest burden of CMDs. We have sufficient evidence to conclude that there is a significant relationship between the age of the mother and CMDs.

Further examination of in and out of union has shown higher prevalence CMDs of in single mothers and in union. The distinction we examined the nature of the mother' marital status.analyzed data to determine if the mother was in a relationship (union) of not, regardless of her marital status. Jacobs, notes that the prevalence of CMDs is increased in women living alone. Evidence suggest that 37.5% of women in the 25-44 age group in Guyana are heading their homes. We discover that 36,1% of mothers in our study do not have relationship with their spouses. Yet, the majority of mothers stated that fathers of their babies accepted the pregnancies and support them mean (95.75). This phenomenon tends to introduce the notion of what may be termed co-parenting. In examining the literature we noted the findings pointing to unions and devastating effects on the mother's mental health. These include emotional dissatisfaction Malaray, 2015, unhappy relationships and patterns of communication, Fellmeth, 2016. Although our study did not include these variables we found a relationship significant at 0.05 between depressive symptoms in women whose spouses accepted their pregnancies. We believe that there is sufficient evidence to conclude that spousal acceptance of pregnancy and support does not protect the mother from CMDs.

In the category of **obstetrical variables findings** show the highest prevalence of CMDs occurs mothers who are post natal (28.9), multipara mothers (26%), and mothers in their third trimester (14.4%). Supported by the fact of a highly significant,0.01 relationship, p 0.005 between parity and depressive and anxious thoughts we believe that there is sufficient evidence the link between multipara status and depressive anxious symptoms (CMDs)

Mothers were assessed for depressive thoughts and anxiety, somatic symptoms, reduced energy and depressive thoughts. 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 attributed to the these symptoms, sadness did not dominate. Headache (mean 1.52) emerged as the leading **somatic symptom** among these mothers. This finding concurs with those of Jullian (2011) that placed the prevalence of headaches as the most prevalent feature in this category. Even though the majority of the sample were high-risk mothers, it is difficult to relate this finding to the general physiology of pregnancy related complications. Their varied diagnosis of the majority sample (high-risk) may not be attributed the frequency of headaches. Hence this finding must be view in its original context, its prevalence. Moreover we found a highly significant relationship at 0.01, $p =$ Examining the construct of reduce energy 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. We suggest that this finding relates to depression. The evidence garnered in this study suggest a higher prevalence.

Although most mothers had not lost interest in things (depressive thoughts), the presentation of suicide idealization in 36(18%) of these mothers is alarming. These findings different from those of Jullian who cited high prevalence's of depressive thoughts was evident but suicide idealization was not mentioned as a dominant feature.

Prevalence of Common mental Disorders

Felmenth notes a prevalence of depression as 36% which is congruent with the findings of our study that cites the overall prevalence of CMD's in antenatal and post natal mothers as 36%. OR 1.8(95% CI .928-1.57) pinpoints the relationship between support from relatives and positive CMDs in antenatal mothers. The notion that support from relatives as a protective factor is not supported by this finding. Reflecting that most mothers had support from their relatives we conclude that our evidence is not sufficient to provide an inferential statement on this finding. We suggest that further research that examines the covariates, that affect the factor and this outcome is necessary may provide the required evidence.

Validity

All questions were based on the literature reviewed. Content validity of the demographic and obstetrical questions were ascertain by basing the questions on the scientific evidence produced in previous studies [12]. Evidence suggest that the SRQ-20 tool, when validated in Brazil, attained sensitivity of 83% and specificity of 80 %. in this study the sensitivity for the SRQ -20 is 0.664 and the specificity is 0.84. To validate the tool in this study a ROC curve evaluation yield Sensitivity 0.644 and Specificity of 0.84.

Reliability

The standard SQK 20 instrument was tested extensively in middle and- lower- income countries worldwide and was also used in countries in South America and the Caribbean [19]. The instruments were pretested on a sample of 20 women, who were not reused in the study. The principal investigator (PI) trained during the pretesting sessions to administer questions asked by subjects with consistency.

Cronbach alpha conducted on social capital and the SRQ-20 scales. Cronbach alpha index for the social capital (family support) in the pre-test, with a mean of 3.27, is .819. In the final study its alpha is .823, $p = 0.00$. (cochrons test)

Ethical consideration

The Institutional review board (IRB) at the Ministry of Health, Guyana granted permission to conduct this study. Institutional and approvals and cooperation were subjected to were attained following congruence with pandemic requirements for engagement with subjects, to gain permission to execute the investigation. Potential participants were informed of the nature and conduct of the study. They were told that their participation is voluntary and that they can withdraw from the study at any time. Refusal to participate or withdrawal will not attract penalties. Anonymity, confidentiality and privacy were during the process of this investigation.

Limitations

Although a there is a dearth of studies on CMDs, few are written in English.

Poor access to local unpublished materials on CMDs. Situational restrictions reduced associated with the timing of the study reduced the mothers' antenatal clinic visit. Numbers of mothers worked from their homes, making this a suitable setting for data collection. Further, the admission of high-risk subjects, during data collection lead to incomplete questionnaires. Notably, the exclusion of women with language barriers lead to disproportionate sampling that can limit the dept of comparisons

The cross-sectional design masters prevalence, is a weak measure of relationships and cannot measure cause. There is the possibility of biases associated with the overestimation of CMDs which can limit the validity of the study. The SRQ, questionnaire is not diagnostic, it merely identifies clients who fit specified cut off points.

Implications

These findings have unearthed gaps in the this body of knowledge which are required to interpret findings relating to factors in social factors (relatives, friends, spouse and welfare). It signals a need for a more indebt case control or longitudinal study which investigates the covariates that interact with these factors, in determining the response in the mother. Inherent in these findings are facts pinpointing the type of unions that are congruent with CMDs in antenatal and Post natal mothers in this study. This signal the social machinery that is responsible for promotion, protection and sustenance of antenatal and post natal mothers, to engage an integrative response.

This implies that team addressing issues of this nature must be duly constituted with a cadre of professionals, specialist and representatives of the antenatal and post natal mothers. These must be capable of effecting policy modifications to facilitate family centered changes, resource allocation and intersectoral collaboration to effect client centered, evidence based preparations to combat this occult malignant disintegration of the quality of life experienced by antenatal and post natal mothers [20-36].

Conclusion

The fact common mental disorders exhort heavy burdens on the family, community and health service cannot be overstated. Guyana has already responded to international movements to improve maternal mental health. Therefore, generating evidence

on the burden of CMDs on the perinatal mothers receiving services in Georgetown, can add substance to mental health policy, programmes and practice.

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