

Indications for Gynaecological Consultation by Women at a Rural Outreach Centre in North-Central Nigeria

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ABSTRACT

Aims: To identify the reasons for consultations, the common clinical diagnosis and disease pattern at a rural gynaecologic outreach clinic.

Study design: Descriptive Retrospective Study.

Place and Duration of Study: NKST Hospital Mkar-Gboko, Benue state, North-central Nigeria, in seven years (1st April 2005 to 31st July 2012).

Methodology: Information from the case notes of patients who attended the outreach clinic over the study period were retrieved and analysed. Majority of the patients came by self-referral.

Results: Of the 1,733 women that attended the clinic during the study period, 1,605 (92.6%) women made the inclusion criteria and formed the study population. The age range was 15 to 78 years; mean value of 33.6 +/- 9.5 year; 78% of the women were ages 21 – 40 years. The mean parity was 2.1 +/- 2.7 and ranged between 0 to 13 children. 68% of the women were para 0 – 2 whilst 18% had parity of 5 and above. The women had 73 reasons and 2,390 presenting complaints, 49.6% of them had multiple presenting complaints (average 1.5 complaints per woman). Most common complaints were inability to conceive, lower abdominal pain and leaking of urine and /or faeces amongst 38%, 11% and 10% of the women respectively. There were 63 disease conditions with 1,793 clinical diagnoses. About 12% of the women had multiple clinical diagnoses. The three leading clinical diagnoses were infertility, genital fistulae and uterine myoma, in 46%, 12% and 10% of the women respectively; followed by sundry other gynaecological disorders (9%) and medical disease conditions (5%) in which hypertension, diabetes mellitus and retroviral diseases were more frequent in that order. Some women (n = 21; 1%) came for second opinion.

Conclusion: Gynaecological diseases are diverse and common among women in rural central Nigeria. Inability to conceive, lower abdominal pain and incontinence of urine and or faeces were the three main reasons women sought consultation with the gynaecologist at Mkar. Infertility, genital fistulae, uterine myoma, non-communicable medical disorders and retroviral diseases were leading clinical diagnoses. Extending the services of Gynaecologist to the rural areas in the region may reduce the access gap to women's health and enhance national development.

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1. INTRODUCTION

Women, men, children and the aged live different lives. This poses challenge in the priority setting for planning, design and implementation of the health needs of these groups of people [1]. Being a woman has implications for one's health. The female reproductive system is vulnerable to dysfunction or disease from infancy to old age. These dysfunctions if not properly managed can give rise to morbidity and mortality [2, 3]. The most evident issue is of course the differences that occur because women carry a greater health burden through the health risks and hazards linked with sexual and reproduction function [4]. Issues related to childbearing (high parity and infertility) are great causes of emotional and physical morbidity among women in developing countries [4]. The quality of care the women receive also varies widely depending on where they live and who they see [5]. The existing gross inequality in the health status of the people particularly between developed and developing countries, as well as within countries is pronounced. There is no area of health in which this inequity is as striking as in women's health and yet women's health and rights are central to population and development of any nation [1]. Up to now, both in developed and more in the developing countries, women continue to suffer needless disabilities and die prematurely of preventable causes [5]. The obstacles for optimal health remain greatest for the women living in the poverty stricken societies. They are the most likely to be deprived, abused and burdened with customs and traditions. They are the most likely to be subjected to high parity, physical labour, subjugation in decision making and impoverished. Achieving significant level of women's health requires knowledge of a true representative pattern of women disease in a region. This is necessary for a country like Nigeria if cost effective measures are to be taken to improve the quality of life of the Nigerian woman and achieve millennium development goals (MDG) 3, 4 and 5. The entire operation of the health care system allocation of resources is important with an adequate understanding of the morbidity pattern. This determines the utilization of resources by the healthcare providers and the clientele. A lot has been written about the prevalence of women's health conditions with infertility as the commonest condition in most African countries [3,6,7]. However, there is no report available to us in central Nigeria on the frequency of gynaecological diseases. It is out of this desire that the study sets to document the common presenting complaints and pattern of morbidity among women attending agynaecological clinic in a rural secondary level health facility in Benue State. It is envisaged that the data from the study will provide baseline information on the pattern of women's disease in the area for comparative and policy formation purposes.

2. MATERIAL AND METHODS

2.1 Study Background

Benue State is in north-central zone of Nigeria with an area of 34,059 km² and an estimated population of 4.22 million people, having its capital in Makurdi. Mkar, a sub-urban community in Gboko local government area of Benue state is located at about 85 kilometres north east of Makurdi. It has a population of 35,000 (2006 est) and houses a university, a mission hospital (NKST-Nongu U Kristu U Ken Sudan hen Tiv Hospital, a 170 bed secondary level health facility, established 1925), and other higher institutions among others (Nigeria Min. of Information, 2006 National Population census). More than 90% of the inhabitants are subsistent farmers and over 98% of the populace is of Tiv ethnicity.

2.2 Study Population

All women who registered at the outreach clinic to see the gynaecological team were included in the study. Most of the patients came by self-referral following announcement

byword of mouth in worship places. An outpatient register was kept on all patients who came to the clinic. Clinical impression of the patient's conditions/diagnosis were arrived at after history, physical examination and minimal investigation and recorded in the case notes, including age and parity were extracted and compiled for the period under study. This study was based on the outpatient consultations in the gynaecological clinic, therefore gynaecological emergency services of the hospital were not considered..

2.3 Study Design

This was a 7-year descriptive retrospective study of gynaecological illnesses seen in the gynaecological outreach clinic on NKST Hospital, Mkar between 1st April 2005 and 31st July 2012. All women who attended the gynaecology clinic were identified from the outpatient register. Names of the patients and their hospital numbers were obtained. With this, case notes of the patients were retrieved from the health records department and relevant data including age and parity were extracted and compiled for the period under study. The data was analysed using Microsoft Excel 2010 to obtain the mean, range and percentages and standard deviations. These were displayed on tables 1-5.

2.4 Ethical Considerations

Ethical approval for the study was obtained from the management of the Mkar Christian hospital, and patients confidentiality was ensured throughout the study.

3. RESULTS

A total of 1,733 women came for consultation during the study period, 128 of them had incomplete data and some medical emergencies, hence only the records of 1,605 women were analysed. The patients were aged 15 to 78 years with a mean age of 33.7 $\pm$ 9.5 years. Women aged 21 – 40 formed 78% of the patients. Adolescents and the elderly were 1% and 2% respectively. The parity of the women ranged from 0 to 13 with a mean of 2.1 $\pm$ 2.7 deliveries. Most of the women (68%) were of low parity (para 0 – 2) compared to 18% with parity of 5 and above. The age and parity distribution is as shown in **Table 1**

Tables 2 shows the distribution of the presenting complaints by the women who attended the clinic; and **Table 3** shows the distribution of the presenting complaints by age and by parity. The women had 73 indications that brought them to see the Gynaecologist and about half of them (49.6%) had multiple presenting complaints, giving an average of 1.5 complaints per woman. The 73 reasons were grouped into 12 categories. Most of the complaints were from women in the second and third decades of life (85%) and of low parity (68%).

Most of the women (38%) complained of inability to conceive, whereas 11% and 10% of the women complained of lower abdominal pain and leaking of urine respectively.

Tables 4 shows the distribution of the diagnoses among the women that presented for gynaecological consultation and **Table 5** shows the distribution of the diagnoses and percentages of women by ages and by parity. There were about 63 clinical diagnoses further grouped into 14 diagnostic entities from the 73 complaints made. About 12% of the women had more than one clinical diagnoses. The three leading clinical diagnoses were infertility, genital fistulae and uterine myomas in 46%, 12% and 10% of the women respectively; followed by various 'other' gynaecological disorders (9%) and medical disease conditions (5%) in which hypertension, diabetes mellitus and retroviral diseases were more frequent. Genital malignancies with preponderance of cancer of the cervix were present in 1% of the women. Some of the women (n= 21, 1.0%) came to seek second opinion for intervention offered to them elsewhere.

122 **Table 1 Age and parity distribution of the women that attended outreach clinic**
 123 **to see the gynaecologist (no = 1605)**

	Variable	Number (%)
124	AGE (YRS)	N=1,605
125	<16	11 (1)
126	16 -20	51 (3)
127	21 - 25	203 (13)
128	26 - 30	422 (26)
129	31 - 35	341 (21)
130	36 - 40	280 (18)
131	41 - 45	116 (7)
132	46 - 50	70 (4)
133	51 - 55	31 (2)
134	56 - 60	23 (1)
135	>=61	26 (2)
136	No Age	<u>31 (2)</u>
137		<u>1605 (100)</u>
138	Range	15 to 78 years Average 33.7 +/- 9.5 years

139

140 **Parity Distribution of the Women**

	Variable	Number (%)
143	<u>PARITY</u>	<u>N = 1605</u>
144	0	598 (37)
145	1	339 (21)
146	2	156 (10)

147 3 101 (6)

148 4 92 (6)

149 ≥ 5 287(18)

150 not stated 32(2)

151 1605 (100)

152 Range 0 - 13 Average 2.1 +/- 2.7 Total deliveries 3294

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154 **Table 2 Distribution of presenting complaint(s) among women at gynaecology clinic at**
155 **NKST hospital Mkar (n=2390)**

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S/No	Reason(s)	Primary	Secondary	Tertiary	'Quartenary'	Total (%)
1	Abdominal pain	5	2	1	0	8 (0)
2	Abdominal swelling	1	1	0	0	2 (0)
3	Abnormal genitalia	2	0	0	0	2 (0)
4	Abnormal genitals colour	1	0	0	0	1 (0)
5	Abnormal vaginal bleeding	8	0	1	1	10(0)
6	Acne	0	1	0	1	2(0)
7	Bad breath	1	0	0	0	1(0)
8	Bleeding at intercourse	2	6	4	0	12(1)
9	Blood in stool and urine	0	1	0	0	1(0)
10	Bloody urine at menses	0	1	0	0	1(0)
11	Itching of the Body	1	1	0	1	3 (0)
12	Cervical lesion	1	4	0	0	5(0)
13	Cervical tear	0	2	0	0	2 (0)
14	Chest pain	2	1	0	0	3 (0)
15	Complete family size	2	2	0	0	4 (0)
16	Constipation	0	1	0	1	2 (0)

174	17	Cough	0	1	0	0	1 (0)
175	18	Diabetes mellitus	0	8	1	1	10 (0)
176	19	Discharging nipples	0	12	6	5	23 (1)
177	20	Dizziness	1	1	1	0	3 (0)
178	21	Husband with weak erection0		1	0	0	1 (0)
179	22	Excessive hair growth	0	5	6	3	14(1)
180	23	Fear of Fibroid	0	2	0	0	2 (0)
181	24	Fear of HIV	0	1	0	0	1 (0)
182	25	Fever	0	2	3	0	5 (0)
183	26	Frequent urination	0	1	3	1	5 (0)
184	27	Headache	2	3	2	1	8 (0)
185	28	Heavy menstruation	40	39	7	0	86 (4)
186	29	Feeling heat over the body	7	8	5	1	21 (1)
187	30	Hypertension	0	12	7	13	32 (1)
188	31	Irregular menstruation	18	36	4	0	58 (2)
189	32	Joints pain	1	1	0	0	2 (0)
190	33	Leaking stool	0	6	0	0	16 (1)
191	34	Leaking urine	220	11	6	4	241(10)
192	35	Leaking urine and stool	5	0	0	0	5 (0)
193	36	Low sexual feeling	0	1	1	0	2 (0)
194	37	Lower abdominal pain	214	53	5	0	272(11)
195	38	Lower abdominal swelling	21	45	4	1	71 (3)
196	39	Lower back pain	5	19	9	0	33 (1)
197	40	Lump in the breast	3	3	0	0	6 (0)
198	41	Multiple body complaint	1	0	0	0	1 (0)
199	42	Narrow vagina	2	6	1	0	9 (0)

200	43	Neck swelling	2	0	0	0	2 (0)
201	44	No menstruation	51	81	6	3	141 (6)
202	45	Increasing weight gain	0	10	5	1	16 (1)
203	46	Pain at intercourse	6	6	3	0	15 (1)
204	47	Pain in the breast	1	0	0	0	1 (0)
205	48	Pain with menstruation	7	3	2	0	12 (1)
206	49	Pain with urination	3	5	1	1	10 (0)
207	50	Palpitation	0	1	2	0	3 (0)
208	51	Perineal pain	2	3	1	0	6 (0)
209	52	Perineal tear	0	1	1	1	3 (0)
210	53	Poor sleep	0	1	1	0	2 (0)
211	54	Positive Pap smear	1	0	0	0	1 (0)
212	55	Pregnancy check	0	5	2	0	7 (0)
213	56	Recurrent child losses	8	0	0	0	8 (0)
214	57	Recurrent miscarriages	25	5	2	0	32 (1)
215	58	Living with HIV	0	24	9	1	34 (1)
216	59	Scanty menstruation	4	9	5	0	18 (1)
217	60	Wants another opinion	17	4	0	0	21 (1)
218	61	Swelling in vagina	45	22	5	2	74 (3)
219	62	Swelling of the body	1	0	0	0	1 (0)
220	63	Swelling of the legs	1	0	0	0	1 (0)
221	64	Vaginal discharge	11	20	11	6	48 (2)
222	65	Vomiting	1	0	0	0	1 (0)
223	66	Vulval itching	5	10	7	0	22 (1)
224	67	Vulval swelling	1	1	0	0	2 (0)
225	68	Vulval warts	0	0	1	0	1(0)

226	69	Want contraception	1	1	0	0	2 (0)
227	70	Wants IUD removed	1	0	0	0	1 (0)
228	71	Unable to conceive	822	67	24	3	916(38)
229	72	Wets bed at night	1	0	0	0	1 (0)
230	73	Feels vagina too wide	1	0	0	0	1 (0)
231	Total		1,594	579	165	52	2,390(100)

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233

234 **Distribution of the constellation of presenting complaint(s) at gynaecology clinic at**
 235 **NKST Hospital Mkar (n=2390)**

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237	<u>Variable</u>		<u>*Primary</u>	<u>Secondary</u>	<u>Tertiary</u>	<u>'Quarternary'</u>	<u>Total (%)</u>
238	1	Abnormal vaginal bleeding	68	83	16	1	168 (7)
239	2	Lower abdominal pain	235	69	12	1	317 (13)
240	3	Lower abdominal swelling	22	46	4	2	74 (3)
241	4	Leaking urine & or Stool	235	17	6	4	262 (11)
242	5	Medical disorder	0	44	17	15	76 (3)
243	6	No menstruation	55	95	13	3	166 (7)
244	7	Others	53	96	47	15	211 (9)
245	8	Recurrent miscarriages	25	5	3	0	33 (1)
246	9	Swelling in vagina	46	23	5	2	76 (3)
247	10	Second opinion	17	4	0	0	21 (1)
248	11	Vaginal discharges	16	30	18	6	70 (3)
249	12	Unable to conceive	822	67	24	3	916 (38)
250	Total		1,594	579	165	52	2,390 (100)

251 *Primary Complaint= the main reason the woman sought to see the gynaecologist

252 Secondary = the second reason, tertiary the third reason and 'quarternary' the fourth
 253 presenting complaint as found in the woman's case note

254 **Table 3 Distribution of the clinical diagnosis among the women at gynaecology**
 255 **clinic at NKST Hospital Mkar (n=1795)**

256	S/No	Diagnosis	Primary	Secodary	Tertiary	Total (%)
257	1	Adenomyosis	4	1	0	5 (0)
258	2	Carcinoma of the cervix	14	1	1	16 (1)
259	3	Angiomyxoma	2	0	0	2 (0)
260	4	Anovulation	112	9	5	126 (7)
261	5	Asherman's disease	26	1	0	27 (2)
262	6	Bladder neck incompetence	7	0	0	7 (0)
263	7	Cervical incompetence	13	2	1	16 (1)
264	8	Cervical lesion	8	0	0	8 (0)
265	9	Cervical polyps	5	1	0	6 (0)
266	10	Pelvic inflammatory disease	4	0	0	4 (0)
267	11	Chronic pelvic pain	59	1	1	61 (3)
268	12	Climentaric	11	2	3	16 (1)
269	13	Complete family size	3	1	0	4 (0)
270	14	Delayed menarche	1	0	0	1 (0)
271	15	Depression	1	0	0	1 (0)
272	16	Dysfunctional uterine bleeding	23	0	0	23(1)
273	17	Fear of cancer of the breast	1	0	0	1 (0)
274	18	Fear of cancer of the cervix	3	1	0	4 (0)
275	19	Fear of fertility failure	2	0	0	2 (0)
276	20	Fear of IUCD complication	1	0	0	1 (0)
277	21	Fear of pregnancy	3	1	1	5 (0)
278	22	Fear of STI	1	0	0	1 (0)
279	23	Fear of uterine fibroid	1	0	0	1 (0)
280	24	Genital prolapse	47	7	2	56 (3)

281	25	Genital tract infection	28	5	6	39 (2)
282	26	Gynaetresia	2	2	0	4 (0)
283	27	Inadequate coital frequency	9	3	0	12 (1)
284	28	Male factor	101	18	9	128 (7)
285	29	Menopause	12	0	1	13 (1)
286	30	Nothing abnormal detected	37	0	0	37 (2)
287	31	Ovarian tumours	20	3	0	23 (1)
288	32	Pelvic adhesion disease	15	3	0	18 (1)
289	33	Perineal tear	6	1	2	9 (1)
290	34	Polycystic ovary syndrome	24	1	0	25 (1)
291	35	Pregnancy	19	4	4	27 (2)
292	36	Pregnancy induced hypertension	1	0	0	1 (0)
293	37	Premature ovarian failure	10	0	0	10 (1)
294	38	Premenstrual syndrome	4	0	0	4 (0)
295	39	Previous urinary diversion	1	0	0	1 (0)
296	40	Rectovaginal fistula	6	0	1	7 (0)
297	41	Second opinion	3	0	0	3 (0)
298	42	Stress incontinence	3	6	2	11 (1)
299	43	Transverse vaginal septum	3	0	0	3 (0)
300	44	Tuboovarian mass	6	0	0	6 (0)
301	45	Tuboperitoneal factor	484	10	3	497 (28)
302	46	Ureteric fistula	17	0	0	17 (1)
303	47	Urethral leak	2	0	0	2 (0)
304	48	Urge incontinence	5	3	4	12 (1)
305	49	Uterine displacement	1	3	0	4 (0)
306	50	Uterine myoma	160	11	3	174 (10)

307	51	Vesicouterine fistula	8	0	0	8 (0)
308	52	Vesicovaginal fistula	164	0	0	164 (9)
309	53	VVF/RVF	5	0	0	5 (0)
310	54	Congenital uterine anomaly	0	1	1	2 (0)
311	55	Femoral hernia	0	1	0	1 (0)
312	56	Pulmonary oedema	0	1	0	1 (0)
313	57	Guilt	0	0	1	1 (0)
314	58	Helminthiasis	0	0	1	1 (0)
315	59	Residual ovary syndrome	0	0	1	1 (0)
316	60	Urinary retention	0	0	1	1 (0)
317	61	Medical disorders	40	33	19	92(5)
318	62	Surgical conditions	10	2	0	12 (1)
319	63	Others	23	0	2	25 (1)
320		Total	1,581	39	751,795	(100)
321						

322	Distribution of constellation of the diagnosis among the women (n = 1795)					
323						
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325	S/no	Variable	Primary	Secondary	Tertiary	Total (%)
326	1	Uterine myomas	160	11	3	174 (10)
327	2	Chronic pelvic pain	59	1	1	61 (3)
328	3	Dysfunctional uterine bleeding	23	0	0	23 (1)
329	4	Urinary & or Faecal fistula	210	0	1	211 (12)
330	5	Genital prolapse	47	7	2	56 (3)
331	6	Genital tract infection	38	5	6	49 (3)
332	7	Infertility	771	45	17	833 (46)
333	8	Medical disorders	40	33	19	92 (5)
334	9	Malignant genital tumours	14	1	1	16 (1)
335	10	Menopausal symptoms	33	2	3	38 (2)
336	11	Nothing abnormal detected	37	0	0	37 (2)
337	12	Others	119	28	16	163 (9)
338	13	Pregnancy	20	4	4	28 (2)
339	14	Surgical disorders	10	2	0	12 (1)
340	Total		1,581	139	75	1,795 (100)
341						
342						
343						

Table 4 Distribution of women for gynaecological consultation according to their chief complaint by age and parity (n=1605)

Age (yrs)	Abnormal Vaginal Bleeding	Lower Abd Pain	Lower Abd swelling	Leaking urine or Stool	No Menses	Others	Recurr Abortions	Swelling in Vagina	Second Opinion	Vaginal Discharge	Unable to Conceive	Total (%)
<16	1	3	0	4	0	3	0	0	0	0	0	11(1)
16 -20	3	9	0	24	2	3	2	0	0	0	8	51(3)
21 - 25	2	23	3	42	3	3	3	2	3	2	117	203(13)
26 - 30	10	42	3	36	10	9	7	7	3	4	291	422 (26)
31 - 35	11	37	7	30	8	7	8	3	3	3	224	341 (21)
36 - 40	12	50	5	33	13	11	6	4	6	4	136	280 (17)
41 - 45	16	26	3	14	11	7	0	5	2	1	31	116 (7)
46 - 50	7	22	0	14	4	7	0	8	0	1	7	70 (4)
51 - 55	2	11	0	8	0	2	0	5	0	0	3	31 (2)
56 - 60	0	4	2	11	0	1	0	2	2	1	0	23 (2)
>=61	4	0	1	17	0	2	0	2	0	0	0	26 (2)
Not stated	3	8	6	4	0	1	0	1	2	1	5	31(2)
Total	71	235	30	237	51	56	26	39	21	17	8221,605	(100)

Distribution of women for gynaecological consultation according to their chief complaint by parity (n = 1605)

Parity	Abnormal Vaginal Bleeding	Lower Abdom Pain	Lower Abdoml swelling	Leaking urine/stool	No Menses	Others Abortions	Recurrent in Vagina	Swelling Opinion	Second Discharge	Vaginal to conceive	Unable	Total (%)
0	12	66	14	7	13	13	7	0	3	3	460	598 (38)
1	3	28	1	82	10	1	5	3	3	1	202	339 (22)
2	5	14	2	21	5	5	6	3	2	2	91	156 (10)
3	4	14	0	14	4	12	4	5	3	0	41	101 (6)
4	13	18	2	22	8	4	3	4	3	1	14	92 (6)
>=5	31	86	7	87	10	19	1	22	7	8	9	287(18)
Not stated	4	9	4	4	1	2	0	2	0	1	5	32 (2)
Total	72	235	30	237	51	56	26	39	21	16	822	1,605(100)

Table 5: Distribution of women for gynaecological consultation according to their primary diagnosis by age and parity (n=1605)

Age(yrs)	Uterine Myomas	Chronic Pelvic Pain	Dysfunc Uterine Bleeding	Genital Fistula	Genital Prolapse	Genital Tract Infection	Genital Tumour	Infertility Syndrom	Medical Disorder	Malig Genital	Meno- pausal	Nothing Abnormal	Other Disorders	Preg	Surgical	Total (%)
<16	0	1	0	4	0	0	1	0	0	0	0	1	3	1	0	11 (1)
16 -20	0	1	0	24	0	0	11	3	0	0	0	3	9	0	0	51 (3)
21 - 25	5	5	0	39	3	10	115	3	0	0	0	5	15	2	1	203 (13)
26 - 30	31	9	5	36	11	12	266	9	2	0	8	23	10	0	0	422 (26)
31 - 35	36	13	4	27	4	2	207	6	3	2	8	24	4	1	341 (21)	
36 - 40	50	18	3	29	6	5	118	9	3	4	5	26	4	0	280 (17)	
41 - 45	22	10	8	11	5	0	25	0	0	10	3	19	1	2	116 (7)	
46 - 50	6	10	2	13	8	1	6	4	4	7	2	7	0	0	70 (4)	
51 - 55	5	7	1	6	4	0	1	2	1	0	0	3	0	1	31 (2)	
56 - 60	2	1	0	8	4	1	0	1	3	0	1	2	0	0	23 (1)	
>=61	0	0	0	13	1	0	0	0	4	1	1	5	0	1	26 (2)	
No Age	3	0	0	4	0	1	10	1	0	0	0	6	6	0	31 (2)	
Total	160	75	23	214	46	32	760	38	20	24	37	142	28	6	1,605 (100)	

Distribution of women for gynaecological consultation according to their primary diagnosis by parity (n=1605)

Parity(yrs)	Uterine	Chronic Dysfunc	Genital	Genital	Genital	Genital	Infertility	Medical	Malig	Meno- Nothing	Other	Pregnancy	Surgical	Total (%)
	Myomas	Pelvic	Uterine	Fistula	Prolapse	Tract		Disorder	Genital pausal	Abnormal			Disorders	
	Pain	Bleeding			Infection		Tumour	Syndro	Detected					
0	67	15	1	5	3	11	413	8	2	6	14	38	8	1 592 (37)
1	23	7	0	79	3	5	187	8	1	3	1	13	5	0 335 (21)
2	13	2	1	18	3	6	82	9	0	2	3	15	1	1 156 (10)
3	7	5	2	11	6	3	38	4	0	5	5	14	1	0 101 (6)
4	19	7	8	18	4	1	16	1	1	0	2	12	13	0 102 (6)
>=5	28	39	11	77	27	5	10	6	16	8	12	43	1	4 287 (18)
Not stated	3	0	0	6	0	1	13	1	0	0	0	7	1	0 32 (2)
Total	160	75	23	214	46	32	759	37	20	24	37	142	30	6 1,605(100)

3.1 DISCUSSION

The burden of gynaecological illness is diverse and large among women in central Nigeria with unpretentious need and increasing desire to seek gynaecological consultation. Inability to conceive, lower abdominal pain and incontinence of urine and or faeces were the three main indications for women who sought consultation with the gynaecologist at NKST hospital Mkar. Interestingly, some women came to seek second opinion concerning treatment offered to them elsewhere for their gynaecological illness.

The age range of 15 to 78 years and the distribution among the study population represented the full spectrum of gynaecological patients, from paediatric to senescent age group. This agrees with the earlier statement that female reproductive system is vulnerable to dysfunction or disease from infancy to old age [3]. The average age of 33.7 years, with preponderance of women aged 21 – 40 (78%) was similar to findings in studies from other centres [8, 9, 10,] and shows that gynaecological illnesses affect the most productive segment of the population with obvious socio economic and developmental consequences.

The wide range of parity (0 – 13 deliveries) among the women studied notwithstanding, the average fertility (2.1 deliveries) of the women was low compared to the north central zone total fertility rate of 5.4 [11]. Disaggregating indications for consultation among the women by parity showed that the majority of the women were of low parity (para 0 – 2) giving the reason for the low fertility rate.

Inability to conceive/infertility was the commonest reason (38%/46%) women came to consult with the gynaecologist during the study period. This is similar to the findings in Nnewi and Osogbo where they found infertility as reasons for gynaecological consultation in 41.9% and 48.1% respectively. As in most centres in Africa, infertility remained the leading indication for gynaecological consultation. The desire for pregnancy was expressed across all the age and parity groups. This was similar with the findings in other studies [9, 10] and reflects the high premium placed on fertility in the region.

Lower abdominal pain was the second most common reason (13%) the women came to see the gynaecologist. Lower abdominal pain in women can be of physiological, psychological or pathological cause. Table 4 shows several conditions that are capable of causing pain. Dysmenorrhoea, genital tract infection and its sequelae, chronic pelvic pain, lower abdominal tumours (benign and malignant) and 'presentation' of infertility among others are known to manifest as lower abdominal pain in women [12]. In this study, the prevalence of genital tract infection particularly pelvic inflammatory disease (PID) was lower than the findings from other centres [3, 7, 10, 12], however, we may be dealing with the sequelae of the PID, presenting as infertility and chronic pelvic pain. Hence lower abdominal pain presented as the second commonest reason the women sought to see the gynaecologist.

Leaking urine and or faeces was the third most common reason (11%) the women came. This is much higher than the findings from other centres [3, 7], including some community based studies in low resourced parts of the world where incontinence of urine or faeces were not reported among their findings [13, 14, 15]. Table 3 shows that, the women with the problem of incontinence cut across all the age groups. In Nigeria, the central zone is reported to have a high prevalence of incontinence of urine among women. Though most of the reports are from dedicated fistula centres in the zone [16, 17, 18], National Demographic and Health Survey (NDHS) 2008 corroborated their findings in the zone. The finding from this study further confirms the high burden of female genital fistula in central Nigeria [11]. If obstetric fistula is considered a proximate to maternal mortality, this explains the high maternal mortality ratio reported from the region [19]. Fistula patients are mostly found in rural areas, dedicated fistula centres or in programs that are responsive to them [20, 21]. This outreach centre was a rural community, the gynaecologists had fistula surgical expertise and the fistula surgeries were offered free or at very minimal cost. This might explain the high number of women with incontinence of urine who came for consultation.

This demonstrates that the problem is present and developing programs that are accessible and responsive to women with fistula will attract them from their seclusion and alleviate this human suffering.

Menstrual disorders, represented by abnormal vaginal bleeding and no menstruation for longer than three to six months were the fourth reasons the women sought gynaecological consultation and formed 7% of the reasons each. Menstrual disorders are frequent complaints in gynaecological clinics [3]. However, the finding from the study of 7% each of women with amenorrhoea and dysfunctional uterine bleeding (DUB) respectively was higher than the 5.51% for amenorrhoea and 4.09% for DUB reported from south east (SE) Nigeria [3]. Causes of the menstrual disorders among the study group included anovulatory infertility, dysfunctional uterine bleeding, uterine myomas, delayed menarche, Asherman's disease and menopause.

Medical diseases (hypertension, diabetes mellitus and retroviral diseases) and genital malignancies were observed in 6% of the women. All the medical diseases were secondary or incidental findings during the evaluation of the patients and not primary presentation. Except for the retroviral diseases, the presence in about 6% of the women of non-communicable diseases in the rural setting affirms the opinion of Non-Communicable Diseases (NCD) Alliance [1] on the threat to life of these conditions among girls and women even in Africa.

Swelling in the vagina suggestive of genital prolapse was a complaint in 3% of the women. This was lower than the finding of 7.41% from Eastern Nigeria/other studies [3, 7]. This difference notwithstanding the high fertility rate among families in north central zone as compared to families in SE Nigeria [11] will require further study.

Some women (1.0%) came because of abnormal vaginal bleeding that was found to be a result of advanced cancer of the cervix. This is lower than the finding of 2.38% among the gynaecological patients in Southern part of the country [3, 7]. Carcinoma of the cervix was still the commonest malignancy of the female genital tract seen.

Twenty one women (1%) came seeking a second opinion over treatment offered to them by other physicians. To the best of our knowledge, this is the first reported record of this as a reason for gynaecological consultation in this part of the country. Small as this number is, it is significant as it represents a growing consciousness among women seeking high quality care and recognition of their right concerning the treatment they receive. It is beginning of a paradigm of women assuming more control over their own lives and wellbeing, and challenging the medical professionals in their treatments. This should be a wakeup call for the medical professionals to reappraise themselves in the management of illnesses in women and offer interventions that can stand challenges within the resources offered.

4. CONCLUSION

In conclusion, the reasons women in north central Nigeria sought the gynaecologist were genuine and similar, like inability to achieve conception when desired, but diverse with significant regional variation like problems of incontinence of urine. The burden of gynaecological diseases in the study area was equally much with growing desire for quality care and consciousness of interventional outcome as shown by search for second opinion. There is an urgent need for reorganization of the human resource distribution towards improving health care delivery to the rural communities with increasing access to specialist like gynaecologist. Programs such as opening satellite specialist centres in the district hospital and scheduling regular visits from the regional tertiary hospital from the state capital will increase access of rural women to the specialized care needed. These visiting specialists will undertake complex surgical procedures that are beyond the competence of the resident medical personnel and yet alleviate the economic and psychological hardship of referral to the specialist centres. The common gynaecological problems identified among the study group like infertility, genital fistulae, and cervical cancers among others are

518 preventable. Extending programs that will address control of genital tract infection in women,
519 improving obstetrics care and cervical cancer screening even in the simplest ways like visual
520 inspection will significantly alleviate the suffering of these women. There is need to bring in
521 human right and security approach to women's health not only for the urban population but
522 for the rural women too. Neglecting the rural women is risking failure of attainment of all the
523 MDG but particularly the 3, 4, 5 goals by the year 2015.

524

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532

533 **COMPETING INTERESTS**

534

535 No conflicting interest exists in undertaking this study and writing of the manuscript.

536

537 **AUTHORS' CONTRIBUTIONS**

538

539 This work was carried out in collaboration between all authors. Author Jonathan A.
540 Karshimadesigned the study, performed the statistical analysis, wrote the protocol, and
541 wrote the first draft of the manuscript. Author Philip PineAbataand TerkaaAtim managed the
542 data, while Authors Victor C. Pamand Michael I. Reichworked and on introduction and
543 discussion. Allauthors read and approved the final manuscript.

544 **ETHICAL APPROVAL**

545

546 Ethical approval for the study was obtained from the management of the NKST Hospital

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