REPUBLIQUE DU CAMEROUN
******
PAIX-TRAVAIL-PATRIE
******
MINISTÈRE DE L'ENSEIGNEMENT SUPÉRIEUR
****
UNIVERSITÉ DE YAOUNDÉ I
******
FACULTÉ DE MÉDECINE ET DES SCIENCES BIOMÉDICALES
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REPUBLIC OF CAMEROON
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PEACE-WORK-FATHERLAND
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UNIVERSITY OF YAOUNDÉ I
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FACULTY OF MEDICINE AND BIOMEDICAL SCIENCES
******

DEPARTMENT OF GYNECOLOGY AND OBSTETRICS

SUICIDAL CONDUCTS AMONG INFERTILE WOMEN IN YAOUNDÉ:

Prevalence and Associated factors.

Thesis presented in partial fulfilment of the requirements for the award of a doctorate degree in General Medicine by:

NKUH CLIFORD NGANGE

7th Year General Medicine

Student Registration No: 13M092

Supervisor

Pr DOHBIT JULIUS SAMA

Associate Professor of Gynecology and Obstetrics

Co-Supervisor(s)

Dr KAMGA OLEN JEAN-PIERRE

Senior Lecturer in Psychiatry

Dr EBONG CLIFORD EBONTANE

Senior Lecturer in Gynecology and Obstetrics

Academic year 2023-2024

REPUBLIQUE DU CAMEROUN
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Student Registration No: **13M092**

Jury Members:

President of the Jury

_____

Rapporteur

_____

Members of the Jury

_____

_____

Supervising Team:

Supervisor

Pr DOHBIT JULIUS SAMA

Co-Supervisor

Dr KAMGA OLEN JEAN-PIERRE

Dr EBONG CLIFORD EBONTANE

ACADEMIC YEAR : 2023-2024

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DEDICATION

I dedicate this work to my amazing Parents **Mr NDANGA NKUH COLUMBUS** and **Mrs NGWAYI NYEH** as well as my wonderful siblings **Eng NKUH RHOLY NKONGNUY,NKUH KARL WERNYUH** AND **NKUH SHALLUM NJONYUH** for their constant inspiration, love and support throughout my life and entire stay in medical school

AKNOWLEDGEMENT

I wish to express my sincere and heartfelt thanks to everyone who contributed to the success of this work:

- To all the Deans of the Faculty of Medicine and Biomedical Sciences during my training at this prestigious institution **(Prof EBANA MVOGO CÔME,Prof ZE MIKANDE JACQUELINE and Prof NGO UM epouse MEKA ESTHER JULIETTE ,).** Thank you for leading a team of qualified teachers and administrators who helped me to get to this level. Your impact is a cornerstone to everything you built.
- To my Supervisor, **PR DOHBIT JULIUS SAMA.** Thank you for the guidance and advice you have proffered me throughout this work. You have truly moulded me into someone with valuable skills and talents. It was a privilege to work under your leadership. I hope to make you proud in my future endeavours.
- To my Co-Supervisors ; **DR KAMGA OLEN JEAN-PIERRE** and **Dr EBONG CLIFORD EBONTANE**. for being such amazing mentors, constant sources of inspiration and for giving me directions to strive for the best possible results and impact in my chosen field of study.
- To the **PRESIDENT** and **HONOURABLE MEMBERS** of the jury for all of their invaluable critiques, all aimed at making this work better. Thank you for taking precious time to read my work and for the corrections made.
- To **Prof MAH EVELYNNE AND MR CHRISTOPHER** Thank you for inspiring me to believe in myself and to never give up on my dreams
- To **Dr MAKEBE** for the patience, support, and ideas you showed me whenever the situation arose.
- To the psychiatric **residents (DR CLARIS, DR SANDRA)** who volunteered to help me out during this work, this study would not have been possible without you. I am grateful
- To my friends, **Dr NDO NADEGE, DR MONTY MARINA,DR TANKAM ETIEN**,. Thank you for being there for me, for making me feel supported, loved, and cared for.
- To my beloved parents, **MR NDANGA COLUMBUS NKUH** and **MME NGWAYI NYEH.** I will never be able to repay you for the time and love you showed me growing up, but know that I love and appreciate it all, every single day.
- To my brothers,**ENG NKUH RHOLY NKONGNUY,NKUH KARL WERNYUH** AND **NKUH SHALLUM NJONYUH.**Thank you dear brothers, for never leaving the side of your elder brother and always being there for me.
- To all **my classmates**, thank you for making this academic journey an awesome one. Your help has really made my studies much easier.

- To all the patients who have agreed to participate in this research.
- To all those who have participated directly or indirectly in the accomplishement of this work.
- To all those whose names have not been mentioned but who are just as present in my heart

LIST OF ADMINISTRATIVE AND TEACHING STAFF IN THE FACULTY OF MEDICINE AND BIOMEDICAL SCIENCES YAOUNDE : 2023-2024

ADMINISTRATIVE AND TEACHING STAFF OF FMBS(UY1) 2023-2024

1. ADMINISTRATIVE PERSONNELS

Dean : Pr ZE MINKANDE Jacqueline

Vice-Dean in charge of programming and monitoring academic activities: Pr NTSAMA ESSOMBA Claudine Mireille

Vice-Dean for Research and Cooperation: Pr ZEH Odile Fernande

Vice-Dean in charge of Schooling, Statistics and Student Follow-up: Pr NGANOU Chris Nadège épouse GNINDJIO

Head of the Academic Affairs, Schooling and Research Division: Dr VOUNDI VOUNDI Esther

Head of Administrative and Financial Division: Ms ESSONO EFFA Muriel Glawdis

General Coordinator of the Specialization Cycle: Pr NJAMNSHI Alfred KONGNYU

Head of Finance Department: Mme NGAMLI NGOU Mireille Albertine épouse WAH

Deputy Chief Financial Officer: Ms MANDA BANA Marie Madeleine épouse ENGUENE

Head of General Administration and Personnel: Pr SAMBA Odette NGANO ép. TCHOUAWOU

Head of Diplomas Department: Ms ASSAKO Anne DOOBA

Deputy Head of Diplomas: Dr NGONO AKAM MARGA Vanina

Head of Schooling and Statistics Department: Ms BIENZA Aline

Deputy Head of the Schooling and Statistics Department: Ms FAGNI MBOUOMBO AMINA married name ONANA

Head of Equipment and Maintenance: Mrs HAWA OUMAROU

Deputy Head of Material and Maintenance: Dr MPONO EMENGUELE Pascale épouse NDONGO

Acting Head Librarian: Ms FROUISSOU née MAME Marie-Claire

Materials accountant: Mr MOUMEMIE NJOUNDIYIMOUN MAZOU

2. CYCLE COORDINATORS AND DEPARTMENT HEADS

Coordinator of the Oral Medicine Department: Pr BENGONDO MESSANGA Charles

Coordinator of the Pharmacy Department: Pr NTSAMA ESSOMBA Claudine

Internship coordinator: Pr ONGOLO ZOGO Pierre

Coordinator of the Specialization Cycle in Pathological Anatomy: Pr SANDO Zacharie

Coordinator of the Specialization Cycle in Anesthesia and Intensive Care: Pr ZE MINKANDE Jacqueline

Coordinator of the Specialization Cycle in General Surgery: Pr NGO NONGA Bernadette

Coordinator of the Specialization Cycle in Gynecology and Obstetrics: Pr DOHBIT Julius SAMA

Coordinator of the Specialization Cycle in Internal Medicine: Pr NGANDEU Madeleine

Coordinator of the Specialization Cycle in Pediatrics: Pr MAH Evelyn MUNGYEH

Coordinator of the Specialization Cycle in Clinical Biology: Pr KAMGA FOUAMNO Henri Lucien

Coordinator of the Specialization Cycle in Radiology and Medical Imaging: Pr ONGOLO ZOGO Pierre

Coordinator of the Specialization Cycle in Public Health: Pr TAKOUGANG Innocent

Continuing education coordinator: Pr KASIA Jean Marie

Project focal point: Pr NGOUPAYO Joseph

CESSI Pedagogical Manager: Pr ANKOUANE ANDOULO Firmin

3. CUSS HONORARY DIRECTORS

Pr MONEKOSSO Gottlieb (1969-1978)

Pr EBEN MOUSSI Emmanuel (1978-1983)

Pr NGU LIFANJI Jacob (1983-1985)

Pr CARTERET Pierre (1985-1993)

4. HONORARY DEANS OF THE FMSB

Pr SOSSO Maurice Aurélien (1993-1999)

Pr NDUMBE Peter (1999-2006)

Prof. TETANYE EKOE Bonaventure (2006-2012)

Prof. EBANA MVOGO Côme (2012-2015)

5. TEACHING STAFF

N°	FULL NAME	GRADE	DISCIPLINE
DEPARTMENT OF SURGERY AND SPECIALTIES			
1	**SOSSO Maurice Aurélien (CD)**	P	General Surgery
2	DJIENTCHEU Vincent de Paul	P	Neurosurgery
3	**ESSOMBA Arthur (Acting CD)**	P	General Surgery
4	HANDY EONE Daniel	P	Orthopaedic Surgery
5	MOUAFO TAMBO Faustin	P	Pediatric Surgery
6	NGO NONGA Bernadette	P	General Surgery
7	NGOWE NGOWE Marcellin	P	General Surgery
8	OWONO ETOUNDI Paul	P	Anaesthesia and intensive care
9	ZE MINKANDE Jacqueline	P	Anaesthesia and intensive care
10	BAHEBECK Jean	AP	Orthopaedic Surgery
11	BANG GUY Aristide	AP	General Surgery
12	BENGONO BENGONO Roddy Stéphan	AP	Anaesthesia and intensive care
13	FARIKOU Ibrahima	AP	Orthopaedic Surgery
14	JEMEA Bonaventure	AP	Anaesthesia and intensive care
15	BEYIHA Gérard	AP	Anaesthesia and intensive care

16	EYENGA Victor Claude	AP	Surgery/Neurosurgery
17	GUIFO Marc Leroy	AP	General Surgery
18	NGO YAMBEN Marie Ange	SL	Orthopaedic Surgery
19	TSIAGADIGI Jean Gustave	SL	Orthopaedic Surgery
20	BELLO FIGUIM	SL	Neurosurgery
21	BIWOLE BIWOLE Daniel Claude Patrick	SL	General Surgery
22	FONKOUE Loïc	SL	Orthopaedic Surgery
23	KONA NGONDO François Stéphane	SL	Anaesthesia and intensive care
24	MBOUCHE Landry Oriole	SL	Urology
25	MEKEME MEKEME Junior Barthelemy	SL	Urology
26	MULUEM Olivier Kennedy	SL	Orthopedics-Traumatology
27	SAVOM Eric Patrick	SL	General Surgery
28	AHANDA ASSIGA	L	General Surgery
29	AMENGLE Albert Ludovic	L	Anaesthesia and intensive care
30	BIKONO ATANGANA Ernestine Renée	L	Neurosurgery
31	BWELE Georges	L	General Surgery
32	EPOUPA NGALLE Frantz Guy	L	Urology
33	FOUDA Jean Cédrick	L	Urology
34	IROUME Cristella Raïssa BIFOUNA married NTYO'O NKOUMOU	L	Anaesthesia and intensive care
35	MOHAMADOU GUEMSE Emmanuel	L	Orthopaedic Surgery
36	NDIKONTAR KWINJI Raymond	L	Anaesthesia and intensive care
37	NWAHA MAKON Axel Stéphane	L	Urology
38	NYANIT BOB Dorcas	L	Pediatric Surgery
39	OUMAROU HAMAN NASSOUROU		Neurosurgery
40	ARROYE BETOU Fabrice Stéphane	SL	Thoracic and Cardiovascular Surgery
41	ELA BELLA Amos Jean-Marie	SL	Thoracic Surgery
42	FOLA KOPONG Olivier	SL	Surgery
43	FOSSI KAMGA GACELLE	SL	Pediatric Surgery
44	GOUAG	SL	Anaesthesia and intensive care
45	MBELE Richard II	SL	Thoracic Surgery
46	MFOUAPON EWANE Hervé Blaise	SL	Neurosurgery
47	NGOUATNA DJEUMAKOU Serge Rawlings	SL	Anaesthesia and intensive care
48	NYANKOUE MEBOUINZ Ferdinand	SL	Orthopaedic and Traumatological Surgery
DEPARTMENT OF INTERNAL MEDICINE AND SPECIALTIES			
49	**SINGWE Madeleine née NGANDEU (CD)**	P	Internal Medicine/Rheumatology
50	ANKOUANE ANDOULO	P	Internal Medicine/ Hepato-Gastro-Enterology
51	ASHUNTANTANG Gloria Enow	P	Internal medicine/nephrology
52	BISSEK Anne Cécile	P	Internal Medicine/Dermatology
53	KAZE FOLEFACK François	P	Internal medicine/nephrology
54	KUATE TEGUEU Calixte	P	Internal Medicine/Neurology
55	KOUOTOU Emmanuel Armand	P	Internal Medicine/Dermatology

56	MBANYA Jean Claude	P	Internal Medicine/Endocrinology
57	NDJITOYAP NDAM Elie Claude	P	Internal Medicine/ Hepato-Gastro-Enterology
58	NDOM Paul	P	Internal Medicine/Oncology
59	NJAMNSHI Alfred KONGNYU	P	Internal Medicine/Neurology
60	NJOYA OUDOU	P	Internal Medicine/Gastroenterology
61	SOBNGWI Eugène	P	Internal Medicine/Endocrinology
62	PEFURA YONE Eric Walter	P	Internal Medicine/Pneumology
63	BOOMBHI Jérôme	AP	Internal Medicine/Cardiology
64	FOUDA MENYE Hermine Danielle	AP	Internal Medicine/Nephrology
65	HAMADOU BA	AP	Internal Medicine/Cardiology
66	MENANGA Alain Patrick	AP	Internal Medicine/Cardiology
67	NGANOU Chris Nadège	AP	Internal Medicine/Cardiology
68	KOWO Mathurin Pierre	SL	Internal Medicine/ Hepato-Gastro-Enterology
69	KUATE née MFEUKEU KWA Liliane Claudine	SL	Internal Medicine/Cardiology
70	NDONGO AMOUGOU Sylvie	SL	Internal Medicine/Cardiology
71	DEHAYEM YEFOU Mesmin	SL	Internal Medicine/Endocrinology
72	ESSON MAPOKO Berthe Sabine épouse PAAMBOG	SL	Internal Medicine/Medical Oncology
73	ETOA NDZIE wife ETOGA Martine Claude	SL	Internal Medicine/Endocrinology
74	MAÏMOUNA MAHAMAT	SL	Internal medicine/nephrology
75	MASSONGO MASSONGO	SL	Internal Medicine/Pneumology
76	MBONDA CHIMI Paul-Cédric	SL	Internal Medicine/Neurology
77	NDJITOYAP NDAM Antonin Wilson	SL	Internal Medicine/Gastroenterology
78	NDOBO épouse KOE Juliette Valérie Danielle	SL	Internal Medicine/Cardiology
79	NGAH KOMO Elisabeth	SL	Internal Medicine/Pneumology
80	NGARKA Léonard	SL	Internal Medicine/Neurology
81	NKORO OMBEDE Grâce Anita	SL	Internal Medicine/Dermatologist
82	OWONO NGABEDE Amalia Ariane	SL	Internal Medicine/Interventional Cardiology
83	NTSAMA ESSOMBA Marie Josiane épouse EBODE	SL	Internal Medicine/Geriatrics
84	ATENGUENA OBALEMBA Etienne	L	Internal Medicine/Medical Oncology
85	FOJO TALONGONG Baudelaire	L	Internal Medicine/Rheumatology
86	KAMGA OLEN Jean Pierre Olivier	L	Internal Medicine/Psychiatry
87	MENDANE MEKOBE Francine épouse EKOBENA	L	Internal Medicine/Endocrinology
88	MINTOM MEDJO Pierre Didier	L	Internal Medicine/Cardiology
89	NTONE ENYIME Félicien	L	Internal Medicine/Psychiatry
90	NZANA Victorine Bandolo wife FORKWA MBAH	L	Internal medicine/nephrology
91	ANABA MELINGUI Victor Yves	SL	Internal Medicine/Rheumatology
92	EBENE MANON Guillaume	SL	Internal Medicine/Cardiology
93	ELIMBY NGANDE Lionel Patrick Joël	SL	Internal medicine/nephrology
94	KUABAN Alain	SL	Internal Medicine/Pneumology

95	NKECK Jan René	SL	Internal Medicine
96	NSOUNFON ABDOU WOUOLIYOU	SL	Internal Medicine/Pneumology
97	NTYO'O NKOUMOU Arnaud Laurel	SL	Internal Medicine/Pneumology
98	TCHOUANKEU KOUNGA Fabiola	SL	Internal Medicine/Psychiatry
MEDICAL IMAGING AND RADIOLOGY DEPARTMENT			
99	**ZEH Odile Fernande (CD)**	P	Radiology/Medical Imaging
100	GUEGANG GOUJOU. Emilienne	P	Medical Imaging/Neuroradiology
101	MOIFO Boniface	P	Radiology/Medical Imaging
102	ONGOLO ZOGO Pierre	AP	Radiology/Medical Imaging
103	SAMBA Odette NGANO	SL	Biophysics/Medical Physics
104	MBEDE Maggy wife ENDEGUE MANGA	SL	Radiology/Medical Imaging
105	MEKA'H MAPENYA Ruth-Rosine	SL	Radiotherapy
106	NWATSOCK Joseph Francis	L	Radiology/Medical Imaging Nuclear Medicine
107	SEME ENGOUMOU Ambroise Thank you	L	Radiology/Medical Imaging
108	ABO'O MELOM Adèle Tatiana	SL	Radiology and Medical Imaging
GYNECOLOGY-OBSTETRICS DEPARTMENT			
109	**NGO UM Esther Juliette épouse MEKA (CD)**	AP	Gynecology and obstetrics
110	FOUMANE Pascal	P	Gynecology and obstetrics
111	KASIA Jean Marie	P	Gynecology and obstetrics
112	KEMFANG NGOWA Jean Dupont	P	Gynecology and obstetrics
113	MBOUDOU Émile	P	Gynecology and obstetrics
114	MBU ENOW Robinson	P	Gynecology and obstetrics
115	NKWABONG Elie	P	Gynecology and obstetrics
116	TEBEU Pierre Marie	P	Gynecology and obstetrics
117	BELINGA Etienne	AP	Gynecology and obstetrics
118	ESSIBEN Félix	AP	Gynecology and obstetrics
119	FOUEDJIO Jeanne Hortence	AP	Gynecology and obstetrics
120	NOA NDOUA Claude Cyrille	AP	Gynecology and obstetrics
121	DOHBIT Julius SAMA	AP	Gynecology and obstetrics
122	MVE KOH Valère Salomon	AP	Gynecology and obstetrics
123	METOGO NTSAMA Junie Annick	SL	Gynecology and obstetrics
124	MBOUA BATOUM Véronique Sophie	L	Gynecology and obstetrics
125	MENDOUA Michèle Florence épouse NKODO	L	Gynecology and obstetrics
126	NSAHLAI Christiane JIVIR FOMU	L	Gynecology and obstetrics
127	NYADA Serge Robert	L	Gynecology and obstetrics
128	TOMPEEN Isidore	L	Gynecology and obstetrics
129	EBONG Cliford EBONTANE	L	Gynecology and obstetrics
130	MPONO EMENGUELE Pascale épouse NDONGO	L	Gynecology and obstetrics
131	NGONO AKAM Marga Vanina	L	Gynecology and obstetrics
DEPARTMENT OF OPHTHALMOLOGY, EAR, NOSE AND THROAT AND STOMATOLOGY			
132	**DJOMOU François (CD)**	P	ENT
133	EBANA MVOGO Côme	P	Ophthalmology

134	ÉPÉE Émilienne épouse ONGUENE	P	Ophthalmology
135	KAGMENI Gilles	P	Ophthalmology
136	NDJOLO Alexis	P	ENT
137	NJOCK Richard	P	ENT
138	OMGBWA EBALE André	P	Ophthalmology
139	BILLONG Yannick	AP	Ophthalmology
140	DOHVOMA Andin Viola	AP	Ophthalmology
141	EBANA MVOGO Stève Robert	AP	Ophthalmology
142	KOKI Godefroy	AP	Ophthalmology
143	MINDJA EKO David	AP	ENT/Maxillofacial surgery
144	NGABA Olive	AP	ENT
145	ANDJOCK NKOUO Yves Christian	SL	ENT
146	MEVA'A BIOUELE Roger Christian	SL	ENT-CCF
147	MOSSUS Yannick	SL	ENT-CCF
148	MVILONGO TSIMI wife BENGONO Caroline	SL	Ophthalmology
149	NGO NYEKI Adèle-Rose wife MOUAHA-BELL	SL	ENT-CCF
150	NOMO Arlette Francine	SL	Ophthalmology
151	AKONO ZOUA épouse ETEME Marie Evodie	L	Ophthalmology
152	ASMAOU BOUBA Dalil	L	ENT
153	ATANGA Léonel Christophe	L	ENT-CCF
154	BOLA SIAFA Antoine	L	ENT
155	NANFACK NGOUNE Chantal	L	Ophthalmology
PEDIATRICS DEPARTMENT			
156	**ONGOTSOYI Angèle épouse PONDY (CD)**	P	Pediatrics
157	KOKI NDOMBO Paul	P	Pediatrician
158	ABENA OBAMA Marie Thérèse	P	Pediatrics
159	CHIABI Andreas	P	Pediatrics
160	CHELO David	P	Pediatrics
161	MAH Evelyn	P	Pediatrics
162	NGUEFACK Séraphin	P	Pediatrics
163	NGUEFACK épouse DONGMO Congratulated	P	Pediatrics
164	NGO UM KINJEL Suzanne épse SAP	AP	Pediatrics
165	KALLA Ginette Claude née MBOPI KEOU	AP	Pediatrics
166	MBASSI AWA Hubert Désiré	AP	Pediatrics
167	NOUBI Nelly wife KAMGAING MOTING	AP	Pediatrics
168	EPEE wife NGOUE Jeannette	SL	Pediatrics
169	KAGO TAGUE Daniel Armand	SL	Pediatrics
170	MEGUIEZE Claude-Audrey	SL	Pediatrics
171	MEKONE NKWELE Isabelle	SL	Pediatrician
172	TONY NENGOM Jocelyn	SL	Pediatrics
DEPARTMENT OF MICROBIOLOGY, PARASITOLOGY, HEMATOLOGY AND INFECTIOUS DISEASES			
173	**MBOPI KEOU François-Xavier (CD)**	P	Bacteriology/ Virology
174	ADIOGO Dieudonné	P	Microbiology/Virology

175	GONSU née KAMGA Hortense	P	Bacteriology
176	LUMA Henry	P	Bacteriology/ Virology
177	MBANYA Dora	P	Hematology
178	OKOMO ASSOUMOU Marie Claire	P	Bacteriology/ Virology
179	TAYOU TAGNY Claude	P	Microbiology/Hematology
180	CHETCHA CHEMEGNI Bernard	AP	Microbiology/Hematology
181	LYONGA Emilia ENJEMA	AP	Medical Microbiology
182	TOUKAM Michel	AP	Microbiology
183	NGANDO Laure épouse MOUDOUTE	AP	Parasitology
184	BEYALA Frédérique	L	Infectious Diseases
185	BOUM II YAP	L	Microbiology
186	ESSOMBA Réné Ghislain	L	Immunology
187	MEDI SIKE Christiane Ingrid	L	Infectious diseases
188	NGOGANG Marie Paule	L	Clinical Biology
189	NDOUMBA NKENGUE Annick épouse MINTYA	L	Hematology
190	VOUNDI VOUNDI Esther	L	Virology
191	ANGANDJI TIPANE Prisca épouse ELLA	L	Clinical Biology / Hematology
192	Georges MONDINDE IKOMEY	L	Immunology
193	MBOUYAP Pretty Rosereine	L	Virology
PUBLIC HEALTH DEPARTMENT			
194	**KAMGNO Joseph (CD)**	P	Public health/Epidemiology
195	ESSI Marie José	P	Public Health/Medical Anthropology
196	TAKOUGANG Innocent	P	Public Health
197	BEDIANG Georges Wylfred	AP	Medical Informatics/Public Health
198	BILLONG Serges Clotaire	AP	Public Health
199	NGUEFACK TSAGUE	AP	Public health /Biostatistics
200	EYEBE EYEBE Serge Bertrand	L	Public health/Epidemiology
201	KEMBE ASSAH Félix	L	Epidemiology
202	KWEDI JIPPE Anne Sylvie	L	Epidemiology
203	MOSSUS Tatiana née ETOUNOU AKONO	L	Expert in Health Promotion
204	NJOUMEMI ZAKARIAOU	L	Public Health/Health Economics
205	ABBA-KABIR Haamit-Mahamat	L	Pharmacist
206	AMANI ADIDJA	L	Public Health
207	ESSO ENDALLE Lovet Linda Augustine Julia	L	Public Health
208	MBA MAADJHOU Berjauline Camille	L	Public Health/Nutritional Epidemiology
MORPHOLOGICAL SCIENCES-PATHOLOGICAL ANATOMY DEPARTMENT			
209	**MENDIMI NKODO Joseph (CD)**	AP	Anatomy Pathology
210	SANDO Zacharie	P	Anatomy Pathology
211	BISSOU MAHOP Josue	AP	Sports Medicine
212	KABEYENE OKONO Angèle Clarisse	AP	Histology/Embryology
213	AKABA Désiré	AP	Human anatomy
214	NSEME ETOUCKEY Georges Eric	AP	Forensic Medicine
215	NGONGANG Gilbert FranK Olivier	AP	Forensic Medicine

216	MENDOUGA MENYE Coralie Reine Bertine épse KOUOTOU	L	Anatomopathology
217	ESSAME Eric Fabrice	L	Anatomopathology
BIOCHEMISTRY DEPARTMENT			
218	**NDONGO EMBOLA née TORIMIRO Judith (CD)**	P	Molecular Biology
219	PIEME Constant Anatole	P	Biochemistry
220	AMA MOOR Vicky Joceline	P	Clinical Biology/Biochemistry
221	EUSTACE BONGHAN BERINYUY	L	Biochemistry
222	GUEWO FOKENG Magellan	L	Biochemistry
223	MBONO SAMBA ELOUMBA Esther Astrid	L	Biochemistry
PHYSIOLOGY DEPARTMENT			
224	**ETOUNDI NGOA Laurent Serges (CD)**	P	Physiology
225	ASSOMO NDEMBA Peguy Brice	AP	Physiology
226	AZABJI KENFACK Marcel	L	Physiology
227	DZUDIE TAMDJA Anastase	L	Physiology
228	EBELL'A DALLE Ernest Remy Hervé	L	Human physiology
DEPARTMENT OF PHARMACOLOGY AND TRADITIONAL MEDICINE			
229	**NGONO MBALLA Rose ABONDO (CD)**	AP	African pharmacotherapeutics
230	NDIKUM Valentine	L	Pharmacology
231	ONDOUA NGUELE Marc Olivier	L	Pharmacology
DEPARTMENT OF ORAL, MAXILLOFACIAL AND PERIODONTAL SURGERY			
232	**BENGONDO MESSANGA Charles (CD)**	P	Stomatology
233	EDOUMA BOHIMBO Jacques Gérard	SL	Stomatology and Surgery
234	LOWE NANTCHOUANG Jacqueline Michèle épouse ABISSEGUE	L	Pediatric dentistry
235	MBEDE NGA MVONDO Rose	L	Oral medicine
236	MENGONG wife MONEBOULOU Hortense	L	Pediatric dentistry
237	NDJOH Jules Julien	L	Dental Surgeon
238	NOKAM TAGUEMNE M.E.	L	Dental Medicine
239	GAMGNE GUIADEM Catherine M	L	Dental Surgery
240	KWEDI Karl Guy Grégoire	L	Oral surgery
241	NIBEYE Yannick Carine Brice	L	Bacteriology
242	NKOLO TOLO Francis Daniel	L	Oral surgery
PHARMACOGNOSY AND PHARMACEUTICAL CHEMISTRY DEPARTMENT			
243	**NTSAMA ESSOMBA Claudine (CD)**	P	Pharmacognosy/Pharmaceutical chemistry
244	NGAMENI Bathélémy	P	Phytochemistry/Organic Chemistry
245	NGOUPAYO Joseph	P	Phytochemistry/Pharmacognosy
246	GUEDJE Nicole Marie	AP	Ethnopharmacology/Plant biology
247	BAYAGA Hervé Narcisse	L	Pharmacy
PHARMACOTOXICOLOGY AND PHARMACOKINETICS DEPARTMENT			
248	**ZINGUE Stéphane (CD)**	AP	
249	FOKUNANG Charles	P	Molecular Biology
250	TEMBE Estella married name FOKUNANG	AP	Clinical Pharmacology

251	ANGO Yves Patrick	L	Chemistry of natural substances
252	NENE AHIDJO wife NJITUNG TEM	L	Neuropharmacology
DEPARTMENT OF GALENIC PHARMACY AND PHARMACEUTICAL LEGISLATION			
253	**NNANGA NGA Emmanuel (CD)**	P	Galenic Pharmacy
254	MBOLE Jeanne Mauricette née MVONDO M.	L	Quality management, Quality control of healthcare products and foodstuffs
255	NYANGONO NDONGO Martin	L	Pharmacy
256	SOPPO LOBE Charlotte Vanessa	L	Drug quality control
257	ABA'A Marthe Dereine	L	Drug Analysis
258	FOUMANE MANIEPI NGOUOPIHO Jacqueline Saurelle	L	Pharmacology
259	MINYEM NGOMBI Aude Périne épouse AFUH	L	Pharmaceutical regulations

P= Professor

AP= Associate Professor

SL= Senior Lecturer

L= Lecturer

THE PHYSICIAN'S PLEDGE

Declaration of Geneva adopted by the 2nd Geneva assembly of the World Medical Association in Geneva, Switzerland, September 1948 and amended by the 22nd World Medical Assembly, Sydney, Australia, August 1968 and the 35th World Medical Assembly, Venice, Italy, October 1983...

On admission to the medical profession:

I will solemnly pledge to dedicate my life to the service of humanity;

The health and well-being of my patient will be my first consideration;

I will respect the autonomy and dignity of my patient;

I will maintain the utmost respect of human life;

I will not permit considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, social standing or any other factor to intervene between my duty and my patient;

I will respect secrets that are confided in me, even after the patient has died;

I will practise my profession with conscience and dignity and in accordance with good medical practice;

I will foster the honour and noble traditions of the medical profession;

I will give my teachers, colleagues, and students the respect and gratitude which is their due;

I will share my medical knowledge for the benefit of the patient and advancement of health care;

I will attend to my own health, well-being, and abilities in order to provide care of the highest standard;

I will not use my medical knowledge to violate human rights and civil liberties, even under threat;

I make these promises solemnly, freely and upon my honour.

ABSTRACT

BACKGROUND: suicidal conducts in infertile women are a complex and multifaceted issue. The emotional distress, societal pressures, physical and financial burdens, hormonal imbalances, and strain on relationships all contribute to the increased risk of suicidal thoughts. By addressing these factors through comprehensive support, education, and accessible mental health services, we can help reduce the prevalence of suicidal conducts and provide better care for women struggling with infertility.Even though some research has been done on the prevalence of infertility in Cameroon very little is known about the psychological impact of childlessness among infertile women.

Objectives: To determine the socio-demographic and clinical factors,the prevalence of suicial conducts and associated factors of suicidal conducts of our study population

Methodology: We conducted a hospital based cross-sectional study at Yaoundé Central Hospital to investigate suicidal conducts. Data were collected using a self-administered questionnaire. Suicidal conduct was assessed by using Beck Scale for Suicide Ideation(BSS). Data were analyzed using Statistical Package for Social Science Version 23.0. Descriptive results were presented in tables and graphs. Bivariate and multivariate logistic regression analyses were done to identify factors associated with suicidal ideation. P-values less than 0.05 were considered statistically significant and the strength of association was presented by an adjusted odds ratio with 95% confidence interval.

RESULTS: This study has found that **35.7%** of women were aged 34-38, with an average age of **30.96** years.**49.3%** were married, **43.6%** single, and **93.4%** had a university degree.**82.8%** were employed, **86.8%** lived in urban areas, with **47.1%** from the Centre region and **33.0%** from the South.Primary infertility was present in **51.1%,** and secondary infertility in **48.9%.92.5%** had received medication-based infertility treatment.However **52.4%** felt discouraged or depressed almost daily, and **54.2%** reported a moderate to severe impact on mental health.furthermore.**26.4%** felt their relationships were severely affected, and **7%** had suicidal attempt**(prevalence)**, with **5.7%** experiencing them occasionally**.**The most common symptoms were depression **(89.2%),** fatigue **(45.4%),**sleeplessnes**(44.9%)** and yet **93.8%** had a moderate to strong desire to live.Additionally,**99.6%** had someone to confide in, but only **6.6%** sought professional help.like wise **56%** used body and mind techniques for coping, while **31.2%** had a social support network, and **33.9%** accessed mental health services. Personal beliefs about mental health influenced **57.8%** in seeking support.

Conclusion. This study has found that **35.7%** of women were aged **34-38**, with an average age of **30.96** years.The factors related to suicide attempts among infertile women. Marital status showed no significant difference in suicide attempts **(p-value = 0.087).** Significant differences were found in

suicide attempts across age groups **(p-value < 0.001),** region of origin (p-value < 0.001), duration of infertility diagnosis (**p-value < 0.001),** impact of infertility on relationships (p-value < 0.001), and mental health factors (**p-value < 0.001).** However, education level showed no significant difference **(p-value = 0.270) and 7%** of participants had suicidal thoughts as prevalence. Community stigmatization of infertility showed a significant difference in suicide attempts **(p-value < 0.001).**

Key words :infertility, transversal study, Cameroon, Suicidal conducts, Mental health, risk factors, psychiatric morbidity

RESUMÉ

CONTEXTE: Les conduites suicidaires chez les femmes infertiles sont une problématique complexe et multiforme. La détresse émotionnelle, les pressions sociétales, les charges physiques et financières, les déséquilibres hormonaux et les tensions dans les relations contribuent tous à l'augmentation du risque de pensées suicidaires. En abordant ces facteurs par un soutien complet, une éducation et des services de santé mentale accessibles, nous pouvons aider à réduire la prévalence des conduites suicidaires et fournir de meilleurs soins aux femmes confrontées à l'infertilité. Bien que certaines recherches aient été menées sur la prévalence de l'infertilité au Cameroun, très peu de donnees sont connues sur l'impact psychologique de l'absence d'enfants chez les femmes infertiles. La présente étude visait à examiner la prévalence, et les facteurs associés aux conduites suicidaires chez les femmes infertiles.

Objectif:Déterminer les facteurs sociodémographiques, la prévalence des conduites suicidaires et les facteurs associes aux conduites suicidaires dans notre population d'étude.

Méthodologie: Nous avons mené une étude transversal descriptive en milieu hospitalier à l'Hôpital Central de Yaoundé. Les données ont été collectées à l'aide d'un questionnaire auto-administré. Les conduites suicidaires ont été évaluées à l'aide de l'Échelle de Désespoir de Beck **(BSS).** Les données ont été analysées à l'aide du logiciel Statistical Package for Social Science Version 23.0. Les résultats descriptifs ont été présentés sous forme de tableaux et de graphiques. Des analyses de régression logistique bivariée et multivariée ont été effectuées pour identifier les facteurs associés à l'idéation suicidaire. Les valeurs de p inférieures à **0,05** ont été considérées comme statistiquement significatives et la force de l'association a été présentée par un rapport de cotes ajusté avec un intervalle de confiance de **95%.**

RÉSULTATS: Cette étude a révélé que **35,7 %** des femmes avaient entre 34 et 38 ans, avec un âge moyen de **30,96** ans. **49,3 %** étaient mariées, **43,6%** célibataires, et **93,4 %** avaient un diplôme universitaire. **82,8 %** étaient employées, **86,8 %** vivaient en milieu urbain, avec **47,1 %** venant de la région Centre et **33,0%** de la région Sud. L'infertilité primaire était présente chez **51,1%,** et l'infertilité secondaire chez **48,9%. 92,5%** avaient reçu un traitement médicamenteux pour l'infertilité. **52,4%** se sentaient découragées ou déprimées presque quotidiennement, et **54,2%** rapportaient un impact modéré à sévère sur leur santé mentale. **26,4%** estimaient que leurs relations étaient gravement affectées, et **7%** avaient pour la prevanlenc des pensées suicidaires, avec **5,7%** les éprouvant occasionnellement. les facteurs associees étaient la dépression **(89,2%),** la fatigue **(45,4%)** et les problèmes de sommeil **(44,9%).**pourtant **93,8%** avaient un désir modéré à fort de vivre. **99,6%** avaient quelqu'un à qui se confier, mais seulement **6,6%** ont cherché une aide professionnelle. **56 %** utilisaient des techniques corps-esprit pour faire face, tandis que **31,2%**

avaient un réseau de soutien social et **33,9%** accédaient aux services de santé mentale. Les croyances personnelles sur la santé mentale ont influencé **57,8%** dans leur recherche de soutien.

Conclusion.Le statut matrimonial n'a montré aucune différence significative dans les tentatives de suicide (**p-value = 0,087).** Des différences significatives ont été trouvées dans les tentatives de suicide à travers les groupes d'âge (**p-value < 0,001),** la région d'origine (**p-value < 0,001),** la durée du diagnostic d'infertilité **(p-value < 0,001),** l'impact de l'infertilité sur les relations (**p-value < 0,001),** et les facteurs de santé mentale (**p-value < 0,001).** Cependant, le niveau d'éducation n'a montré aucune différence significative (**p-value = 0,270**). **7%** des participants ont eu des pensées suicidaires La stigmatisation communautaire de l'infertilité a montré une différence significative dans les tentatives de suicide (**p-value < 0,001).**

Mots-clés: Infertilité, Conduites suicidaires, Santé mentale, Cameroun, Étude transversale, Facteurs de risque, Morbidité psychiatrique

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ABREVIATIONS, ACRONYMES & SIGLES

WHO: World Health Organization

Si: suicidal ideations

SA: suicide attempts

SB: suicidal behaviours

CDC: centers of diseases and control

SPSS: Statistical Package for Social Sciences

BSS: Beck Scale for Suicide Ideation

YCH: YAOUNDÉ CENTRAL HOSPITAL

NSSI: Nonsuicidal self-injury

SIB: self-injurious behavior

VPFC: ventral prefrontal cortex

DPFC: the dorsal prefrontal cortex

dACC: the dorsal anterior cingulate cortex

DNA: Deoxyribonucleic acid

MDD: Major Depressive disorder

ELA: Early-life adversity

PFS:PREFRONTAL SUBDIVISIONS

EMBASE:Exerpta Medical DataBase

CI: confidence interval

1 INTRODUCTION

1.1 BACKGROUND, PROBLEM AND JUSTIFICATION

Infertility is a disease historically defined by the failure to achieve a successful pregnancy after 12 months or more of regular, unprotected sexual intercourse or due to an impairment of a person's capacity to reproduce either as an individual or with her/his partner.Infertility is categorized as a disease by the World Health Organization, [1]. demographers define it as the inability of women in their reproductive age (15–49) years to become pregnant after exposure to pregnancy for five or more years[2]

Suicidal ideation: Thinking of suicide with or without suicidal intent; hoping for death by killing oneself; and, stating the presence of suicidal intention without engaging in behaviour.[3]The centrality of motherhood in a sociocultural context is deep-rooted and may cause significant stress to a woman if she has not attained motherhood as age advances[4]

Infertile women's mental health problems, including depression, are key fertility health issues that affect infertile women[5] Infertility is often associated with a chronic state of stress which may manifest itself in anxiety-related and depressive symptoms[6]

Several studies have examined the psychological strain associated with fertility treatment and many of these studies have reported a high prevalence of distress, depressive symptoms and psychiatric disorders in infertile women, where the risk of these symptoms seems to be positively correlated with length of fertility treatment and with negative results of the treatment" [7]

A survey on depression among infertile women in GHANA showed that the prevalence of depression among the infertile women is high, especially among infertile women age 26 and above, those who are less educated, those with primary infertility, as well as those who have been diagnosed as infertile for more than 3 years[8].Childless Cameroonian women suffer enormous grief and distress. They are considered unmarriageable or abandoned by their husbands, and often are left alone to struggle to earn a livelihood[9]

The psychosocial impact of infertility has been well researched and documented. However very little research has been conducted to assess the causative relationship between infertility and serious psychiatric illness such as suicide[10]especially in low income countries[11].The Centers for Disease Control and Prevention of the United States emphasizes that infertility is more than a quality -of-life issue, with considerable public health consequences including psychological distress, social stigmatization, economic strain, and marital discord[12]

Because the primary aim of infertility treatment is to achieve pregnancy, mental health care during this treatment is often neglected. However, the inability to conceive children is stressful for couples throughout the world. Thus, the purpose of this study was to investigate associate factors [13], determine the prevalence, and coping mechanisms of suicidal ideations related to female infertility in Yaoundé.

1.2 PROBLEM STATEMENT

Infertility is a condition that affects about 10 to 12% of couples worldwide, and it is more prevalent in low- and middle-income countries[10]. Infertile women are more likely to suffer from depression, anxiety, and low quality of life than fertile women or the general population[5]. Depression and suicidality are serious mental health problems that may threaten the health and safety of infertile women[10].There are various factors that may influence the psychological impact of infertility, such as the duration and cause of infertility, the type and outcome of fertility treatment, the social and cultural context, and the availability and accessibility of psychological support

We therefore aspire to evaluate how does infertility affect the mental health and well-being of women who experience it, and what are the risk factors and protective factors for developing suicidal ideation among this population? This problem statement is relevant, specific, and measurable, and it addresses a significant gap in the literature and practice of reproductive and mental health. Solving this problem could help improve the well-being and safety of infertile women, and reduce the burden of suicide on individuals, families, and society.

1.3 RESEARCH QUESTION

I. What are the prevalence of suicidal conducts of our study population?

II. What are the associated factors of suicidal conducts of our study population?

1.4 RESEARCH HYPOTHESIS

I. The prevalence of suicidal conducts among infertile women in Yaoundé is high.

II. There are identifiable associated factors entertaining suicidal conducts among infertile women in Yaoundé.

1.5 OBJECTIVE

1.5.1 GENERAL OBJECTIVE

To study the suicidal conducts among infertile women of our study population

1.5.2 SPECIFIC OBJECTIVES

i)To determine the socio-demographic and clinical factors of our study population

ii) To determine the prevalence of suicidal conducts of our study population

iii) To determine the risk factors of suicidal conducts of our study population

2 LITERATURE REVIEW

2.1 INTRODUCTION

Infertility is associated with mental health disorders in women, even if a successful pregnancy resolves infertility[4]

We define *suicide* as the act of intentionally ending one's own life. Nonfatal suicidal thoughts and behaviors (hereafter called “suicidal behaviors”) are classified more specifically into three categories: *suicide ideation*, which refers to thoughts of engaging in behavior intended to end one's life; *suicide plan*, which refers to the formulation of a specific method through which one intends to die; and *suicide attempt*, which refers to engagement in potentially self-injurious behavior in which there is at least some intent to die[14]

Suicidal ideations (SI), often called suicidal thoughts or ideas, is a broad term used to describe a range of contemplations, wishes, and preoccupations with death and suicide. There is no universally accepted consistent definition of SI[15].Some SI definitions include suicide planning deliberations, while others consider planning to be a discrete stage[15].According to the oxford dictionary suicidal Ideation is having thoughts about committing suicide. Suicidal ideation is commonly associated with depression and bipolar disorder[16],Low-to-moderate income, history of major depression or post-traumatic stress disorder and nulliparity – never giving birth – are predictors of lifetime active suicidal ideation and attempts[17] . These thoughts can be passive or active, depending on the level of intent and planning involved.

Table I.summarizes some of the differences between passive and active suicidal ideation[18]

Passive suicidal ideation	Active suicidal ideation
Thoughts of wishing to die or not to exist, but no plan or intention to act on them	Thoughts of taking action to end one's life, with a specific plan and means to do so
Examples: "I just wish I didn't wake up in the morning", "I don't want to live like this anymore", "Everyone would be better off without me around"	Examples: "I don't want to live like this anymore and I want to end my life", "I have a bottle of pills and I'm going to take them all tonight", "I'm going to jump off the bridge tomorrow"
May indicate depression, hopelessness, or emotional distress, but not necessarily a high risk of suicide	Indicates a high risk of suicide and an urgent need for intervention and treatment

2.2 SOME TERMINOLOGIES

According to CDC we have the following terminologies[19]

Intentional self-injurious thoughts and behavior may be suicidal or nonsuicidal

- Suicidal ideation – Thoughts about killing oneself; these thoughts may include a plan.
- Suicide attempt – Self-injurious behavior that is intended to kill oneself, but is nonfatal.
- Suicide – Self-injurious behavior that is intended to kill oneself and is fatal.
- Suicide threat – Thoughts of engaging in self-injurious behavior that are verbalized and intended to lead others to think that one wants to die, despite no intention of dying (eg, "If you leave me, I will kill myself").
- Suicide gesture – Self-injurious behavior that is intended to lead others to think that one wants to die, despite no intention of dying.
- Nonsuicidal self-injurious thoughts – Thoughts of engaging in self-injurious behavior characterized by the deliberate destruction of body tissue in the absence of any intent to die and for purposes that are not socially sanctioned.
- Nonsuicidal self-injury – Self-injurious behavior characterized by the deliberate destruction of body tissue in the absence of any intent to die and for purposes that are not socially sanctioned.

Self-injurious behavior that is accompanied by **any** intent to die is classified as a suicide attempt, which is consistent with the practice of most clinicians and researchers , as well as recommendations from the United States Centers for Disease Control and Prevention. This approach deliberately errs on the side of safety by categorizing ambivalent behaviors as suicidal[19]

Three other important changes in suicide terminology have also made it into the professional lexicon:

Died by suicide: This recommended language is preferred over the phrase "committed suicide." Other plain language is acceptable as well (eg, "killed himself," "ended her life," "took his life").

Nonsuicidal self-injury (NSSI) and self-injurious behavior (SIB): These behaviors are defined as deliberately injuring oneself without suicidal intent; self-cutting is the most common form, but burning, scratching, hitting, and intentionally preventing wounds from healing are other forms. While the behavior itself is without suicidal intent, people who have a pattern of NSSI have been found to have a higher risk of suicide in the long term.

Suicidality: This term is frequently used in clinical settings between professionals to refer to the spectrum of possible suicidal experiences; it does not specify whether there was suicidal ideation or an attempted suicide, or whether the nature of the ideation or attempts was chronic/recurrent or a singular event or multiple events. In many instances, communication can be more effective and clear if one articulates the actual issue at hand (eg, ideation or attempt) and includes relevant details.

Depressive disorder (also known as depression) according to WHO is a common mental disorder. It involves a depressed mood or loss of pleasure or interest in activities for long periods of time.Depression is different from regular mood changes and feelings about everyday life.[20].Depression is a leading cause of disability world wide including suicide according to WHO.it can affect children, adolescents and adults[21] Previous studies have shown that , infertility is also related to various physical and mental diseases such as anxiety, depression, obsessive-compulsive symptoms and sleep disorder[22]

Based on the defintion of anxiety by the Oxford Learners Dictionary,anxiety (about/over something) is the state of feeling nervous or worried that something bad is going to happen or a strong feeling of wanting to do something or of wanting something to happen[23]

As mentioned by WHO, anxiety disorders are the world's most common mental disorders, affecting 301 million people in 2019 ,more women are affected by anxiety disorders than men, symptoms of anxiety often have onset during childhood or adolescence and there are highly effective treatments for anxiety disorders[24] .Anxiety disorders are characterised by excessive fear and worry and related behavioural disturbances. Symptoms are severe enough to result in significant distress or significant impairment in functioning[25].Everyone can feel anxious sometimes, but people with anxiety disorders often experience fear and worry that is both intense and excessive[24] These feelings are typically accompanied by physical tension and other behavioural and cognitive symptoms. They are difficult to control, cause significant distress and can last a long time if untreated[24]

2.3 EPIDEMIOLOGY

Suicidal behavior is a major public health priority[14] .The World Health Organization (WHO) estimates that almost one million people die by suicide each year worldwide, representing an annual global suicide mortality rate of 16 per 100,000. Besides the increasing number of deaths by suicide, suicide attempts are even more prevalent[14]

Although women are three times as likely to attempt suicide, men are far more likely to complete the act.[26]

The World Health Organization conducted community surveys in 21 countries (n >100,000 individuals) and found that the 12-month prevalence of suicidal ideation (thoughts) was approximately 2 percent , and that the lifetime prevalence was 9 percent[19]

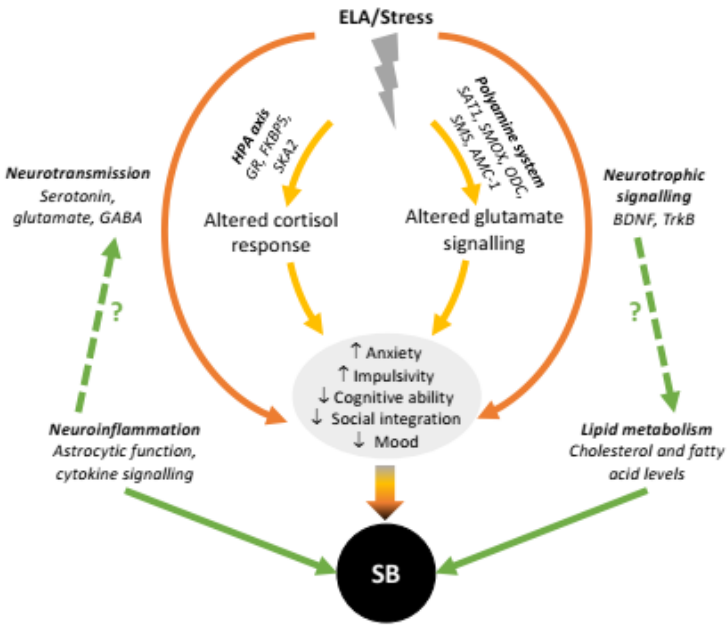
Community surveys in 21 countries (n >100,000 individuals) estimate that the 12-month prevalence of suicidal ideation (thoughts) is greater in females than males (2.2 to 2.4 percent versus 1.6 to 1.7 percent), whereas the prevalence of suicide attempts is comparable for females and males (0.3 to 0.5 percent and 0.3 to 0.4 percent) [19]

Studies have also found that greater than half of the women receiving infertility treatment feel that infertility is the "most stressful experience of their lives"[13]

2.4 PHYSIOLOGY AND PATHOGENESIS OF SUICIDE IDEATIONS

The physiology of suicide is the study of how the body's biological systems and processes influence suicidal behavior

Suicide ideation is a complex phenomenon that involves biological, psychological, and social factors. The neurobiology of suicide ideation refers to the brain structures and functions that are associated with suicidal thoughts and behaviors



Lutz, Figure 2. Biological pathways to suicidal behaviour

FIG 1: Biological pathways to suicidal behaviour[27]

According to the stress-diathesis model, suicide ideation is the result of an interaction between environmental stressors and a trait-like susceptibility to suicidal behavior, independent of psychiatric disorders[28],This susceptibility may have genetic and epigenetic origins, and may be influenced by early-life adversity(FIG 2)[29],[27]

Some of the brain areas that are involved in suicide ideation are part of the systems related to emotion and impulse regulation. These include the ventral prefrontal cortex (VPFC), the dorsal prefrontal cortex (DPFC), the dorsal anterior cingulate cortex (dACC), and the insula[28],[30]

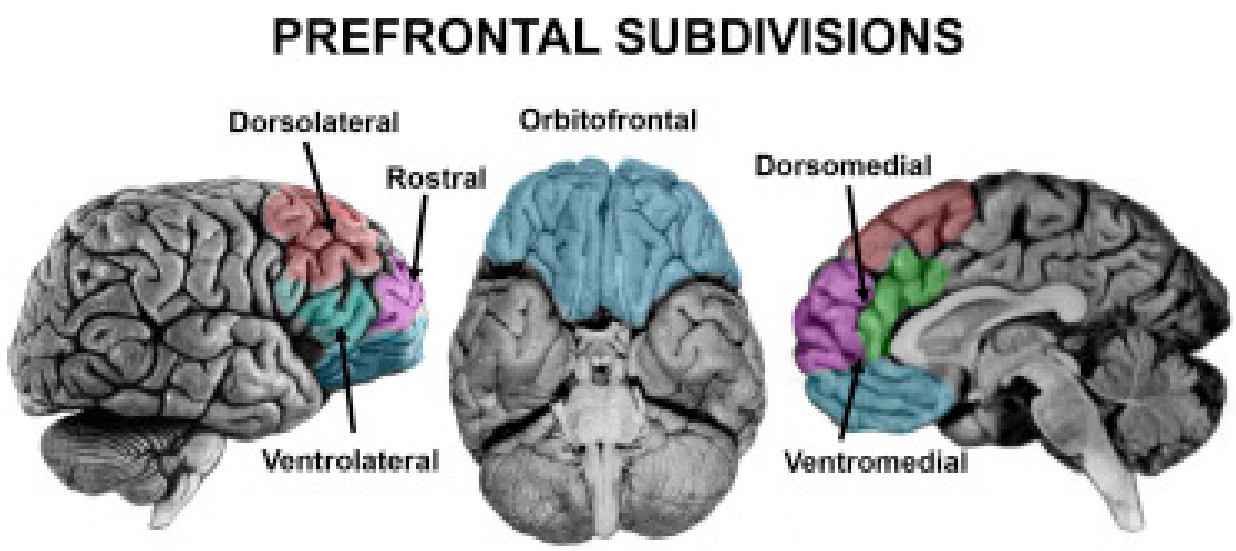


FIG 2: SUBDIVISIONS OF PFC[31]

These areas(FIG 1)are responsible for cognitive control of mood, pessimism, aggression, problem solving, emotional pain, and suicidal planning[28],[32]

Impairments in these brain areas and their connections may lead to increased suicide ideation and risk. For example, reduced activity(FIG 3) and volume of the VPFC may contribute to negative and blunted emotional states, while reduced activity and volume of the DPFC may impair the ability to inhibit suicidal impulses[28] The dACC and the insula may mediate the transition from suicidal thoughts to behaviors by switching between the VPFC and DPFC systems[28]

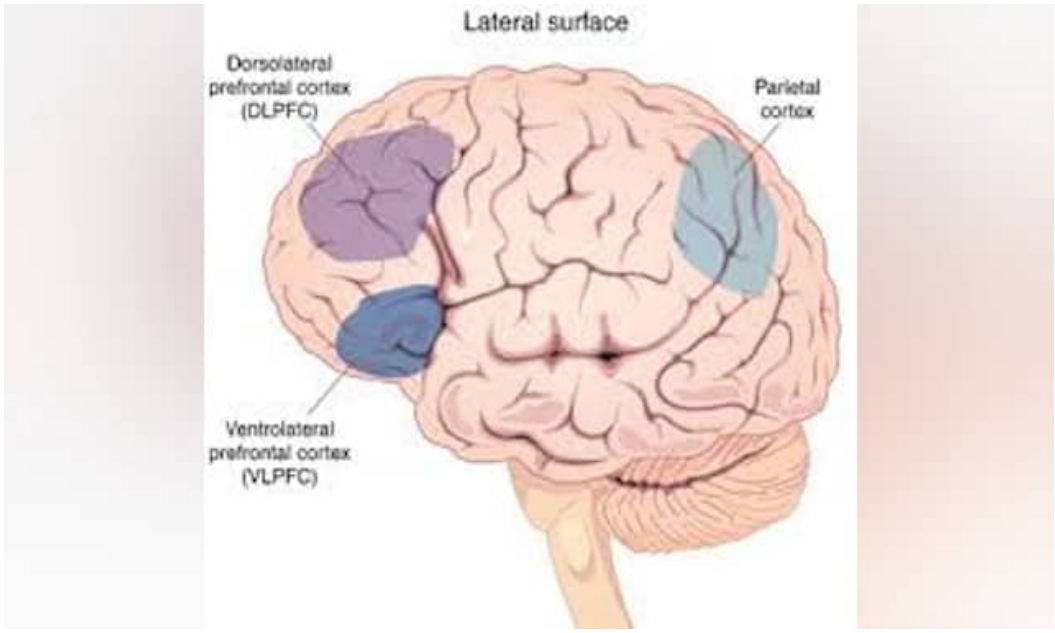


FIG 3: Brain Diagram Averill/Blumberg RC[30]

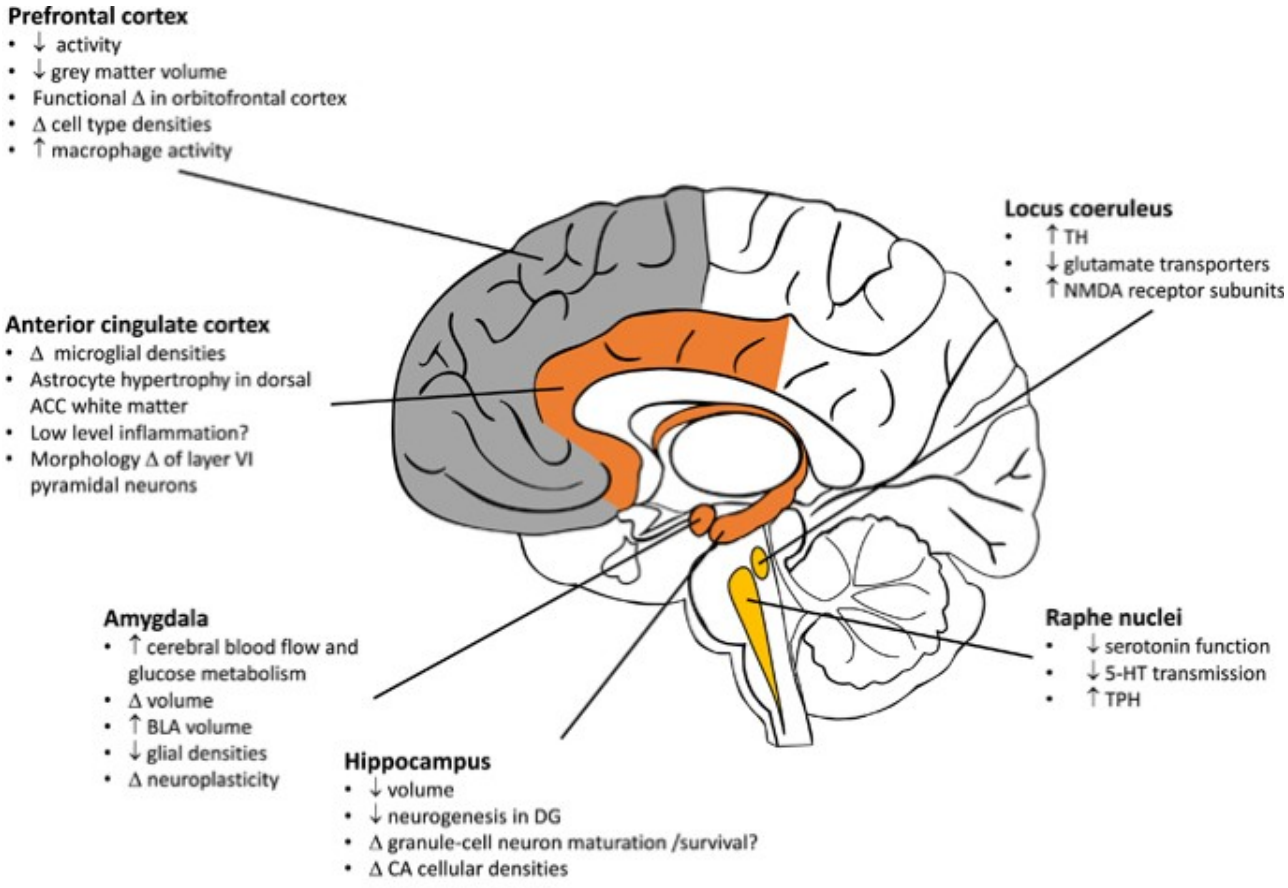


FIG 4: Brain regions implicated in depression and suicidal behaviour [27]

Some of the physiological factors that have been associated with suicide risk include[28],[33];hormonal imbalances, such as low levels of serotonin(FIG 3)[27], cortisol, testosterone, and thyroid hormones,genetic variations, such as polymorphisms in genes related to serotonin, dopamine, and stress response ,inflammation, oxidative stress, and neurodegeneration, which can affect brain structure and function,epigenetic changes, such as DNA methylation and histone modifications, which can alter gene expression in response to environmental stressors,circadian rhythms, which regulate sleep-wake cycles and mood,Pain perception, which can modulate the threshold for suicidal behavior.

These physiological factors can interact with psychological, social, and environmental factors to influence the development and expression of suicidal thoughts and behaviors. Therefore, understanding the physiology of suicide can help to identify biomarkers, risk factors, and potential targets for prevention and treatment of suicidal behavior[28],[33]

The pathogenesis of suicidal ideation due to infertility is not fully understood, but it may involve biological, psychological, and social mechanisms. Some of the possible pathways are:

- Hormonal imbalances: Infertility and its treatments can affect the levels of hormones such as estrogen, progesterone, testosterone, and cortisol, which can influence mood, cognition, and behavior. Hormonal contraceptives, which are sometimes used to treat infertility, can also increase the risk of depression and suicide[34]
- **Depression and Anxiety:** Infertility treatments can be stressful and emotionally draining, leading to feelings of depression and anxiety. A study found that the prevalence of major depressive disorder was 50% among infertile women, and suicidality was significantly higher than other disorders.[10]
- Isolation and Shame: Infertility often causes feelings of shame, making it difficult for individuals to discuss their struggles with friends and family. This isolation can exacerbate feelings of depression and increase the likelihood of suicidal ideation[35]
- **Socioeconomic Factors:** The prevalence of depression among infertile women was found to be higher in low- and middle-income countries compared to high-income countries. This could be due to lack of access to mental health resources, societal pressures, or other socioeconomic factors.[5]
- Stress can affect fertility in women by suppressing luteinizing hormone, increasing serum cortisol levels preventing implantation of a fertilized egg, and reducing egg quality If the stress is continued and prolonged it can result in anxiety and depression .[36]

Given these factors, it's crucial for healthcare providers to routinely screen for suicidal risk and depression in patients undergoing infertility treatments[10]. Early detection and intervention can help manage these mental health issues and improve the overall well-being of individuals dealing with infertility

2.5 RISK FACTORS

Circumstances that increase suicide risk in infertile women include;

The duration and severity of infertility,the type and outcome of infertility treatments,the lack of social support and coping skills,the presence of other stressors or comorbidities,the cultural and religious beliefs and expectations[10] .Age and male infertility are factors that influence the presence of anxiety and depression in female infertility patients[13]

Failure of infertility treatment has also been shown to be emotionally distressing to women[4]. Jacob et al. reported that women seeking infertility treatment show a 16% higher level of psychological distress than those without infertility[37]

Furthermore, the relationship between infertility and psychological stress is bidirectional because infertility can lead to stress, and stress is also a risk factor for infertility[38]

Mental stress, particularly anxiety and depression, resulting from infertility may be due to various factors, including uncertainty of the cause of infertility, uncertain treatment duration, financial stress, and pressure from others who know the couple[13] because of the increasing tendency to delay childbirth in Europe, advanced age can become a prominent psychosocial stress factor for infertile women[6]

Despite the high prevalence of infertility, however, most women do not share their problems with their families and friends, thus precluding the acquisition of social support[5]

However, social media addiction, video game addiction, gambling problems, internet addiction, and exercise addiction are associated with depression, which is an infertility risk factor [39]

Another study showed those who had 2–3 years infertility had more depression / anxiety than those who had this problem for a year or more than 6 years. Peak of depression could be seen during third year of infertility. After six years there will be a reduction in psychological symptoms in women. During first three years, infertility is accompanied by signs such as anxiety, depression, loss of self-esteem, impotence and maladjustment of marital status. After 3 years, optimistic attitude would change to despair and at last there will be some emotional changes to adopt a child or live without one[40]

Genetics may play a role in the risk of suicidal ideation . Mental health conditions linked to suicidal ideation, such as depression, run in families, so people with a family history of mental illness are at an increased risk of experiencing suicidal ideation themselves.[41]

Circumstances that protect against suicide risk in infertile women;

Those who have social support, positive personal characteristics, and have a satisfactory life with their spouse show no signs of anxiety/depression[40].

2.6 WARNING SIGNS OF SUICIDE

Warning signs aren't always obvious, and they may vary from person to person. Some people make their intentions clear, while others keep suicidal thoughts and feelings secret. Suicide warning signs or suicidal thoughts include; talking about suicide — for example, making statements such as:

"I'm going to kill myself,"/

"I wish I were dead" or "I wish I hadn't been born”,

getting the means to take your own life, such as buying a gun or stockpiling pills withdrawing from social contact and wanting to be left alone, having mood swings, such as being emotionally high one day and deeply discouraged the next, being preoccupied with death, dying or violence, feeling trapped or hopeless about a situation, increasing use of alcohol or drugs, changing normal routine, including eating or sleeping patterns, doing risky or self-destructive things, such as using drugs or driving recklessly, giving away belongings or getting affairs in order when there's no other logical explanation for doing this. Saying goodbye to people as if they won't be seen again, developing personality changes or being severely anxious or agitated, particularly when experiencing some of the warning signs listed above[42],[43],[41].

2.7 POSSIBLE MANAGEMENT AND PROGNOSIS FOR SUICIDAL IDEATIONS AMONG INFERTILE WOMEN

Medications: Some antidepressants or mood stabilizers may help reduce the symptoms of depression and suicidal thoughts. However, these medications may have side effects or interactions with fertility treatments, so it is important to consult a doctor before taking them[10]

Psychotherapy: This is a type of talk therapy that can help infertile women cope with their emotions, stress, and grief. There are different types of psychotherapy, such as cognitive behavioral therapy (CBT) and dialectical behavioral therapy (DBT), that can help prevent suicide by changing negative thoughts and behaviors, enhancing coping skills, and increasing social support[10],[5]

Embedded mental health care: This is a model of care that integrates mental health services into the fertility clinic, where infertile women can access them more easily and comfortably. This can help reduce the stigma and barriers to seeking help, and improve the quality of care and outcomes for infertile women[41],[44]

The prognosis of suicidal ideations among infertile women depends on various factors, such as the severity of depression, the availability and accessibility of mental health care, the social and cultural context, and the response to treatment. According to some studies, there is a lack of research on the long-term outcomes of suicidal ideations among infertile women, and more studies are needed to understand the risk factors and protective factors for this population[10]

Eliminating psychological stress may also be necessary for successful infertility treatment[13]

However, some studies suggest that infertile women who receive appropriate treatment for their depression and suicidal thoughts can improve their mental health and quality of life, and may also increase their chances of achieving pregnancy[5],[45]. Therefore, it is important for infertile women who experience suicidal ideations to seek help and support from professionals and their loved ones, and to follow the treatment recommendations. There is hope and recovery possible for infertile women who struggle with suicidal ideations

2.8 ARTICLE REVIEW

2.8.1 ARTICLE REVIEW ON INFERTILITY

A Retrospective Study of the Prevalence of Female Infertility in the Southwest Region, Cameroon by Akah Roland and al published in 2020[46]

Methods and methods:A retrospective descriptive design was used which involved studying clinical files of women within the reproductive age group (15 - 49) with infertility problems, at the gynaecological and maternity units of the selected hospitals in the Southwest region of Cameroon over a period of five years (2015-2019). Data were collected from all files included in the study

Conclusion: This study found that the prevalence of infertility in Southwest Cameroon is high with secondary infertility being most predominant among infertile women with a prevalence of 69%

Primary and secondary infertility in Africa: systematic review with meta-analysis published by Abebe and al in 2020[47]

Materials and methods; An internet-based search was conducted on the following databases; PubMed/Medline, EMBASE, Cochrane library, and google scholar. Both population and institution-based studies conducted among African couples, males, and females were included. Data extraction and critical appraisal of the articles were done by two independent investigators. Meta-analysis using a random effect model was conducted by Stata version 14. Forest plot, heterogeneity test, and funnel plot for publication bias were performed.

Conclusion; In Africa, the proportion of primary and secondary infertility is approximately equal.

Magnitude of infertility and associated factors among women attending selected public hospitals in Addis Ababa, Ethiopia: a cross-sectional study published by Akalewold in 2022[48]

Materials and method; An institutional-based cross-sectional study design was used to conduct the study. The participants were selected by using a systematic random sampling technique. Data were collected through an interview using a structured questionnaire. The data were entered into Epi Data version 3.1 and exported to SPSS version 25 for analysis. Logistic regression was used to identify the predictor variables. Statistical significance was considered at a $P < 0.05$ with an adjusted odds ratio calculated at 95% CI.

Conclusion; According to the results of thess study, the prevalence of infertility was high compared to the global estimate of the World Health Organization

Worldwide prevalence, risk factors and psychological impact of infertility among women: a systematic review and meta-analysis published by Hazlina and al in 2022[49]

Materials and methods; In this study they included cross-sectional, case–control and cohort designs, published in the English language, conducted in the community, and performed at health institution levels on prevalence, risk factors and psychological impact of infertility in women. Two reviewers independently extracted and assess the quality of data using the Joanna Briggs Institute Meta-Analysis. The outcomes were assessed with random-effects model and reported as the OR with 95% CI using the Review Manager software

Conclusions The study results highlight an essential and increasing mental disorder among females associated with infertility and may be overlooked. Acknowledging the problem and providing positive, supportive measures to females with infertility ensure more positive outcomes during the therapeutic process.

2.8.2 ARTICLE REVIEW ON SUICIDAL CONDUCTS

Suicidal behaviors of scolarised adolescents an young adults in the city of Douala (Cameroon) by ***Christian et al*** in **2023**

Methods: In this study, 704 participants were selected 4 public schools in the the city of Douala. The sampling method was systemic and a group interview was carried out. Was excluded those who did not agree to the survey and those who were absent during the interview periods.

Materials : A survey was form developed from the suicidality section of the Mini International Neuropsychiatric Interview of the American Psychiatric Association. **Conclusions :**As prevalence of suicidal behavior, the study found 24.7% of suicidal ideation, 13.1% of suicidal plans and 10% of suicidal attempts [50]

Factors associated with depressive symptoms and suicidal ideation and behaviors amongst sub-Saharan African adolescents aged 10-19 years: cross-sectional study by *Nyundo et al* published in 2020

Methods : Household-based cross-sectional study involving male and female adolescents ages 10-19 years. A total of **7,662** adolescents from eight sites in six countries participated in the survey. Three sites were urban: Dar es Salaam (Tanzania ;825), Harar (Ethiopia ;1,059) and Ibadan

(Nigeria ;750); five were rural: Dodoma (Tanzania ;1,226), Iganga/Mayuge (Uganda ; 598), Kersa (Ethiopia ;951), Ningo Prampram (Ghana ;625) and Nouna (Burkina Faso ;1,628).

Materials : **KADS-6** (6-Item Kutcher Adolescent Depression Scale) They also included three questions from the **GSHS** (Global School-Based Student Health Survey) relating to suicidal expression in the last 12 months to define suicidal behaviour ((1) having seriously considered attempting suicide; (2) made a plan about how they would attempt suicide; and (3) having attempted suicide in the last 12 months. These items were coded as No/Yes; No = 0 and Yes = 1**),** Independent variables considered in this study were also largely ascertained through questions from the Global School-Based Student Health Survey with minimal modifications. **Conclusions** : It was shown that depressive symptoms and suicidal behaviour were common amongst sub-Saharan African adolescents at these 8 sites. Most factors associated with depressive symptoms are modifiable and preventable. Routine screening for depressive symptoms in services frequented by adolescents in these and similar communities would be crucial in early detection and prompt intervention[51]

Depression, anxiety, and suicidal ideation among Vietnamese secondary school students and proposed solutions: a cross-sectional study by ***Nguyen et al*** published in **2013.**[52]

Methods: In this study, 1260 students from three secondary schools in urban and suburban areas in a city of vietnam were selected. 99 (7.85%) were excluded from the analysis due to insufficiently complete responses.

Materials : CES-D (Center for Epidemiology Studies Depression Scale – and an anxiety scale), **ESSA** (Educational Stress Scale for Adolescents), questions on suicide; and 5 questions on solutions.

Conclusions : It was shown that anxiety, depression, and suicidal ideation were common among Vietnamese secondary school students. There were strong associations with physical and emotional abuse in the family and high educational stress. Academic curricula and attitudes of parents and teachers need to be changed from a punitive to a more supportive approach to reduce the risk of poor mental health. An internet-based mental health intervention could be a feasible and effective first step to improve students' mental health.

Children are highly valued, and childlessness is culturally not acceptable in any typical sub-Saharan African community. Involuntary infertility is associated with significant distress and

psychological disturbances, and different psychiatric disorders have been reported among women [53].**(table 2)**

Table II.Article Review on suicidal conducts

TITTLE(Auth and Year)	COUNTRY	STUDIED POPULATION AND TYPE OF STUDY	METHODS	RESULTS
Depression and suicidality amongst infertile women: a hidden pandemic?(B.GHOSH DASTIDAR,2022)	Kolkata, India	100 infertile women undergoing infertility treatment at an IVF Centre	Mini International Neuropsychiatric Interview was administered to 100 female patient's undergoing IVF treatment and 100 control patient's , visiting an IVF Centre based in Kolkata. Chi square test, independent t test and Z test used for statistical analysis	The prevalence of major depressive disorder (50 %) followed by Dysthymia (25%) was documented among infertile group while suicidality at 15% were significantly higher than other disorder (Z = 3.80, p> .001)
Living as an infertile woman(Dorcas OfosuBudu and Vilma Hanninen,2022)	Ghana	30 infertile married women	qualitative method, phenomenological study design and thematic analysis	intense pressure, stress, and stigma

Alhassan et al.2014[8]	Ghana	(Cross-sectional studies and longitudinal studies using cross-sectional data)	clinical interviews or standard questionnaires	The prevalence of depression among the women was 62.0% with the level of depression showing a significant positive correlation with age of the women and the duration of infertility. The level of depression was significantly higher among subjects with low or no formal education and among the unemployed
Oladeji and OlaOlorun ,2018[54]	Nigeria	110 infertile women(Cross-sectional studies and longitudinal studies using cross-sectional data)	clinical interviews or standard questionnaires	Primary and secondary infertility.The study found a depression prevalence of 52.7 52.70%
Al-Asadi and Hussein, 2015[55]	Iraq	251 infertile women(cross-sectional study)	They were interviewed using a structured questionnaire. Depression was assessed by Interactional Classification of Diseases-Version 10 (ICD-10) criteria	The prevalence of depression among infertile women was 68.9%. It was significantly related to primary type of infertility, duration of infertility and treatment, and threat of husband's remarriage.

Vo et al. 2019 [56]	Vietnam	401 infertile women(Cross sectional studies)	The PHQ-9 scale was used to measure depressive symptoms. Face-to-face interviewing was conducted using a structured questionaire. Participants were also inquired about demographic characteristics, socio-economic status, infertility related characteristics and family and social relationships.	The depression prevalence was 12.2%, with a cut-off score ≥10 on PHQ-9 scale. Depression in infertile female patients was associated with infertility caused by the husband (AOR=3.09, 95% CI=1.44–6.63), infertility caused by both spouses (AOR=3.63, 95% CI=1.26–10.48), alcohol-addicted husband (AOR=4.83, 95% CI=1.32–17.58), and with wife's previous antidepressant use (AOR=48.1, 95% CI=4.83–47.96)

3 METHODLOGY

3.1 TYPE OF STUDY

A cross sectional descriptive study.

3.2 STUDY SETTING

The study was carried out at the Yaoundé Central Hospital

The gynecology-obstetrics unit includes: 02 common delivery rooms, common and individual hospitalization rooms with a capacity of 95 beds, 04 external consultation boxes, an emergency service integrated into the admission service, two care rooms A and B, a family planning service, an archive room B, a meeting room, an operating block of 3 rooms, and a neonatology service.

Regarding the staff, the gynecology-obstetrics unit includes: 11 gynecologist-obstetricians of which 02 are professors, a professor of anesthesia-resuscitation, an anesthesiologist-resuscitator, residents and interns in Gynecology-Obstetrics, midwives; delivery nurses, maintenance workers, and stretcher bearers.On the administrative level, the service is led by a unit head, an assistant coordinator, a clinic head A, a clinic head B, a sector supervisor, and three majors.

3.3 STUDY PERIOD AND DURATION

The study ran from November 2023 to June 2024, lasting 8 months. Data collection began in December

3.3.1 STUDY POPULATION

3.3.1.1 Source Population

All Patient Consulting at Yaoundé Central Hospital

3.3.1.2 Target population

Women of reproductive age living in Yaoundé who have been medically diagnosed with infertility. at the Yaoundé Central Hospital

3.3.2 INCLUSION, NON-INCLUSION AND EXCLUSION CRITERIA

3.3.2.1 INCLUSION CRITERIA

- Women between the age of 25-45 years old diagnosed with infertility.
- Participants must report having experienced suicidal conducts
- Participant willing to provide informed consent
- Participant able to understand and communicate in French or English

3.3.2.2 NON-INCLUSION CRITERIA

- Participants without infertility diagnosis would dilute the study's focus and potentially skew results
- Participants with history of suicidal ideation or a history of psychosis or severe mental illness

3.3.2.3 EXCLUSION CRITERIA

- Participants could withdraw from the study at any time
- Participants with incomplete data on inclusion/non-inclusion

3.4 SAMPLE SIZE DETERMINATION

Sampling was non-probabilistic and consecutive.

We calculated our minimum sample size using the Cochran's formula below

$$n = \frac{Z^2 * p * (1 - p)}{e^2}$$

Where:

- n is the sample size
- Z is the Z-value (e.g., 1.96 for a 95% confidence level)
- p the estimated prevalence for depression among couple infertility in Ghana ranges from **12%.**[56]
- e is the acceptable margin of error 0.5

Our Sample size is **163**

3.5 STUDY PROCEDURES

3.5.1 Ethical and Administrative procedures

After validation of our research protocol by our supervisor and co-supervisors, we submitted a request for ethical clearance to the Institutional Review Board (IRB) of the Faculty of Medicine and Biomedical Sciences of the University of Yaoundé I. Thereafter, we will submit research authorization forms at the Faculty of medicine and Biomedical Science of the University of Yaoundé I for administrative approval.

3.5.2 Recruitment

During this phase, we invitted and sort out patient matching our inclusion and non-inclusion criteria, to enroll patients. Thereafter we will trim down this group of patients following our exclusion criteria, sequentially in two steps. Firstly ,we called to inform them the studies we were carrying out and explained to them in detail : the nature ,aim ,benefits ,risks and disadvantages of our study in English or French according to Helsinki decleration then we requested for verbal consent ,all patient not consenting to our studies will be excluded. Furthermore we proceeded to ask questions on about their past medical records to exclude some patients. Next, we informed all patients that an informed consent will be available for personal approval by signature once they come to the hospital. This final group of patients constituted our definite patient sample.

3.5.3 Data Collection

We collected data through a written questionnaire (appendix V, VI) comprising of eight (8) sections.

Section 1: Demographic Information

Section 2: Infertility Information

Section 3: Emotional Well-Being

Section 4: Patient Heath Questionnaire-9 (Phq-9)

Section 5: Beck Suicide Intent Scale (SIS)

Section 6: Support Systems

Section 7: Coping Strategies

Section 8: Stigma and Cultural Attitudes

The Patient Health Questionnaire-9 (PHQ-9)

It was a brief, self-administered questionnaire used to screen for and assess the severity of depression it's consisting of 9 items that align with the 9 diagnostic criteria for major depressive disorder in the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, 5th Edition) [57].

The Patient Health Questionnaire-9 (PHQ-9)[58], [59] is a highly valuable tool used in healthcare to:

- **Screen for potential depression:** It helps in identifying individuals who might be experiencing depressive symptoms and warrant further evaluation.
- **Diagnose depression:** With its standardized score, the PHQ-9 can provide valuable information to support a diagnosis of depression, alongside a clinical assessment.
- **Monitor severity of depression:** Over time, the PHQ-9 can be used to track the progress of patients undergoing treatment for depression and adjust their therapy accordingly.

How is the PHQ-9 Evaluated?

1. **Completing the Questionnaire:**

- Individuals rate how often they've experienced each of the 9 depression symptoms over the past 2 weeks, using a scale of 0 (not at all) to 3 (nearly every day).

2. **Scoring the PHQ-9:**

- Each item scores 0 to 3, leading to a total score ranging from 0 to 27.
- Higher scores indicate more severe depression.

Interpretation of the PHQ-9 Score:

- 0-4: Normal or minimal depression
- 5-9: Mild depression
- 10-14: Moderate depression
- 15-19: Moderately severe depression
- 20-27: Severe depression

Significance of the PHQ-9:

a. **Screening:**

- Efficiently identifies individuals who may have depression and require further evaluation.
- Used in primary care settings, mental health clinics, research studies, and other contexts.

b. **Diagnosis:**

- Can be used to make a provisional diagnosis of major depressive disorder, but a trained clinician is needed for a definitive diagnosis.

c. **Monitoring Treatment Progress:**

- Repeated PHQ-9 assessments can track changes in depression symptoms over time and evaluate the effectiveness of treatment.

Advantages:

- **Simple and quick:** Easy to administer and complete, taking only a few minutes.
- **Self-administered:** Empowers patients to openly describe their experiences.
- **Standardized:** Consistent scoring allows for comparison across different settings and clinicians.
- **Valid and reliable:** Extensive research supports its accuracy in identifying and measuring depression.

Limitations:

- **Self-reported:** Relies on the patient's honesty and awareness of their symptoms.
- **Not a diagnostic tool alone:** Clinical judgment and additional evaluation are crucial for diagnosis.
- **May not capture all aspects of depression:** Certain forms of depression, such as atypical depression, might not be fully captured.

Widely used in research studies to measure depression severity and outcomes.

THE BECK SUICIDE INTENT SCALE (BSS)

An interview-administered scale assesses the seriousness of a person's intent to commit suicide before they attempt it. The SIS is made up of 15 items that measure a person's verbal and nonverbal behavior before a suicide attempt [60] .

Components and Scoring:

The BSS consists of 21 items, each with three statements representing increasing levels of suicidal intent (0 to 2).

- The statements cover various aspects of suicidal ideation, including:

  -Wish to die: "I have thoughts of wanting to kill myself."

  -Suicidal plans: "I have a plan for how I would kill myself."

  -Means and methods: "I have easy access to means to kill myself."

  -Preparation for death: "I have put my affairs in order in case I kill myself."

The total score ranges from 0 to 42, with higher scores indicating a greater severity of suicidal ideation.

Scores are typically interpreted as follows:

- **0-8:** No or minimal suicidal ideation
- **9-14:** Mild suicidal ideation
- **15-19:** Moderate suicidal ideation
- **20-42:** Severe suicidal ideation

Clinical Use and Assessment:

The BSS is a valuable tool for clinicians in various settings:

- **Screening for suicidal ideation:** Quickly identify individuals who may be at risk for suicide.
- **Assessing severity:** Gain deeper insight into the intensity and nature of suicidal thoughts.
- **Monitoring progress:** Track changes in suicidal ideation over time to evaluate treatment effectiveness.

Administration and Considerations:

The BSS can be self-administered or administered by a clinician and typically takes 10-15 minutes to complete. It is important to note that:

- The BSS is not a diagnostic tool and should not be used alone to diagnose suicidal intent.
- It should be used in conjunction with other clinical information and assessments.
- It is not suitable for children or adolescents.

3.5.4 MATERIALS AND RESOURCES

- Human resources,Principal investigator,Supervising team,Health personnel,Study participants,Statistician,Collection materials: Data sheets.Office equipment: A4 paper reams, pens, pencils, erasers, printer.Data analysis materials: Software (CS pro, SPSS, Microsoft Office Excel), laptop, USB (Universal Serial Bus) key

3.6 DATA MANAGEMENT AND ANALYSIS

Database was made and coded using Cs Pro (Census Survey Processing) software and extracted to SPSS (Statistical Package for Social Sciences) version 23.0 software for statistical analysis.Chi - square test was used for comparing proportions. Charts was made using Microsoft® Office Excel 2016 and S.P.S.S. version 23.0 Quantitative variables was expressed using mean and standard deviations or medians and interquartile ranges according to the distribution. The data was displayed using frequency tables and percentages.

3.7 ETHICAL CONSIDERATIONS

3.7.1 Ethical Clearance

- We submitted our study protocol to the Centre Regional Ethics Committee for Human Health Research and to the Institutional Review Board of the Faculty of Medicine and Biomedical Sciences of the University of Yaoundé I for evaluation and ethical clearance. We also requested for research authorization to the Director of Yaoundé Central Hospital Ethical Considerations

Risks

- Related to the patients: We find no major risks to this study.

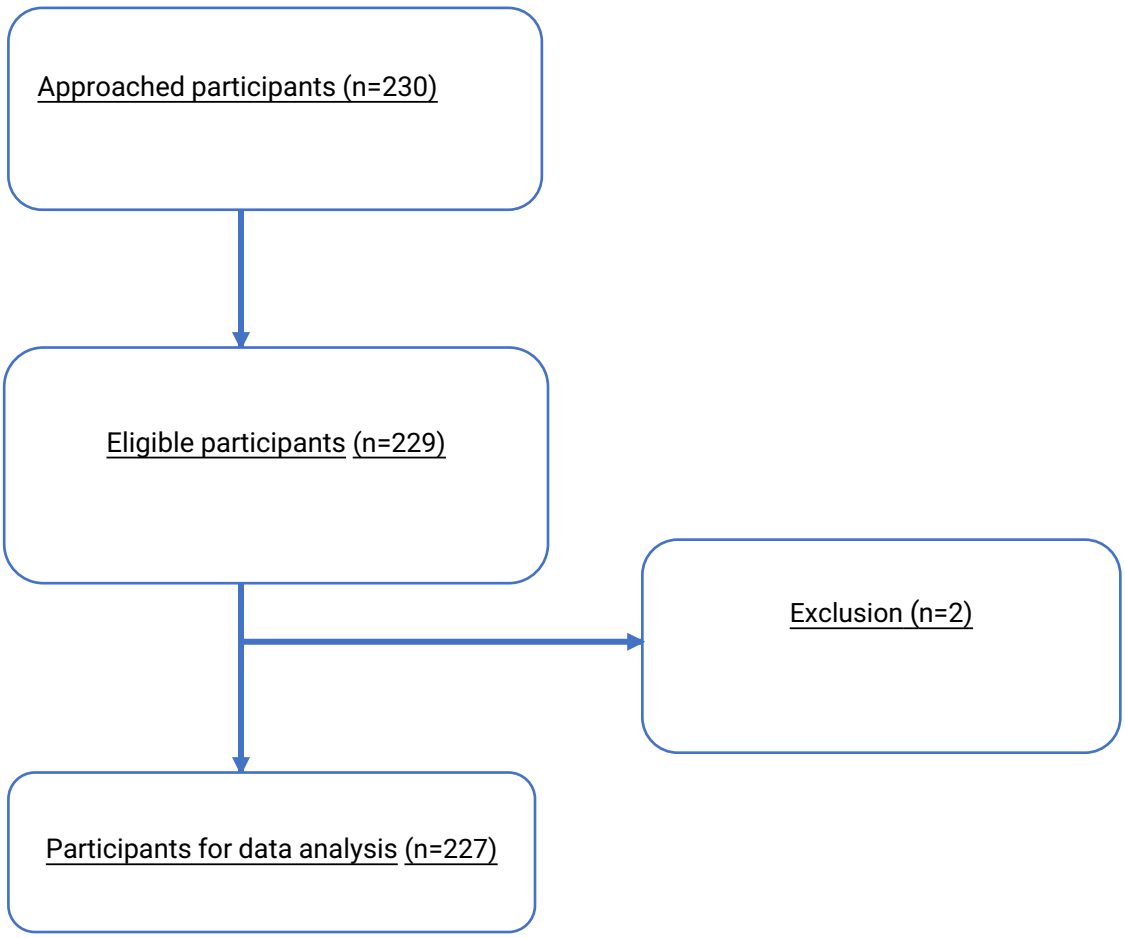
- Related to the study: The minimal sample size to achieve significance is high and may not reached. We set forth to doing consecutive sampling, including all patients trimmed down after verification of the inclusion, non-inclusion and exclusion criteria.
- Benefits
- Disadvantages
- There is no disadvantage with respect to this study

Confidentiality

- Participants was interviewed privately. In case it may not be possible, divider curtains was used.
- Participants was given consent forms to sign after the details (nature, risks, benefits) of the study was explained to them
- The participants were free to participate and to withdraw from the study at any time they please.
- Participants was given codes instead of using their names for identification. The consent forms containing their names was kept separate from the data collection forms. These forms was kept secured.

4 RESULTS

A total of 230 participants were recruited, during our study period with data sorted as seen in the below figure 5.



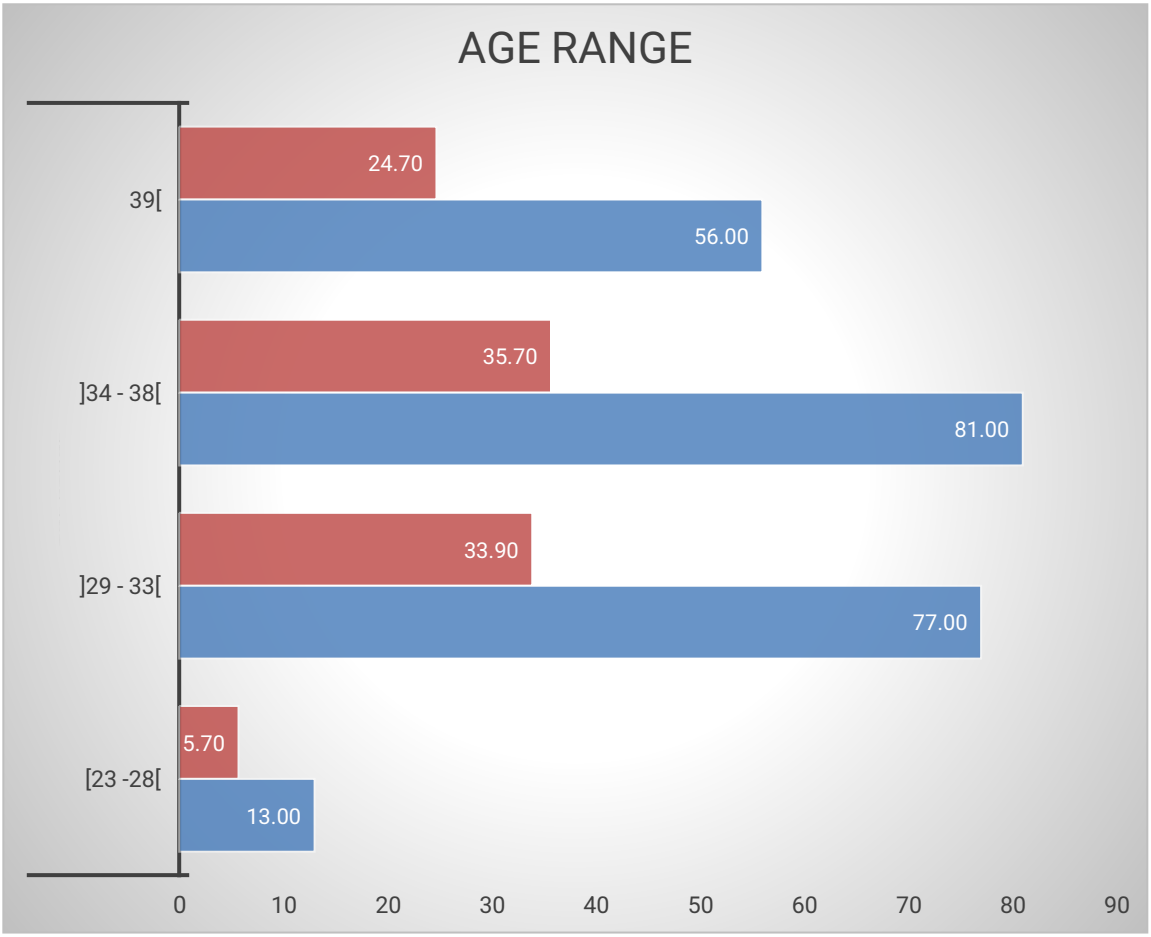
4.1 SOCIO-DEMOGRAPHIC AND CLINICAL FACTORS

4.1.1 SOCIO-DEMOGRAPHIC FACTORS

158 of women (**35.7%)** were aged between **34** and **38** years, with an average age of **30.96 ±5.312**, married (**49.3%)** or single (**43.6%),** and **93.4%** were highly educated. Most had a job **(82.8%),** lived in urban areas (**86.8%),** and were from the Centre region (**47.1%)** or the South **(33.0%).**

Table III.Sociodemographic characteristics of infertile women in Yaoundé (N =227)

Variables	Categories	Number/count(n)	Proportion (%)
age range	[23 -28[	13	5.7
	]29 - 33[	77	33.9
	]34 - 38[	**81**	**35.7**
	39[	56	24.7
matrimonial	Single	99	43.6
status	Maried)	**112**	**49.3**
	Free union	16	7.0
Level of	Secondary	15	6.6
education	University	**212**	**93.4**
	Employed	188	82.8
Profession :	house wife	6	2.6
	Unemployed	**33**	**14.5**
Residence	Rural	30	13.2
	Urbarn	**197**	**86.8**
Region of	Centre	**107**	**47.1**
origin :	West	30	13.2
	South	75	33.0
	south west	15	6.6



- **Fig. 5: Age range of infertile women in yaounde of study participants.(** The lowest range [23-28] has 13 individuals, which constitutes 5.7% of the total. **]34 - 38[**: The largest group falls within this age range, with 81 individuals accounting for 35.7% of the total.)

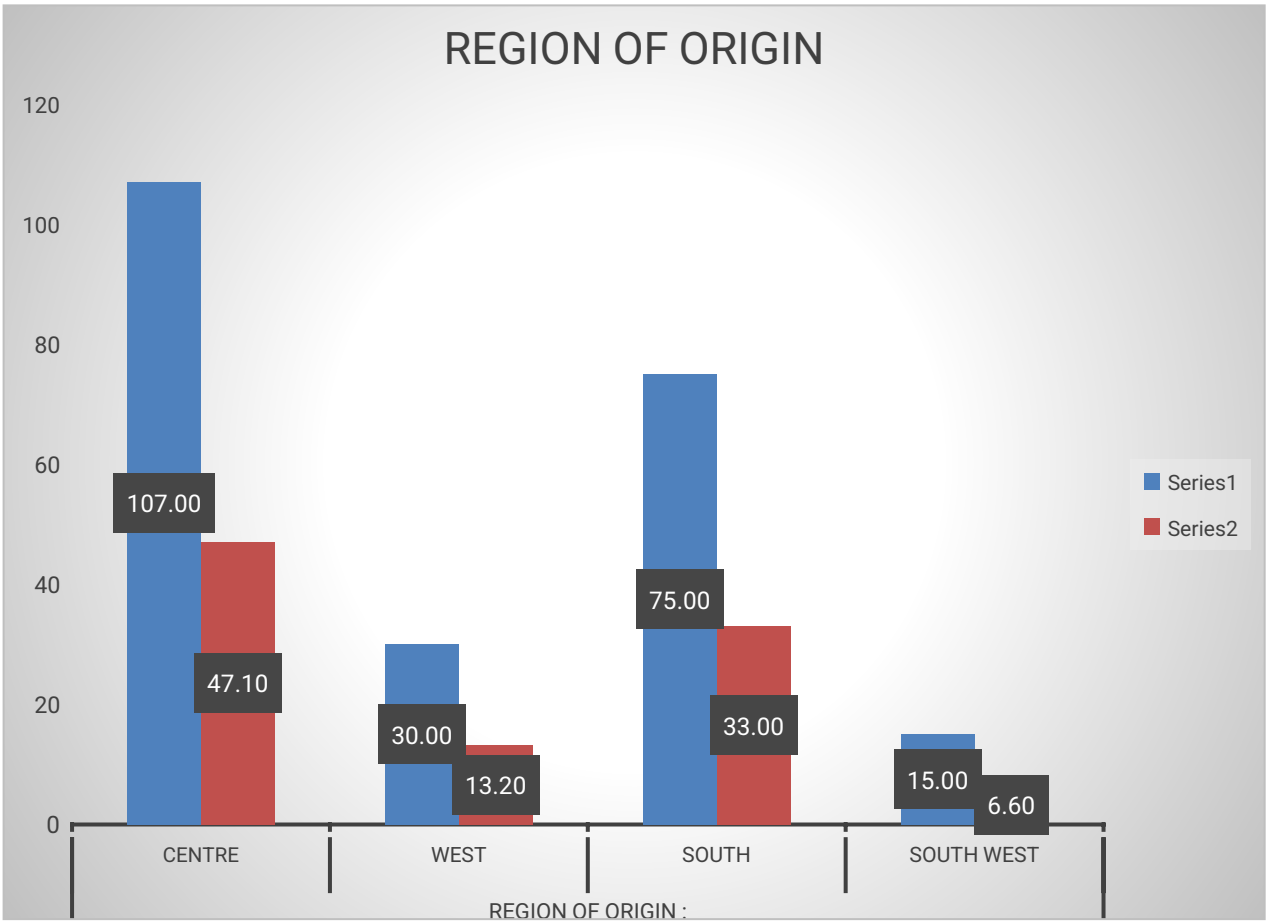


Fig. 6 the distribution by region of origin of the study participants(The centre has the highest count with 107 individuals, which constitutes 47.1% of the total. The smallest group comes from the southwest region, with 15 individuals representing 6.6% of the total.)

4.1.2 CLINICAL FACTORS

Table IV.Clinical characteristics of our study population (N = 227)

variables	categories	count(n)	Proportion(%)
Type of infertility	Primary	***116***	***51.1***
	Secondary	111	48.9
Infertility treatment status.	No	17	7.5
	yes	**210**	**92.5**
Kind of treatment received	Medication	**210**	**92.5**
	None	17	7.5
Time since diagnosis.	<1yr	112	**49.4**
	1-5 years	75	**33.0**
	> 5 years	40	**17.6**

The prevalence of primary (51.1%) and secondary (48.9%) infertility was almost equal. The vast majority of women (92.5%) had received infertility treatment, exclusively medication-based. All women were diagnosed by a gynecologist. The duration of infertility varied, with the largest group (49.4%) being diagnosed for less than a year.

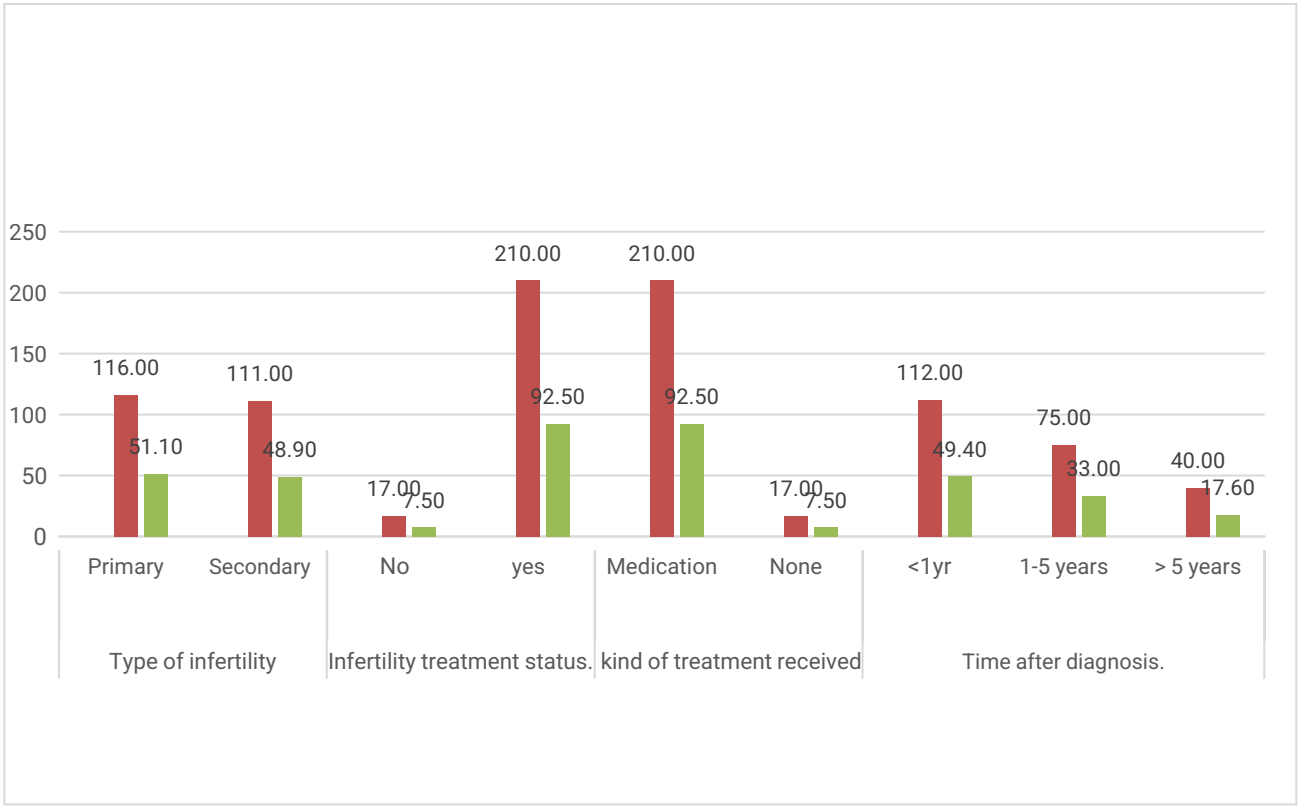


Fig.7 Clinical characteristics of the infertile women surveyed (N = 227)

(The prevalence of primary (51.1%) infertility. The vast majority of women (92.5%) had received infertility treatment. All women were diagnosed by a gynecologist. The duration of infertility varied, with the largest group (49.4%) being diagnosed for less than a year)

4.1.2.1 EMOTIONAL WELL-BEING AND DEPRESSION

Table V.Impact of infertility on the emotional well-being of women (N = 227)

Variables	Categories	count(n)	Proportion (%)
Impact of infertility on relationship with relatives	None	**63**	**27.8%**
	Mild	60	26.4%
	Moderate	44	19.4%
	severe	60	26.4%
Depression Frequency in a Month	Not at all	23	10.1%
	More than half of the days	38	16.7%
	Almost every day	**119**	**52.4%**
	Few days	47	20.7%
Attempted suicide	No	**211**	**93.0%**
	Yes	16	7.0%
Thoughts frequency	Not at all	**213**	**93.8%**
	A few days	13	5.7%
	More than half of the days	1	0.4%
Impact of Infertility on Mental Health,	None	56	24.7%
	Mild	48	21.1%
	Moderate	**94**	**41.4%**
	Severe	29	12.8%

The majority of participants **(52.4%)** reported feeling discouraged, depressed, or hopeless almost every day in the past month. Infertility had a moderate to severe impact on the mental health of **54.2%** of respondents, and **26.4%** said it severely affected their relationship with their partner. Suicidal thoughts were present in **7%** of participants with most of them**(5.7%)**experiencing these thoughts occasionally

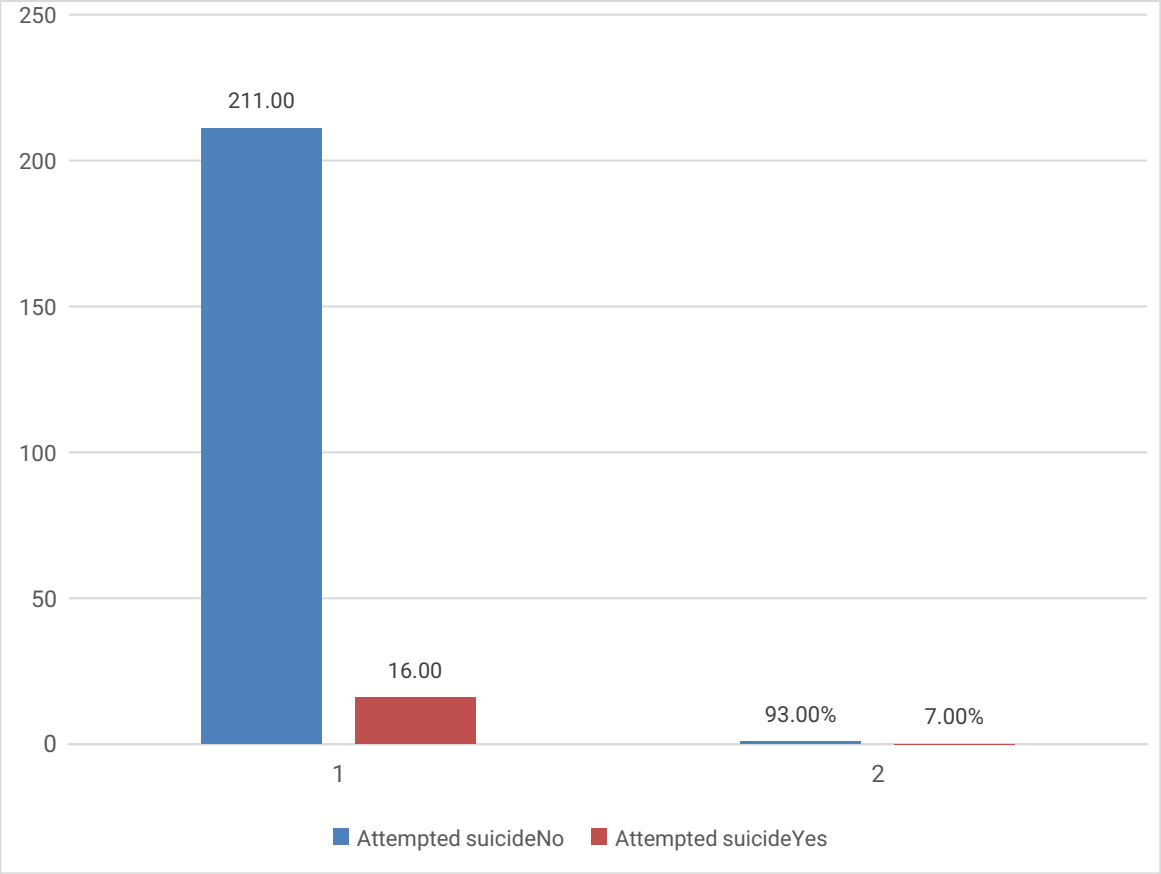


Fig 8: infertile women that attempted suicide in our study population

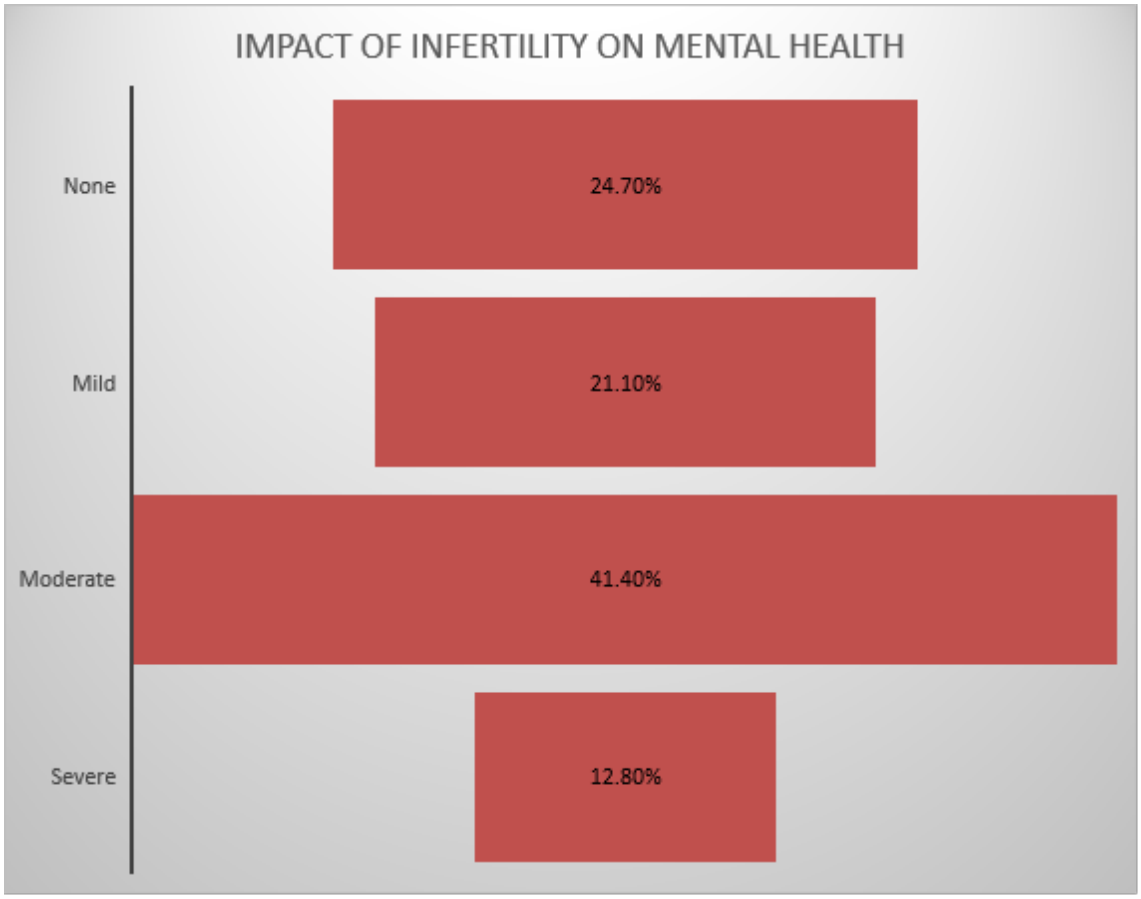


Fig 9: Impact of infertility on mental health(. Infertility had a moderate to severe impact on the mental health of 54.2% of respondents, and 26.4% said it severely affected their relationship with their partner.)

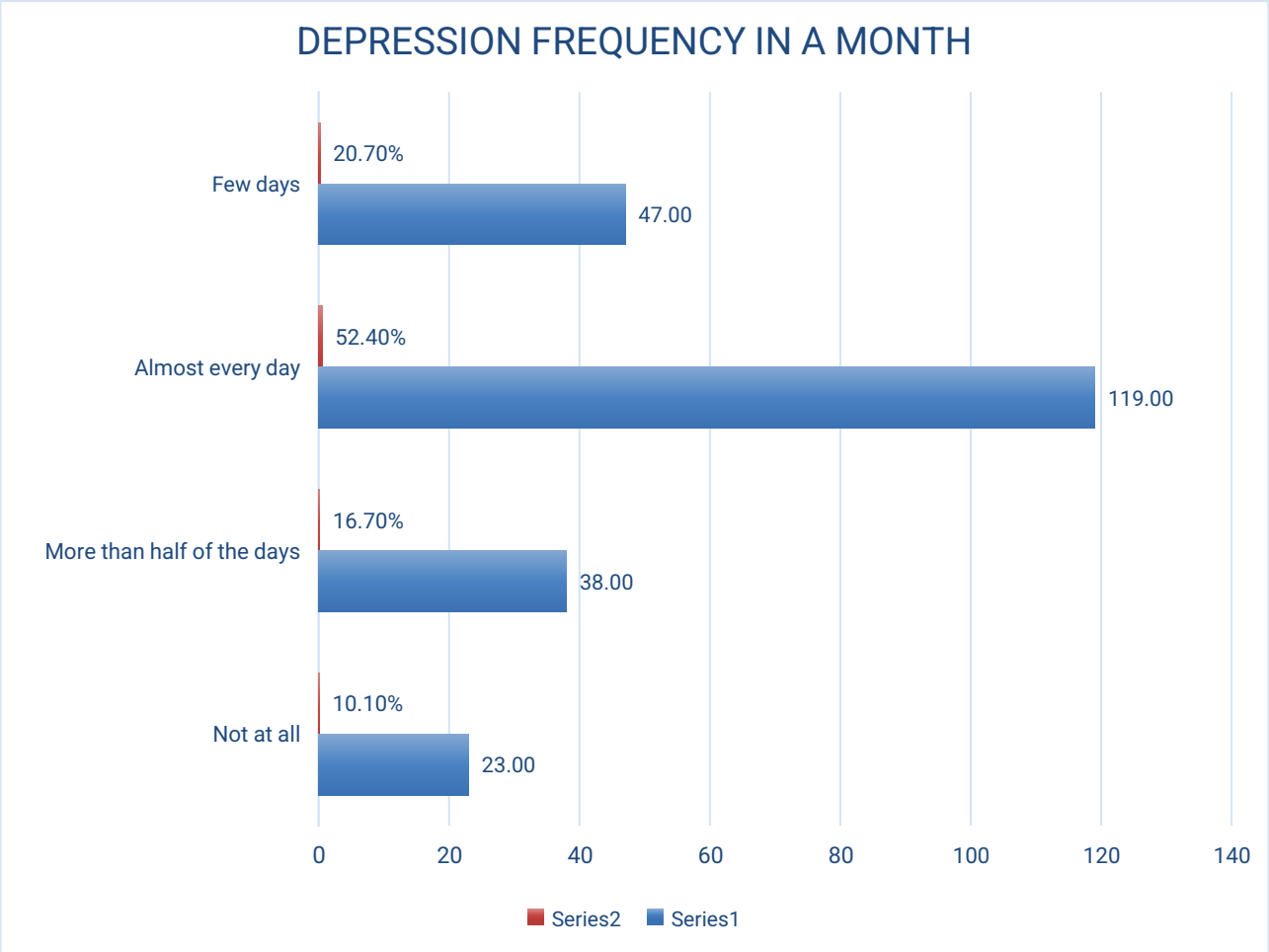


Fig 10:depression frequency in a month(The majority of individuals, numbering 119, where depressed Almost every day, representing 52.4% of the overall count. Conversely, 23 individuals where not depressed at all, amounting to 10.1% of the total)

4.1.2.2 Assessment of depressive symptoms in infertile women

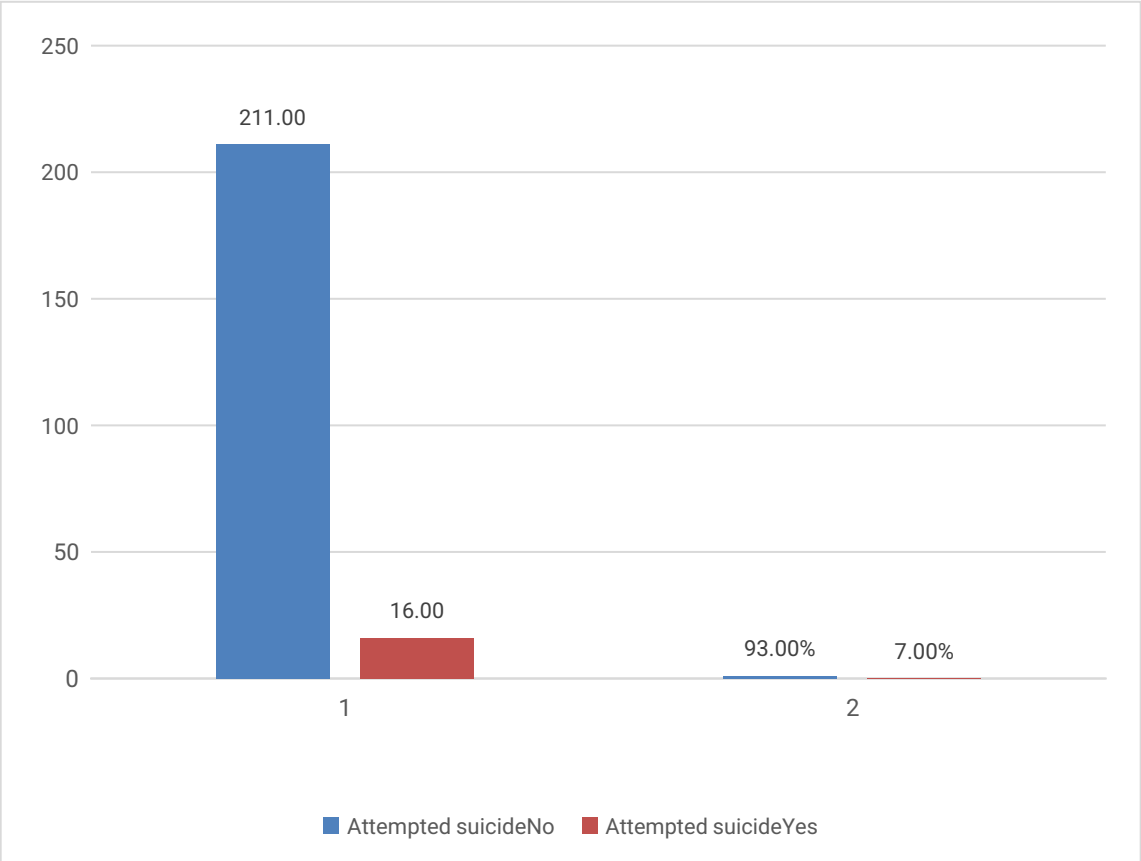
Table VI. Assessment of depressive symptoms in infertile women using the Patient Health Questionnaire-9 (PHQ-9) (N=227)

Categories		count(n)	Proportion (%)
Little interest or pleasure in doing things	**Not at all**	**103**	**45.4%**
	More than half of the days	4	1.8%
	Several days	56	24.7%
	Almost every day	64	28.2%
Feeling downward, depressed, or hopeless	Not at all	68	30.0%
	More than half of the days	51	22.5%
	Several days	19	8.4%
	Almost every day	**89**	**39.2%**
Difficulty falling asleep or excessive sleep	**Not at all**	**102**	**44.9%**
	More than half of the days	40	17.6%
	Several days	25	11.0%
	Almost every day	60	26.4%
Feeling tired or lacking energy	**Not at all**	**75**	**33.0%**
	More than half of the days	42	18.5%
	Several days	65	28.6%
	Almost every day	45	19.8%
Lack of appetite or overeating	**Not at all**	**104**	**45.8%**
	More than half of the days	38	16.7%
	Several days	25	11.0%
	Almost every day	60	26.4%
Discomfort, failure and disappointment	Not at all	66	29.1%
	More than half of the days	19	8.4%
	Several days	69	30.4%
	Almost every day	**73**	**32.2%**
Difficulty in concentrating	**Not at all**	**116**	**51.1%**
	More than half of the days	5	2.2%
	Several days	46	20.3%
	Almost every day	60	26.4%
	Not at all	**169**	**74.4%**

Slowness or Agitation	More than half of the days	11	4.8%
	Several days	17	7.5%
	Almost every day	30	13.2%
Frequency of Thoughts of	Not at all	**169**	**74.4%**
Self-Harm,	Several days	2	0.9%
	Almost every day	56	24.7%

The most common symptoms are feelings of depression, depression or hopelessness **(39.2%),** followed by fatigue or loss of energy **(28.6%)** followed by Loss of interest or enjoyment in doing things was reported by **28.2%** of participants and sleep disturbances **(26.4%).** Notably**, 24.7%** of women had suicidal thoughts, most of the time every day.

4.2 PREVALENCE OF SUICIDAL CONDUCTS



- Fig 11 .**attempted suicide of infertile women in our study population**(A significant majority of 211 individuals have not attempted suicide, which constitutes 93.0% of the total. A smaller number of 16 individuals have attempted suicide, making up 7.0% of the total)

Table VII:Evaluation of suicidal intent in infertile women using the suicide intent scale (SIS) (N =227)

Categories	SUICIDAL INTENT	COUNT(n)	Proportion (%)
Attempted suicide	no	211	93.0%
Attempted suicide	**yes**	**16**	**7.0%**
wish to live	Weak	14	6.2%
	Moderate to strong	**213**	**93.8%**
Reasons to Live/Die	Equal Purpose	15	6.6%
	To live outweigh to die	**212**	**93.4%**
Desire to attempt active suicide	**none**	**213**	**93.8%**
	Moderate to strong	14	6.2%
Passive suicidal desire	No desire	40	17.6%
	I'd let life/death choose	14	6.2%
	Taking precautions to save life	**173**	**76.2%**
Duration of suicide ideation/ suicide wish	**None**	**168**	**74.0%**
	Brief periods	45	19.8%
	Longer periods	14	6.2%
Frequency of suicidal thoughts	**None**	**160**	**70.5%**
	Intermittent	14	6.2%
	Rare, occasional	53	23.3%
Attitude towards suicidal ideation/suicidal wishes	Ambivalent;indifferent	1	0.4%
	Reject	**226**	**99.6%**
Controle over suicidal action	has no sense of control	36	15.9%
	a sense of controle	**183**	**80.6%**
	uncertain of controle	8	3.5%
Deterrents to an active attempt (e.g., family, religion, irreversibility)	**Concerns about deterrence measures**	**14**	**6.2%**
	Will not attempt because of a deterrent	132	58.1%
	Little to no concerns about deterrence measures	81	35.7%
Reasons for planning an attempt	**None**	**174**	**76.7%**
	To manipulate the environment; Taking Attention, Revenge	15	6.6%
	To escape problems	38	16.7%

Method:	The method would take time/effort;	14	6.2%
Availability/Opportunity	Opportunity not readily available		
for a Considered Attempt	**Method not available; No opportunity**	**213**	**93.8%**
capability of committing	Uncertainty of courage	13	5.7%
suicide.	**No courage**	**214**	**94.3%**
planning a suicide attempt	None	227	100.0%
engage in any final acts in	**none**	**226**	**99.6%**
anticipation of death	thought about	1	0.4%
deceiving others about	**None**	**193**	**85.0%**
contemplated suicide	Insights Revealed	34	15.0%

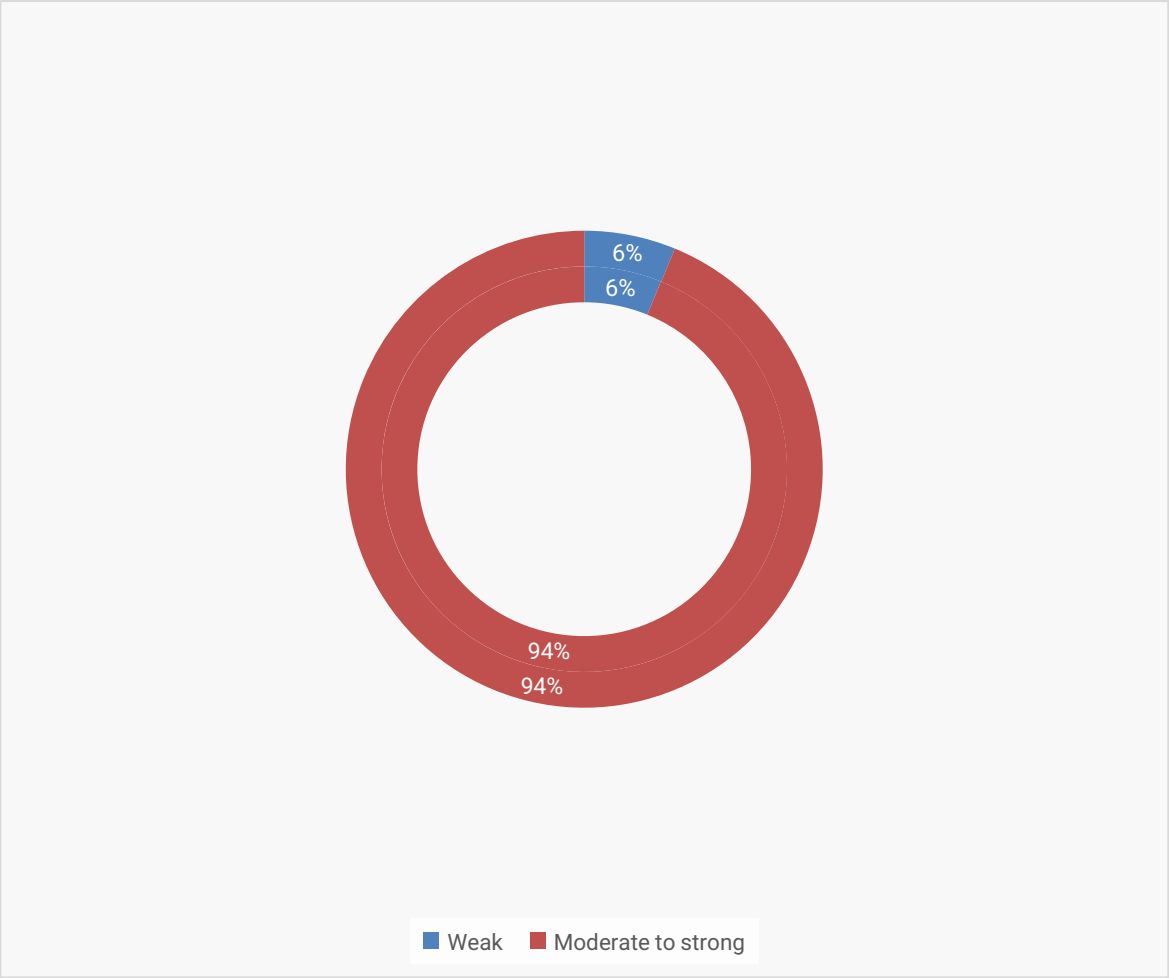
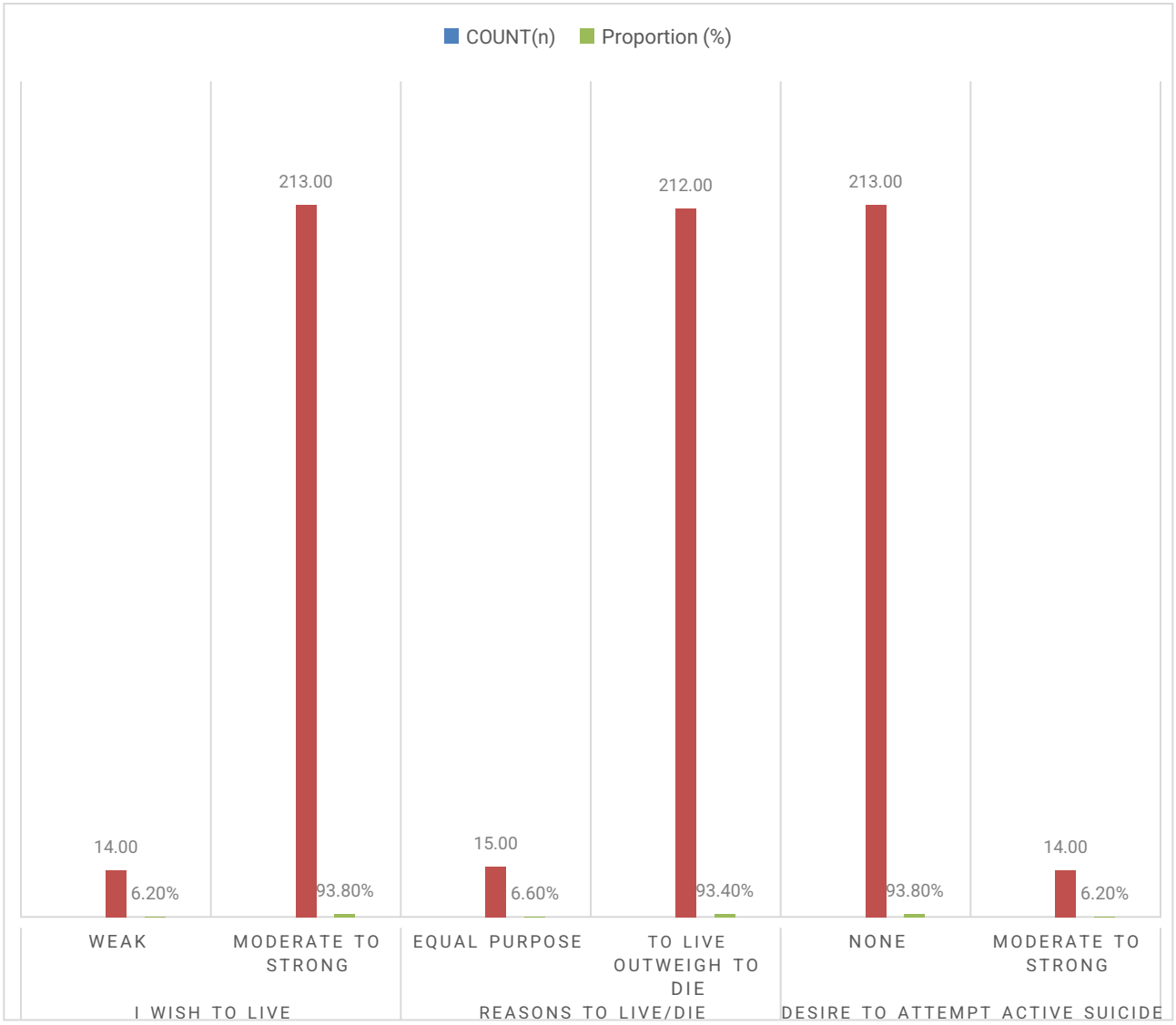
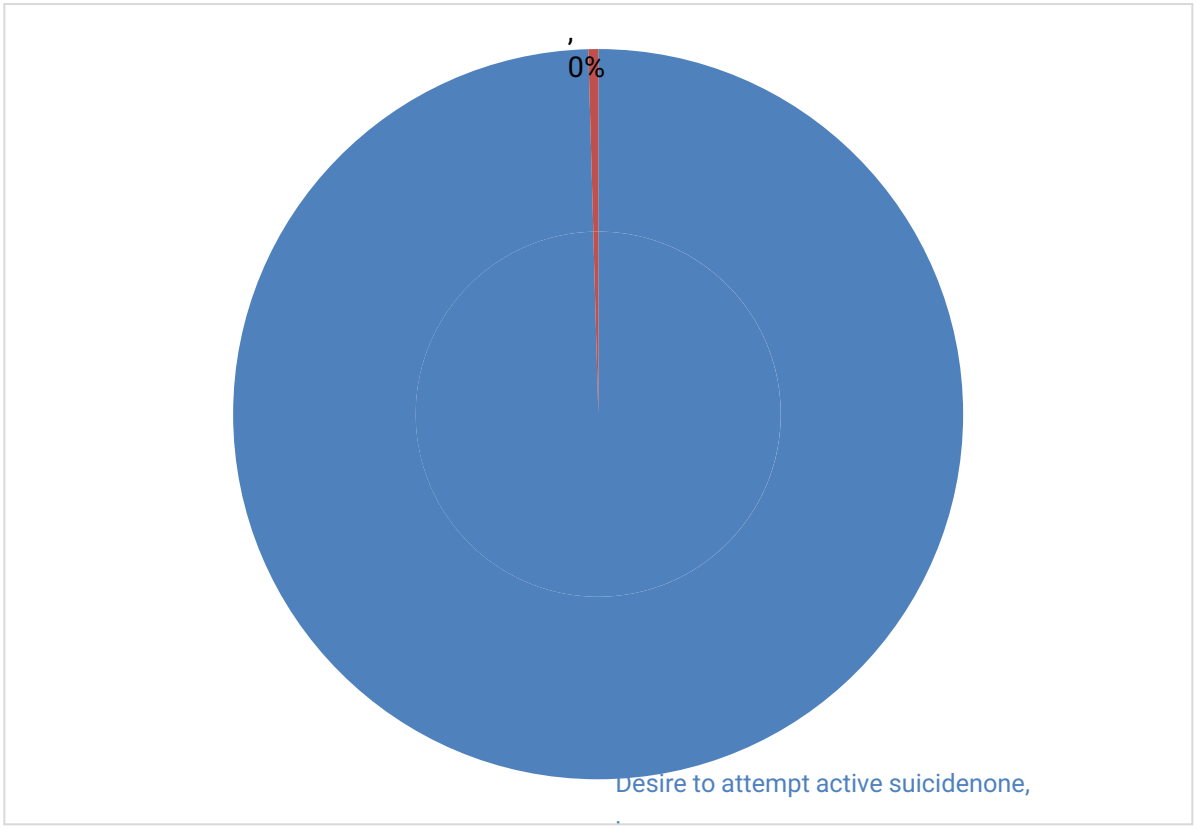


Fig. 12: distribution of infertile women that wish to live(The overwhelming majority of individuals, numbering 213,had a moderate to strong wish to live, representing 93.8% of the total.)



- **Fig 13: a summery of some variables on suicidal intent scale(**A small group of 15 individuals, which is 6.6% of the total, sees equal reasons to live and die while the vast majority, with 212 individuals, representing 93.4% of the total, find more reasons to live than to die.

Fig 14 wish to live



- **Fig.15 distribution that shows the desire of those that had the desire to attemp active suicide(**A significant majority of 213 individuals have no desire to attempt suicide, constituting **93.8%** of the total.A smaller segment of 14 individuals, making up **6.2%** of the total, has a moderate to strong desire to attempt suicide)

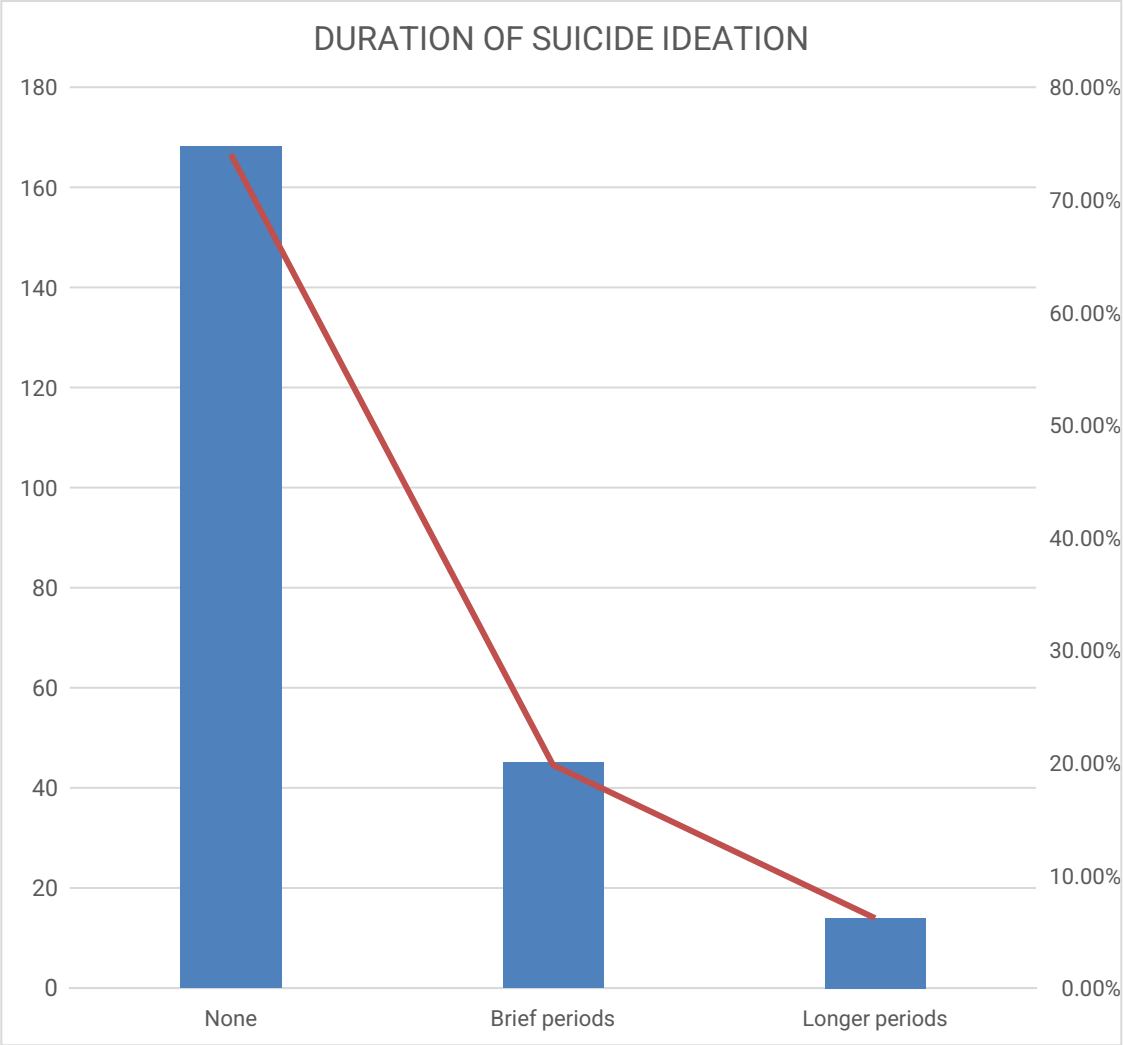


Fig. 16 distribution of infertile women on periods they had suicidal thoughts(most (168,74%)do not experience such ideation, while a smaller proportion (14,6.2%)do for varying lengths of time.

4.3 ASSOCIATED FACTORS

4.3.1 SUPPORT SYSTEMS

Table VIII: Support systems mobilized by infertile women (N = 227)

Categories	RESPONSE	COUNT(n)	Proportion (%)
having someone you can talk about your feelings	No	1	0.4%
	Yes	**226**	**99.6%**
Type of person available to talk with	Friend	59	26.0%
	Family member	58	25.6%
	Partners	**95**	**41.9%**
	Health Professional	15	6.6%
Recourse to professional help for feelings of depression or suicidal thoughts	No	**153**	**67.4%**
	yes	74	32.6%
prevention from seeking help	Stigma	14	6.2%
	Despair	60	26.4%
	Lack of awareness of resources	31	13.7%
	Expensive	30	13.2%
	Other	**92**	**40.5%**

This table describes the support systems mobilized by 226 infertile women..Almost all **(99.6%)** of women have someone they trust to talk to about their feelings, most commonly their partner (**41.9%).** only **6.6%** sought professional help, with desperation being the main reason given for not doing so (**26.4%).**

4.3.2 COPING STRATEGIES:

Table IX:Coping strategies and use of mental health services among infertile women (N = 227)

Categories		count(n)	Proportion (%)
strategies used to cope with the stress and emotions associated with infertility	Physical activity	15	6.6%
	Healthy life stile	15	6.6%
	Self-care	16	7.0%
	Communication	45	19.8%
	Techniques of the body and mind: yoga, meditation	**75**	**33.0%**
	Others	61	26.9%
Social Support Networks	No	**168**	**74.0%**
	Yes	59	26.0%
Access to mental health institution	**No**	**165**	**72.7%**
	Yes	62	27.3%
Factors that help them to seek help for mental health problems	Awareness and availability	67	29.5%
	Awareness and availability and others	33	14.5%
	Personal Beliefs About Mental Health,	**96**	**42.3%**
	Personal Beliefs About Mental Health, Others	16	7.0%
	Support Social Network	15	6.6%

This table presents coping strategies and use of mental health services among 226 infertile women. The majority **(33.0%)** use mind-body techniques to cope with the stress and emotions of infertility. However, only **26.0%** have a social support network and **27.3%** have used mental health services. Personal beliefs about mental health are the main factor (**42.3%)** that can influence the decision to seek mental health support

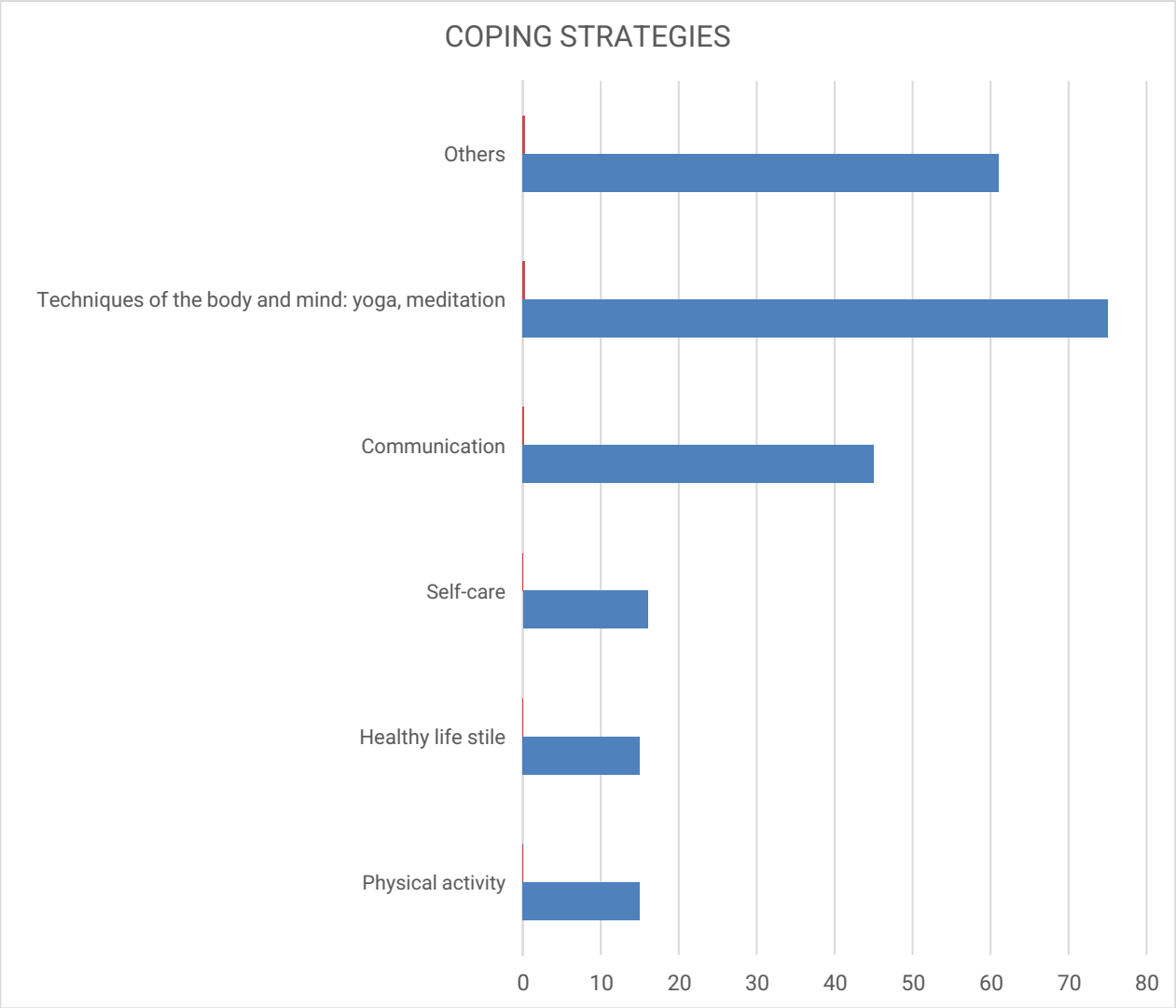


Fig.17 infertile women and coping strategies(The majority **(33.0%)** use mind-body techniques to cope with the stress and emotions of infertility)

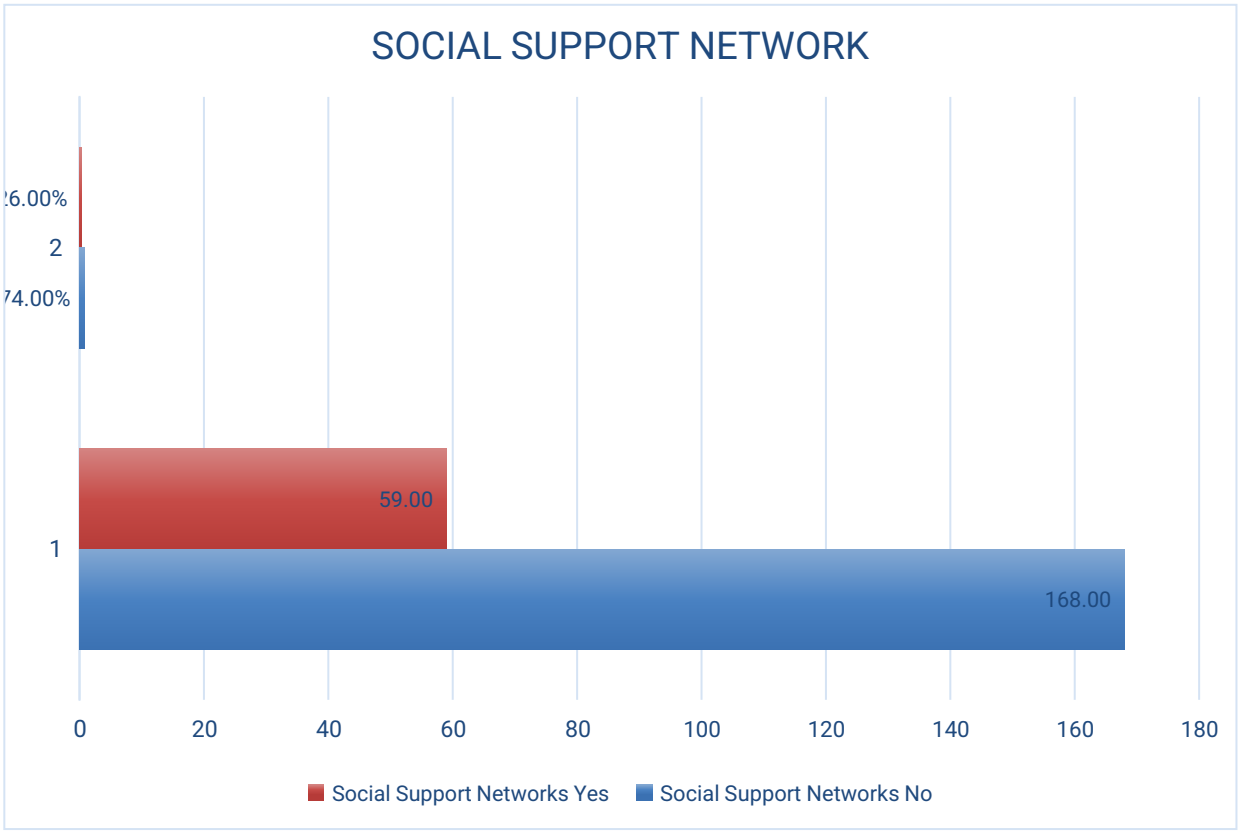


Fig. 18 infertile women that had social support network in our study population(only **26.0%** have a social support network)

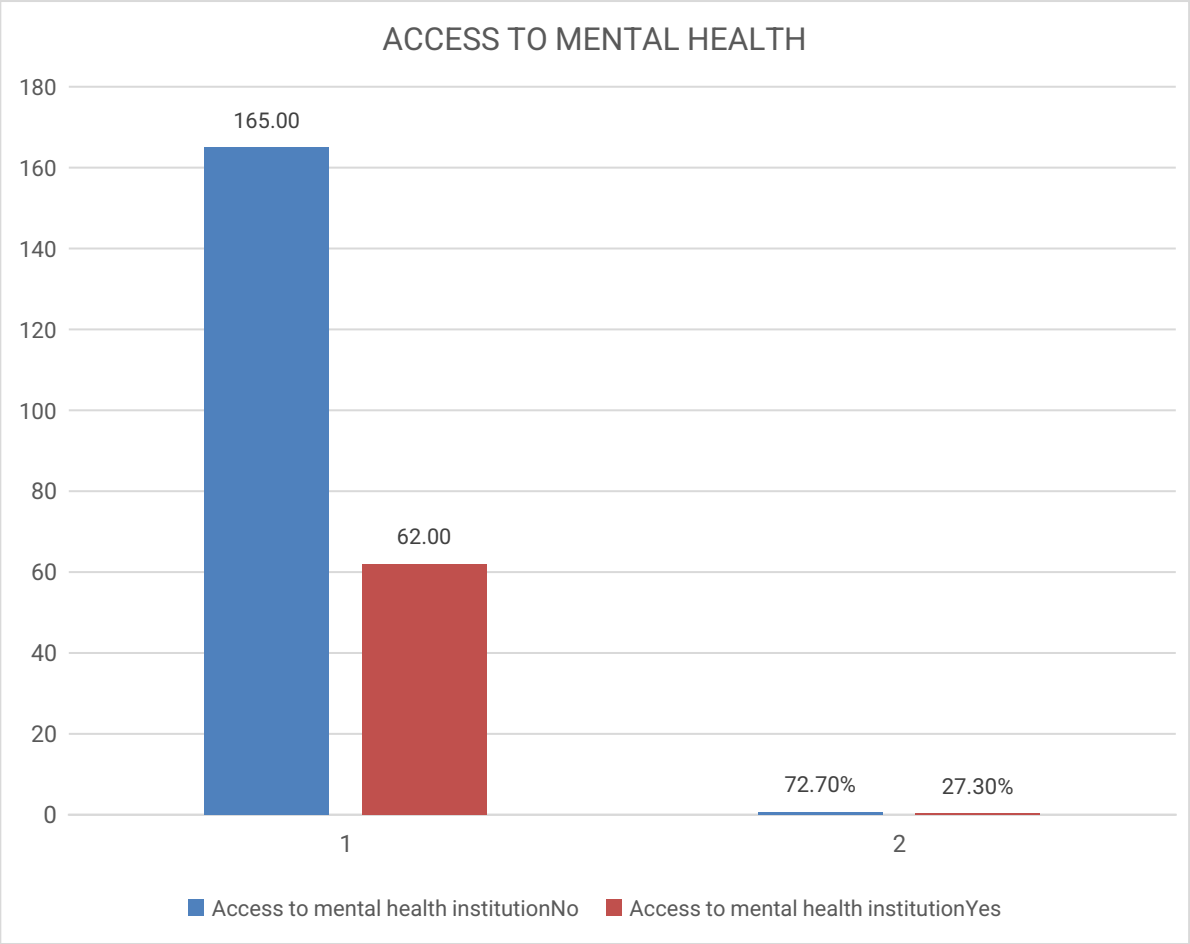


Fig 19: infertile women that had access to mental health in our study population(27.3% have used mental health services)

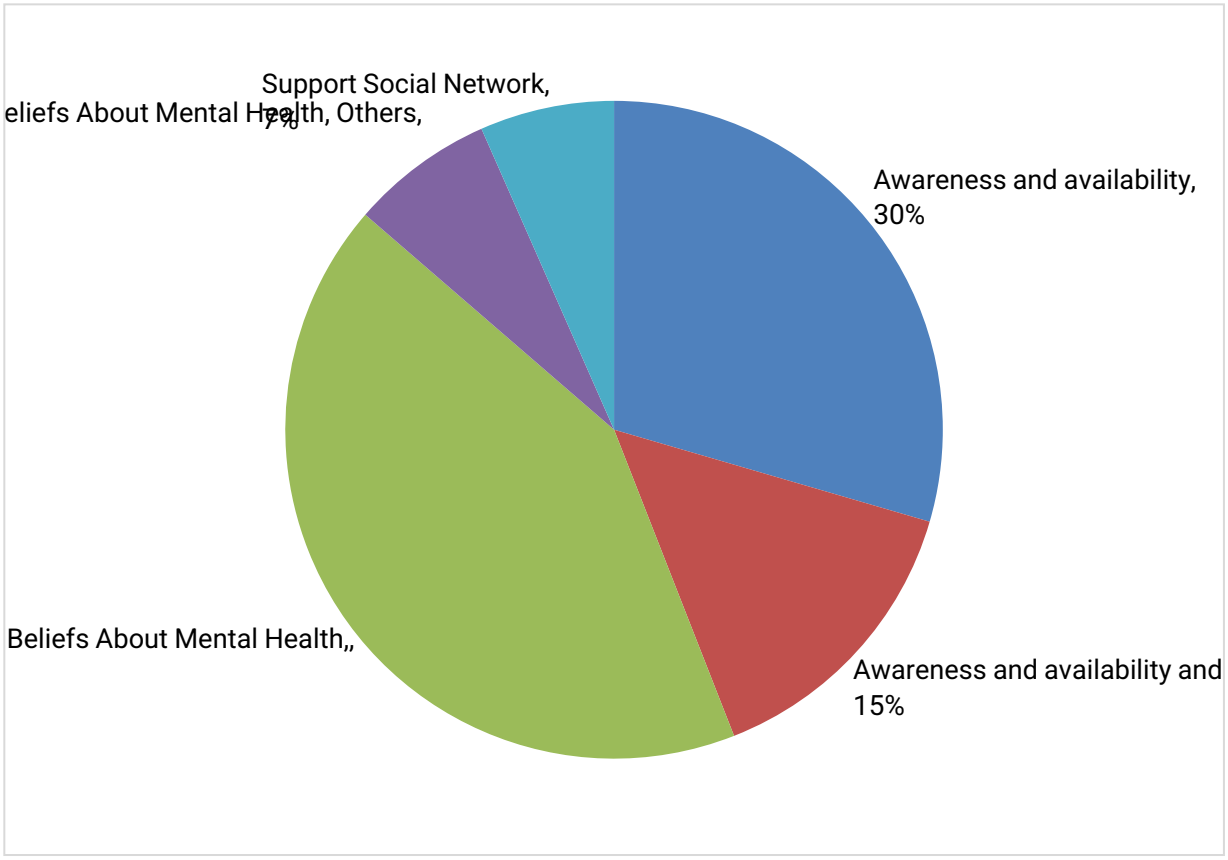


Fig.20 Factors that led them to seek help for mental health problems(Personal beliefs about mental health are the main factor (**42.3%)** that can influence the decision to seek mental health support)

4.3.3 STIGMA AND CULTURAL ATTITUDES

Table X: explores the perceived stigma and cultural attitudes related to infertility and mental health among our study population

Categories		COUNT(n)	Proportion (%)
Perceiving a stigma surrounding infertility within the community	No	**63**	**57.8%**
	yes	46	42.2%
Stigmatize culture of suicide and mental health problems	No	**65**	**59.6%**
	yes	44	40.4%
feeling comfortable talking openly about struggling with infertility and mental health	No	2	1.8%
	yes	**107**	**98.2%**
Methods of raising awareness and reduce the stigma of these issues in a community	Talking more	26	23.9%
	Cheaper	9	8.3%
	Collaboration with healthcare providers	**38**	**34.9%**
	Advocacy and health policy change	1	0.9%
	Others	35	32.1%

A significant proportion (**42.2%)** perceive a stigma around infertility and **40.4%** consider that their culture stigmatizes suicide and mental health problems. However, the vast majority (**98.2%)** feel comfortable discussing these issues openly

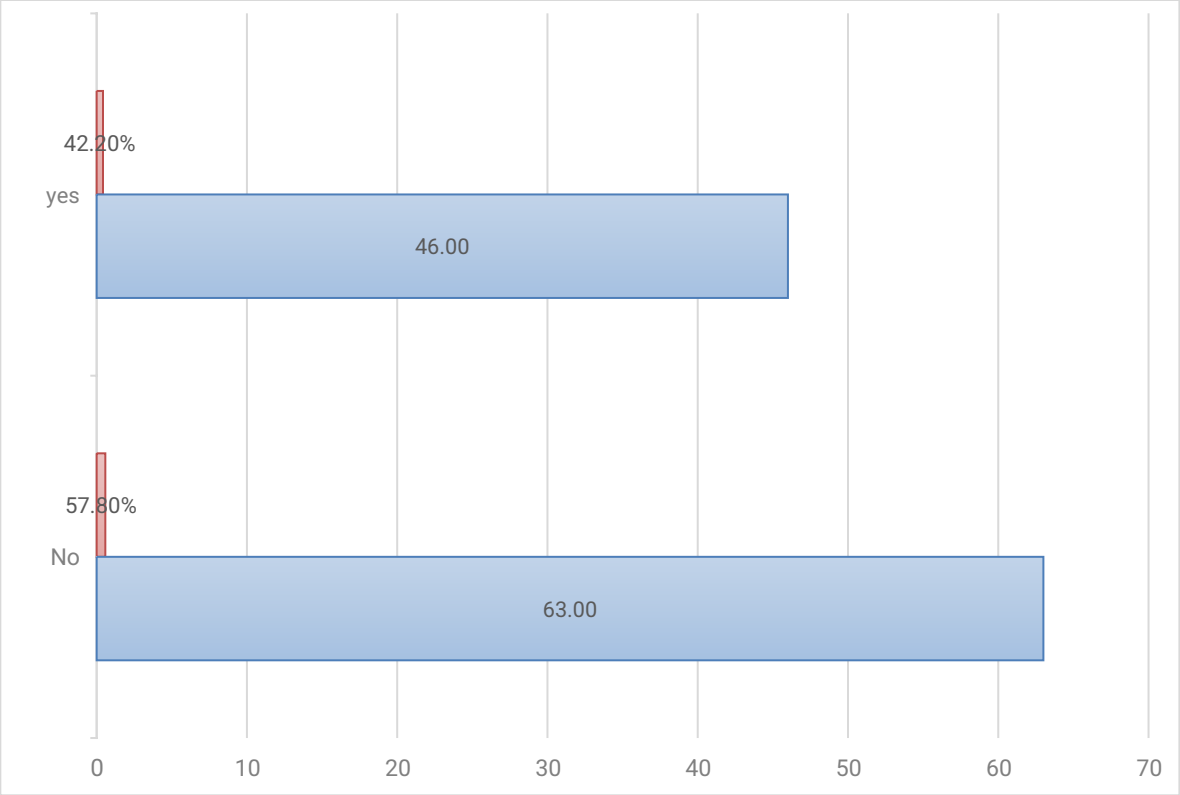


Fig. 21 infertile women that Perceived stigma surrounding infertility within the community(A significant proportion (**42.2%)** perceive a stigma around infertility)

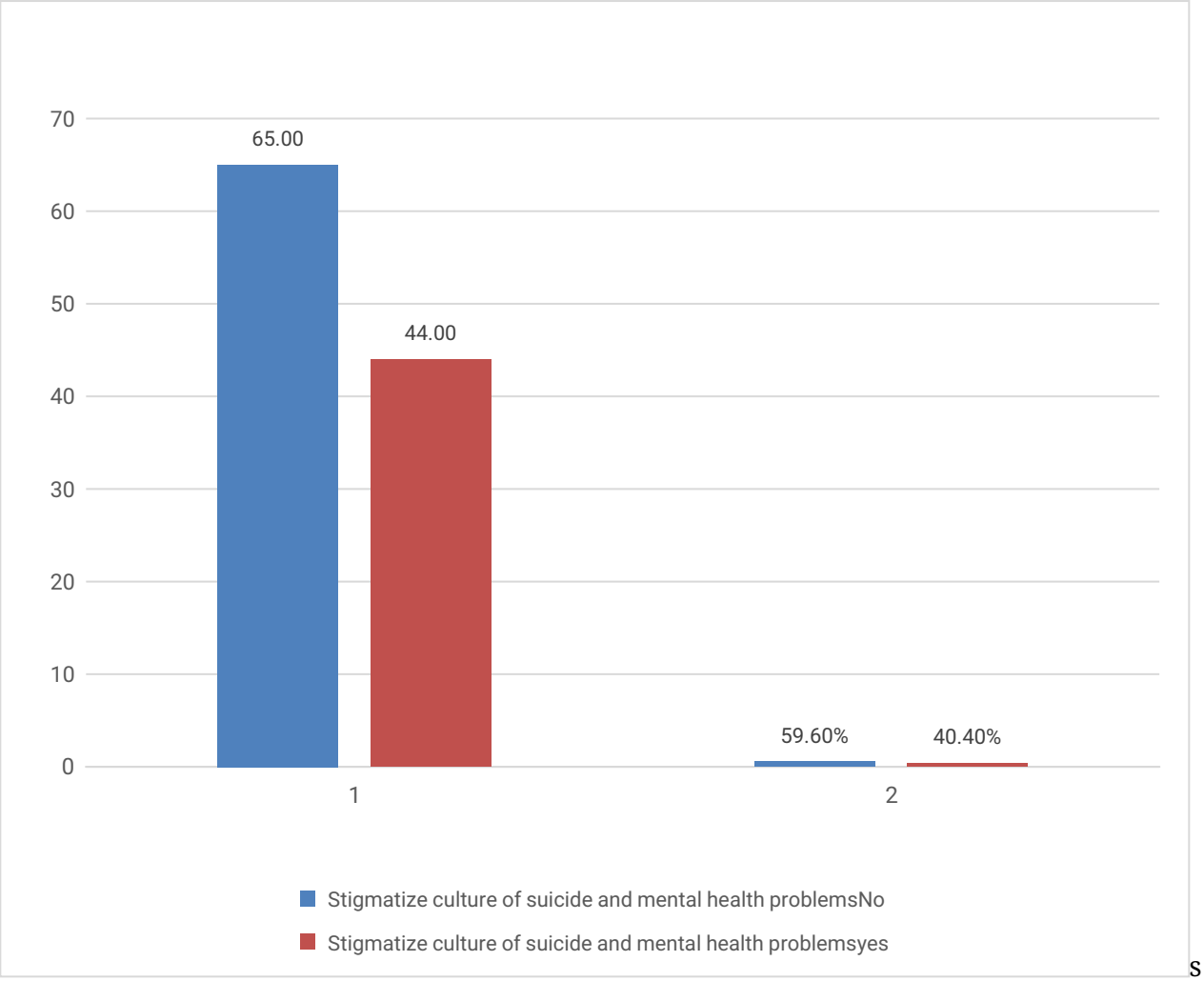


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Fig. 22 infertile women having a stigmatize culture on suicide and mental health problems in our study population(40.4% consider that their culture stigmatizes suicide and mental health problems)

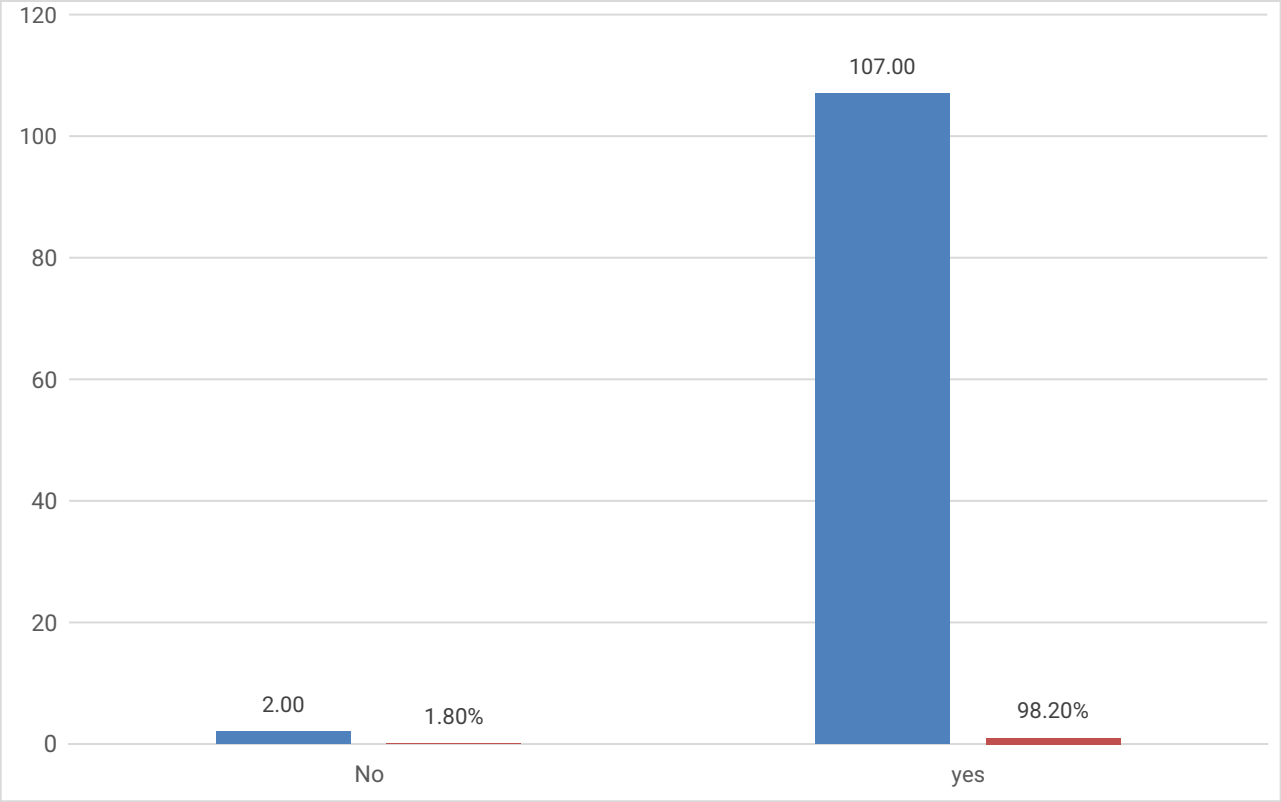
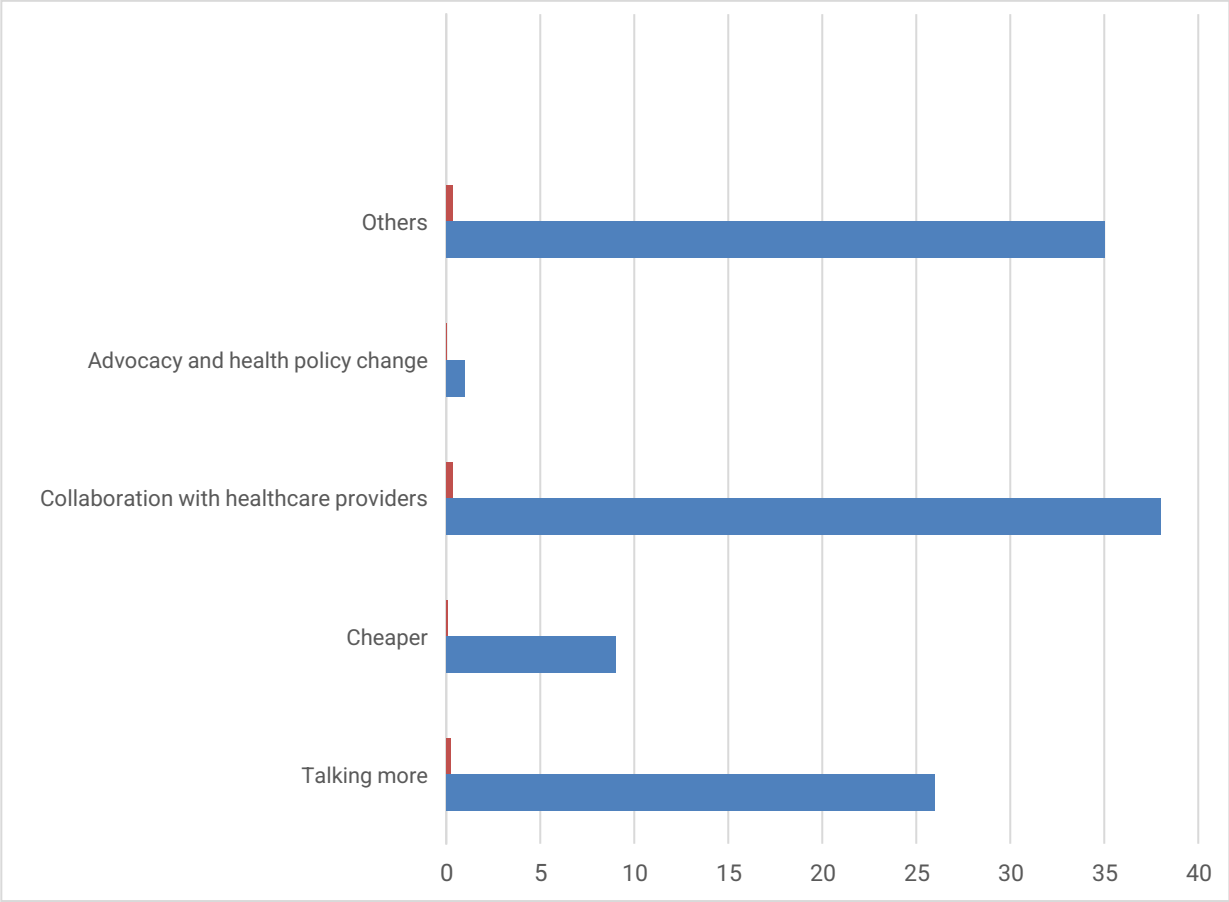


Fig.23 infertile women feeling comfortable talking openly about their struggles with infertility and mental health in our study population(the vast majority (**98.2%)** feel comfortable discussing these issues openly)



- **Fig 24: Methods of raising awareness and the reduce of stigma for these issues in a community in our study population**(The largest group, with 38 individuals, representing 34.9% of the total, supports collaboration with healthcare providers as a method.Only 1 individual, accounting for 0.9% of the total, sees advocacy and health policy change as a method.)

Table XI:Association Between Attempted Suicide and Potential Risk Factors Among Infertile Women in Yaoundé

		ATTEMPTED SUICIDE				
		NO		YES		p-value
Categories		**participant(n)**	**Proportion (%)**	**participant (n)**	**Proportion (%)**	
Marital status	Single	95	45.0%	4	25.0%	
	Married	100	47.4%	12	75.0%	0.087
	Free union	16	7.6%	0	0.0%	
Age range	[23 -28[	11	5.2%	2	12.5%	
	]29 - 33[	63	29.9%	**14**	**87.5%**	
	]34 - 38[	**81**	**38.4%**	0	0.0%	**<0.001***
	39[	56	26.5%	0	0.0%	
Region of origin :	centre	**105**	**49.8%**	2	12.5%	
	west	16	7.6%	**14**	**87.5%**	
	south	75	35.5%	0	0.0%	**0.000***
	south west	15	7.1%	0	0.0%	
Level of education	University	**196**	**92.9%**	**16**	**100.0%**	
	Secondary	15	7.1%	0	0.0%	0.270
Duration of Infertility diagnosis	<1year	97	45.9%	15	93.8%	
	1-5 years	**75**	**35.5%**	0	0.0%	**<0.001***
	More than 5 years	39	18.5%	1	6.2%	
Community that stigmatized infertility	No	**152**	**72.0%**	0	0.0%	**<0.001***
	Yes	59	28.0%	**16**	**100.0%**	
Infertility impact on relationships with relatives	Not at all	**63**	**29.9%**	0	0.0%	
	Lightly	58	27.5%	2	12.5%	
	Moderately	30	14.2%	**14**	**87.5%**	**<0.001***
	severely	60	28.4%	0	0.0%	
	Not at all	**103**	**48.8%**	0	0.0%	
	More than half of the days	4	1.9%	0	0.0%	<0.001*
	Several days	40	19.0%	**16**	**100.0%**	

Little interest or pleasure in doing things	Almost every day	64	30.3%	0	0.0%	
Feeling of despondency, depression or hopelessness	Not at all	**68**	**32.2%**	0	0.0%	
	More than half of the days	51	24.2%	0	0.0%	<0.001*
	several days	17	8.1%	2	12.5%	
	Almost every day	75	35.5%	**14**	87.5%	
Difficulty falling asleep or excessive sleep	Not at all	102	48.3%	0	0.0%	
	More than half of the days	26	12.3%	14	87.5%	<0.001*
	Several days	23	10.9%	2	12.5%	
	Almost every day	60	28.4%	0	0.0%	
Feeling tired or lacking energy	Not at all	**75**	**35.5%**	0	0.0%	
	More than half of the days	42	19.9%	0	0.0%	**<0.001***
	Several days	49	23.2%	**16**	**100.0%**	
	Almost every day	45	21.3%	0	0.0%	
Lack of appetite or overeating	Not at all	**104**	**49.3%**	0	0.0%	
	More than half of the days	24	11.4%	**14**	**87.5%**	<0.001*
	Several days	23	10.9%	2	12.5%	
	Almost every day	60	28.4%	0	0.0%	
Feeling uncomfortable - or feeling of failure or disappointment with oneself or one's family	Not at all	**64**	**30.3%**	**2**	**12.5%**	
	More than half of the days	19	9.0%	0	0.0%	**<0.001***
	Several days	69	32.7%	0	0.0%	
	Almost every day	59	28.0%	**14**	**87.5%**	
	Not at all	**114**	**54.0%**	2	12.5%	
	More than half of the days	2	0.9%	0	0.0%	
	More than half of the days	3	1.4%	0	0.0%	

Difficulty	Several days	32	15.2%	**14**	**87.5%**	**<0.001***
concentrating	Almost every day	**60**	**28.4%**	0	0.0%	

The table presents various categories and their corresponding proportions of participants who attempted suicide and those who did not. The p-values indicate the statistical significance of the differences between the two groups.In the category of marital status, **45.0%** of single women and **47.4%** of married women did not attempt suicide, compared to **25.0%** and **75.0%** respectively who did, with a p-value of **0.087**.In terms of age range, the p-value is less than **0.001,** indicating a significant difference between the age groups in terms of suicide attempts.

The region of origin also shows a significant difference **(p-value < 0.001)**, with **49.8%** from the Centre region and **35.5%** from the South among those who did not attempt suicide, compared to **12.5%** and **0.0%** respectively among those who did.

The duration of infertility diagnosis shows a significant difference **(p-value < 0.001)** between the groups.The community that stigmatized infertility shows a significant difference **(p-value < 0.001)** between those who did and did not attempt suicide.The impact of infertility on relationships also shows a significant difference **(p-value < 0.001).**

The categories of little interest or pleasure in doing things, feeling of despondency, depression or hopelessness, difficulty falling asleep or excessive sleep, feeling tired or lacking energy, lack of appetite or overeating, feeling uncomfortable, and difficulty concentrating all show significant differences **(p-value < 0.001)** between those who did and did not attempt suicide.

5 DISCUSSION

5-1 STUDY LIMITATIONS:

- The study is limited to participants from Yaoundé, which may not accurately represent the broader population of infertile women in other regions, leading to potential sampling bias.
- Participants' responses may be biased or inaccurate due to the nature of self-reporting.
- The study may not fully capture the cultural nuances and variability in social support systems, potentially affecting the generalizability of the findings.

5.1 SOCIO-DEMOGRAPHIC AND CLINICAL FACTORS

5.1.1.SOCIO-DEMOGRAPHIC FACTORS

The majority of the women **(35.7%)** were aged between **34** and **38**, with a mean age of **30.96 ±5.312,** where either married **(49.3%)** or single **(43.6%),** and highly educated (**93.4%** with a university degree). Most were employed **(82.8%),** lived in urban areas **(86.8%)** and came from the Centre region **(47.1%)** or the South **(33.0%).**This results are similar to that of Alhassan et al., 2014 in Ghana where the mean age of participant was **30.5years** and the majority of participants with majority aged was between **31** to **35 (32%)[61]**. Also, most participant in this study where self-employed **78%** however it contrast our studies in that majority of participants had no education **54%.** Our Studies however differs from that of Oladeji and OlaOlorun, 2018 in South Africa where the mean age of participant was **34.5 ± 5.7** years, majority of female participants had a tertiary education 69 **(62.7%).[62]**. Also, most of Our Study participant live in the Urban residence 197**(86.6%)** in the center region 107 **(47.1%)** of Cameroon.

5.1.2.CLINICAL FACTORS

Our analysis revealed a near equal distribution between primary infertility **(51.1%),** referring to women who have never conceived, and secondary infertility **(48.9%),** referring to women who have been pregnant before but are now unable to conceive. This finding aligns with Sulyman's 2019 study, which also showed a higher prevalence of primary infertility **(60.4%)** [63].

Furthermore, the vast majority of women in our study **(92.5%)** sought and received treatment for their infertility, exclusively through medication. This is consistent with Sulyman's study, where most participants **(61.8%)** opted for medical treatment [63]. Additionally, both our study and Sulyman's showed that a large proportion of participants had a duration of infertility of less than or equal to five years **(35.5%** in our study and **41.1%** in Sulyman's) [63].However, our results differed from those of Alhassan et al. (2014) in Ghana, where the majority of participants had secondary infertility **(62.0%)** [61].This discrepancy highlights the importance of considering regional and demographic factors when interpreting infertility data.

Overall, our study confirms the high prevalence of primary infertility and the widespread use of medication for treatment, as reported in previous research. However, it also underscores the variability of infertility patterns across different populations, emphasizing the need for tailored interventions and support services.

It is important to note that all the women in our study were formally diagnosed with infertility by a gynecologist. This ensures the accuracy and reliability of our data, providing valuable insights into the prevalence and characteristics of infertility in our study population.

5.2 PREVALENCE

Our study examined suicidal ideation and attempts among participants. While a strong will to live was evident in the majority (**213, 93.8%),** with no desire to die reported, a small subgroup **(14, 6.2%)** did experience moderate to strong thoughts of suicide attempts.

Examining suicidal ideation further, **45** participants **(19.8%)** reported brief thoughts of suicide, had prevalence of **7.0%** for suicidal thoughts while 14 **(6.2%)** experienced these thoughts for a longer duration. Additionally, **53** participants **(23.3%)** reported having attempted suicide on rare occasions. Notably, a significant portion of participants (**44, 19.4%)** expressed uncertainty or a lack of control regarding potential suicidal actions (8, 3.5% uncertain; 36, 15.9% no sense of control).

5.3 ASSOCIATED FACTORS

The **region of origin** also shows a significant difference **(p-value < 0.001)**, with **49.8%** from the Centre region and **35.5%** from the South region.This is because the centre region is close to the south region which makes them easy for them to travel

The **duration of infertility diagnosis** shows a significant difference **(p-value < 0.001)** between the groups. The duration of infertility diagnosis can significantly impact individuals and couples, as it often correlates with increased stress, emotional distress, and psychological challenges.The longer the duration of infertility, the more likely it is that individuals will experience feelings of loss, grief, shame, and depression. This prolonged stress can lead to a decrease in quality of life and exacerbate mental health conditions

The community that stigmatized infertility shows a significant difference **(p-value < 0.001)** between those who did and did suicide conduct. In communities where infertility is heavily stigmatized, individuals may experience intense pressure to conform to societal expectations of parenthood. When they are unable to meet these expectations, they may face discrimination, social

exclusion, and even violence. This can exacerbate mental health issues such as depression and anxiety, which are closely linked to suicidal behavior

The **impact of infertility on relationships** also shows a significant difference **(p-value < 0.001).** Infertility can lead to a range of emotional and psychological effects, such as grief, sadness, anger, guilt, shame, and anxiety. These feelings can spill over into the relationship itself, affecting communication, trust, resilience, and more

The categories of **little interest or pleasure in doing things, feeling of despondency**, show significant differences **(p-value < 0.001).**Infertility can lead to a profound sense of loss and grief, which can manifest as a lack of interest or pleasure in activities that were once enjoyable. This anhedonia is a core symptom of depression and can contribute to feelings of despondency, or deep sadness and loss of hope

Depression or hopelessness show significant differences **(p-value < 0.001).** The significant differences could be due to various factors, including the psychological impact of infertility, societal pressures, and the stress of ongoing fertility treatments

Difficulty falling asleep or excessive sleep show significant differences **(p-value < 0.001)**. The stress of infertility can exacerbate these sleep issues, leading to a higher likelihood of suicide attempts among infertile women

Feeling tired or lacking energy show significant differences **(p-value < 0.001)**, fatigue may be exacerbated by the stress of dealing with a chronic condition, the strain on relationships, and societal stigma

Lack of appetite or overeating show significant differences **(p-value < 0.001)**. These eating patterns may reflect the emotional turmoil and stress associated with infertility, which can lead to feelings of hopelessness and despair. Depression and anxiety can disrupt normal eating behaviors, causing some individuals to lose their appetite or, conversely, to eat more as a coping mechanism

Feeling uncomfortable, and difficulty concentrating all show significant differences **(p-value < 0.001)** between those who did and did not attempt suicide. Feeling uncomfortable may indicate a heightened state of emotional or physical distress, which can contribute to a sense of hopelessness or despair. Difficulty concentrating can be a sign of cognitive overload or a lack of mental clarity, which may be associated with severe stress or depression.

Both symptoms can interfere with an individuals ability to function effectively in daily life and may exacerbate feelings of isolation and helplessness. When these symptoms are present in infertile women, they may increase the risk of suicidal behavior due to the compounded stress of infertility and its impact on mental health

5.3.1 DEPRESSION

Majority of participants in our study, a significant portion of participants 119 **(52.4%)** reported experiencing discouragement, depression, or hopelessness nearly every day during the past month. These findings suggest that infertility has a moderate to severe impact on mental health, affecting **54.2%** of respondents. Additionally, **26.4%** reported a severe negative impact on their relationship with their partner. Notably, **7%** of participants endorsed suicidal thoughts, with most **(5.7%)** experiencing them occasionally. Further breakdown revealed that the majority 94 **(41.4%)** experienced moderate mental health difficulties, while 48 **(21.1%)** reported mild effects.

These findings align with previous research. Vo et al. **(2019)** reported that a substantial majority **(87.8%)** of their participants experienced depression [64]. Similarly, Alhassan et al. (2014) found that **62%** of their participants had some form of depression, with **40%** and **20%** experiencing mild and moderate forms, respectively[61].

Furthermore in our Study The most frequent symptoms were feelings depression or hopelessness **(89.2%),** followed by fatigue or loss of energy **(45.4%)** and sleep disturbance **(44.9%).** Loss of interest or pleasure in doing things was reported by **28.2%** of participants. Notably, **24.7%** of women had suicidal thoughts, mostly on a daily basis.How ever the symptoms found in our study where similar to that of Kamboj et al. (2023) where female patient surfing from infertility demonstrated significantly higher stress and anxiety levels in infertile women compared to fertile controls ($p < 0.05$), further supporting our observations regarding the negative impact of infertility on mental well-being[65]

5.3.2 SUPPORT SUSTEMS

In our study, a majority of participants had access to social support for their emotional well-being. Most frequently, participants spoke with their partner **(95, 41.9%).** However, a smaller proportion **15(6.6%)** sought professional help. While some participants did not confide in anyone due to hopelessness **(60, 26.4%),** limited resources **(31, 13.7%),** cost **(30, 13.2%),** or stigma **(14, 6.2%),** others had unspecified reasons for not seeking help.

5.3.3 COPING STRATEGIES:

In our studies the coping strategies and use of mental health services among 226 infertile women. Most women **(56%)** used mind-body techniques to cope with the stress and emotions associated with infertility. However, only **31.2%** benefited from a social support network and **33.9%** used mental health services. Personal beliefs about mental health were the main factor **(57.8%)** influencing the decision to seek mental health support. However our study differs fro that of Roberts et al. (2020) in that women in this studies utilized both wishful thinking (an emotion-focused or avoidant coping strategy) and practical coping strategies. However, the study emphasizes that wishful thinking was significantly associated with poorer mental health outcomes. This suggests that while women may employ a mix of coping mechanisms, relying on avoidance or emotional coping may not be as effective in managing the distress associated with infertility. The study does not elaborate on the specific practical coping strategies used by the women.[66]. Moudi et al. (2019) found that the women in their study commonly used maladaptive coping behaviors, such as active avoidance and emotional-oriented responses toward others. The study does not elaborate on the specific details of these coping mechanisms. However, it highlights that these women often used avoidance and emotional responses as ways to deal with the stigma associated with infertility. The study also mentions that women were taught relaxation techniques and assertive communication skills during counseling sessions to help them develop more adaptive coping strategies.[67]. Also, in a study by Patel et al., 2016 there was a significant association **(p = 0.02)**for stress due to infertility and copping difficulties as most women in this studies faced difficulties coping with stress due to infertility The study suggests that women with adaptive coping capacities were better able to buffer themselves from the stress of infertility. While the study does not detail the specific adaptive coping strategies, it implies that these strategies are crucial in mitigating the negative psychological impact of infertility [68]. Collectively, these studies highlight the diverse range of coping strategies employed by infertile women and the complex relationship between coping mechanisms and mental health outcomes.

5.3.4 STIGMA AND CULTURAL ATTITUDES

In our studies we noticed that a significant proportion **(42.2%)** of participants are stigmatized due to their infertility and **40.4%** consider that their culture stigmatizes suicide and mental health problems. However our study is similar to that of Kjaer et al. (2011) and that of Swadesh and Rajarshi, 2024 in that both highlight the significant negative psychological impact of infertility on women, particularly the distress associated with the inability to conceive and the stigma surrounding it. While our study focused on stigma and cultural attitudes, Kjaer et al. (2011) found a significantly higher risk of suicide in women who did not have a child after infertility evaluation, underscoring the potential severity of psychological distress in this population [69], [70]. Despite the stigma, our study

found that most women felt comfortable discussing infertility openly, suggesting a potential avenue for intervention and support.

CONCLUSION

In socio-demographic and clinical factors,we have marital status, **45.0%** of single women and **47.4%** of married women did not attempt suicide, compared to **25.0%** and **75.0%** respectively who did, with a p-value of **0.087**.In terms of age range, the p-value is less than **0.001**, indicating a significant difference between the age groups in terms of suicide attempts.The region of origin also shows a significant difference **(p-value < 0.001),** with **49.8%** from the Centre region and **35.5%** from the South among those who did not attempt suicide, compared to **12.5%** and **0.0%** respectively among those who did.The level of education shows no significant difference **(p-value = 0.270)** between those who did and did not attempt suicide.The duration of infertility diagnosis shows a significant difference (**p-value < 0.001**) between the groups.The impact of infertility on relationships also shows a significant difference **(p-value < 0.001).**The categories of little interest or pleasure in doing things, feeling of despondency, depression or hopelessness, difficulty falling asleep or excessive sleep, feeling tired or lacking energy, lack of appetite or overeating, feeling uncomfortable, and difficulty concentrating all show significant differences **(p-value < 0.001)** between those who did and did not attempt suicide

Secondly, the prevalence of those that attempted suicide was **7%** , with most **(5.7%)** experiencing them occasionally.

Lastly,for the associated factors we have,the community that stigmatized infertility shows a significant difference (**p-value < 0.001)** between those who did and did not attempt suicide.The majority **(33.0%)** use mind-body techniques to cope with the stress and emotions of infertility. However, only **26.0%** have a social support network and **27.3%** have used mental health services. Personal beliefs about mental health are the main factor (**49.3%)** that can influence the decision to seek mental health support.Almost all (**99.6%)** of women have someone they trust to talk to about their feelings, most commonly their partner (**41.9%).** only **6.6%** sought professional help, with desperation being the main reason given for not doing so (**26.4%).**

RECOMMENDATIONS

Addressing suicidal tendencies among infertile women requires a multi-faceted approach that involves both the ministry and medical practitioners. Here are some possible recommendations:

Recommendations to the ministry of public health

1. **Increase Awareness and Education**: Launch nationwide campaigns to educate the public about infertility, its psychological impact, and available support resources. This can help reduce the stigma and isolation felt by infertile women.

2. **Comprehensive Health Insurance:** Mandate that health insurance plans cover mental health services related to infertility, including counseling and therapy sessions.

3. **Legal and Policy Support**: Develop and implement policies that support work-life balance and reduce the stress associated with infertility, such as fertility treatment leave and adoption support policies.

Recommendations for Medical Practitioners

1. **Routine Mental Health Screening**: Incorporate routine mental health screening for all patients undergoing infertility treatment to identify those at risk of depression and suicidal ideation early.

2. **Integrated Care Approach**: Develop a holistic treatment plan that includes mental health support as part of the infertility treatment process. This could involve regular check-ins with a psychologist or counselor.

3. **Patient Education**: Educate patients about the potential psychological impact of infertility and provide them with information about available mental health resources.

4. **Support Networks:** Encourage the formation of support networks among patients. Facilitate support groups within clinics where women can meet others going through similar experie

To the scientific committee :Conduct studies on larger populations

Implementing these recommendations can create a more supportive environment for infertile women and help reduce the risk of suicidal behavior. Both government and medical practitioners play crucial roles in addressing this complex issue.

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APPENDIX

Appendix I: Information leaflet

TITLE: SUICIDAL CONDUCTS AMONG INFERTILE WOMEN IN YAOUNDÉ

Investigator: I am NKUH CLIFORD NGANGE, final year general medicine student at the Faculty of Medicine and Biomedical Sciences of the University of Yaoundé I, Cameroon.

Supervisor: Professor DOHBIT JULUS SAMA, Associate Professor of Obstetrician and Gynecologist

Co-supervisor(s): Dr. KAMGA OLEN JEAN PIERRE,Senior Lecturer of Psychiatry

DR EBONG CLIFORD EBONTANE,senior lecturer in Obstetrics and Gynecology

Subject: An invitation to take part in the study

Study aim:

Study sites: YAOUNDÉ CENTRAL HOSPITAL

Duration: DECEMBER 2023 to JUNE 2024

Procedure:Answering of questions on the questionnaire

Benefits:

Risks and inconveniences: There are no major risks associated with this study

Cost: You will not be given any material or financial incentives to participate in the study. Participation will be your free will.

Ethical considerations: Permission has been obtained from the appropriate persons in charge of the study sites and authorization gotten from the National Ethics Committee. An encryption code shall be used rather than your name on all documents containing data collected. The data will be handled with the greatest confidentiality. You can opt out of the study at any point and refusal to participate or opting out will involve no penalties nor alter the relationship between you and your attending physician, hospitals, study investigators or your employers.

Contacts: For more information or further clarification about the study, you can contact the investigator through the following telephone number (Tel 654536290)

APPENDIX II: NOTICE D'INFORMATION

Titre : États suicidaires chez les femmes infertiles à Yaoundé

Enquêteur : Je suis NKUH CLIFORD NGANGE, étudiant en dernière année de médecine général à la Faculté de Médecine et des Sciences Biomédicales de l'Université de Yaoundé I, Cameroun.

Superviseur : Professeur DOHBIT JULUS SAMA, professeur titulaire D'obstétrique et Gynécologie

Co-superviseur(s): Dr. KAMGA OLEN JEAN PIERRE, MAÎTRE de CONFÉRENCES en Psychiatrie

DR EBONG CLIFORD EBONTANE

Objet : Invitation à participer à l'étude

But de l'étude :

Sites de l'étude : HOPITAL CENTRAL DE YAOUNDE

Durée de l'étude : DECEMBRE 2023 à JUIN2024

Procédure :

Avantages :.

Risques et inconvénients : Il n'y a pas de risques majeurs associés à cette étude

Coût : Vous ne recevrez aucune incitation matérielle ou financière pour participer à l'étude. Vous participerez à l'étude de votre plein gré.

Considérations éthiques : La permission a été obtenue auprès des responsables des sites d'étude et l'autorisation a été obtenue auprès du Comité national d'éthique. Un code de cryptage sera utilisé à la place de votre nom sur tous les documents contenant des données collectées. Les données seront traitées avec la plus grande confidentialité. Vous pouvez vous retirer de l'étude à tout moment et le refus de participer ou le retrait n'entraînera aucune pénalité ni ne modifiera la relation entre vous et votre médecin traitant, les hôpitaux, les investigateurs de l'étude ou vos employeurs.

Contacts : Pour plus d'informations ou d'éclaircissements sur l'étude, vous pouvez contacter l'investigateur au numéro de téléphone (Tel :237654536290) et à l'adresse électronique suivants :

nkuhclifordngange@gmail.com

Appendix III: Informed Consent form

Title: SUICIDAL CONDUCTS AMONG INFERTILE WOMEN IN YAOUNDÉ

Investigator: NKUH CLIFORD NGANGE, final year general medical student in the Faculty of Medicine and Biomedical Sciences, University of Yaoundé I.

Supervisor: **PROFESSOR DOHBIT JULIUS SAMA**, Associate Professor in Obstetrics and Gynecologist, Faculty of Medicine and Biomedical Sciences, University of Yaoundé I

Co-supervisors: DR. KAMGA OLEN JEAN PIERRE,Senior lecturer of Psychiatry

Dr EBONG CLIFORD EBONTANE Senior Lecturer in Obstetrics and Gynecology

Mr. / Mrs. / Ms.

……

Confirm that I was asked to take part in this study, which is part of a M.D thesis, which seeks to describe the severity of suicidal ideations among infertile women in Yaoundé, Cameroon. I hereby agree that:

- I have understood the study's aim, benefits and risks as mentioned in the information sheet provided for this study

All questions I had concerning this study have been answered appropriately

The risks and benefits of this study have been explained to me in detail

I understand that I am free to either accept or decline to be a part of the study

My consent does not relieve the investigators of their responsibilities, and I retain my rights as ordained by law

I freely accept to participate in this study according to the specified conditions on the information sheet, to:

Answer truthfully to all questions asked with regard to the study

- Authorize the consultation of my medical records and radiological exam records

I also freely authorize findings obtained from me, to be published.

Date: ……/……. /…

Investigator's signature and name Participant's signature and name

Appendix IV : FICHE DE CONSENTEMENT ECLAIRE

Titre : LES ÉTATS SUICIDAIRES CHEZ LES FEMMES INFERTILES Á YAOUNDE

Enquêteur : NKUH CLIFORD NGANGE, étudiant en dernière année de médecine général à la Faculté de Médecine et des Sciences Biomédicales, Université de Yaoundé I.

Superviseur : PROFESSEUR DOHBIT JULIUS SAMA, PROFESSEUR TITULAIRE D'OBSTETRIQUE ET GYNECOLOGIE, FACULTE DE MEDECINE ET DES SCIENCES BIOMEDICALES, UNIVERSITE DE YAOUNDE I.

Co-superviseurs : Dr. KAMGA OLEN JEAN PIERRE,MAITRE DE CONFERENCES EN PSYCHIATRIE

DR EBONG CLIFORD EBONTANE,MAITRE DE CONFERENCE EN OBSTETRIQUE ET GYNECOLOGIE

M. / Mme / Ms.....

Confirme qu'il m'a été demandé de participer à cette étude, qui fait partie d'une thèse de doctorat en médecine, visant à décrire la gravité des idées suicidaires chez les femmes infertiles à Yaoundé, au Cameroun. Je reconnais par la présente que :

J'ai compris l'objectif, les bénéfices et les risques de l'étude tels que mentionnés dans la fiche d'information fournie pour cette étude

Toutes les questions que j'ai posées concernant cette étude ont reçu une réponse appropriée.les risques et les avantages de cette étude m'ont été expliqués en détail ,Je comprends que je suis libre d'accepter ou de refuser de participer à l'étude.

Mon consentement ne décharge pas les chercheurs de leurs responsabilités, et je conserve mes droits tels qu'ils sont définis par la loi..J'accepte librement de participer à cette étude conformément aux conditions spécifiées sur la feuille d'information, à savoir

Répondre sincèrement à toutes les questions posées concernant l'étude

Autoriser la consultation de mon dossier médical

J'autorise également la publication des résultats obtenus auprès de moi.

J'autorise également la publication des résultats obtenus auprès de moi.

Date : ...../..... /...

Signature et nom du chercheur Signature et nom du participant

Appendix V : ADMINISTRATIVE AUTHORIZATION FROM THE CENTRAL HOSPITAL OF YAOUNDE

REPUBLIQUE DU CAMEROUN
Paix-Travail-Patrie
****
MINISTERE DE LA SANTE PUBLIQUE
****
SECRETARIAT GENERAL
****
DIRECTION DE L' HOPITAL CENTRAL DE YAOUNDE
****
SECRETARIAT MEDICAL
N° 131/24/ AP/MINSANTE/SG/DHCY/CM/SM

REPUBLIC OF CAMEROUN
Peace-Work-Fatherland
****
MINISTRY OF PUBLIC HEALTH
*** *****
GENERAL SECRETARY
****
DIRECTORATE OF CENTRAL HOSPITAL OF YAOUNDE
****
MEDICAL SECRETARY

Yaoundé, le 21 MARS 2024

ACCORD DE PRINCIPE

Je soussigné Professeur FOUDA Pierre Joseph, Directeur de l'Hôpital Central de Yaoundé, marque mon Accord de Principe à Monsieur NKUH Cliford NGANGE, étudiant de 7ème année de médecine générale à la Faculté de Médecine et des Sciences Biomédicales de l'Université de Yaoundé I, sous le thème « SUICIDAL CONDUCTS AMONG INFERTILE WOMEN IN YAOUNDE » à l'Hôpital Central de Yaoundé, sous la codirection du docteur EBONG Cliford .

Pour Le Directeur et par ordre
Le Conseiller Médical,

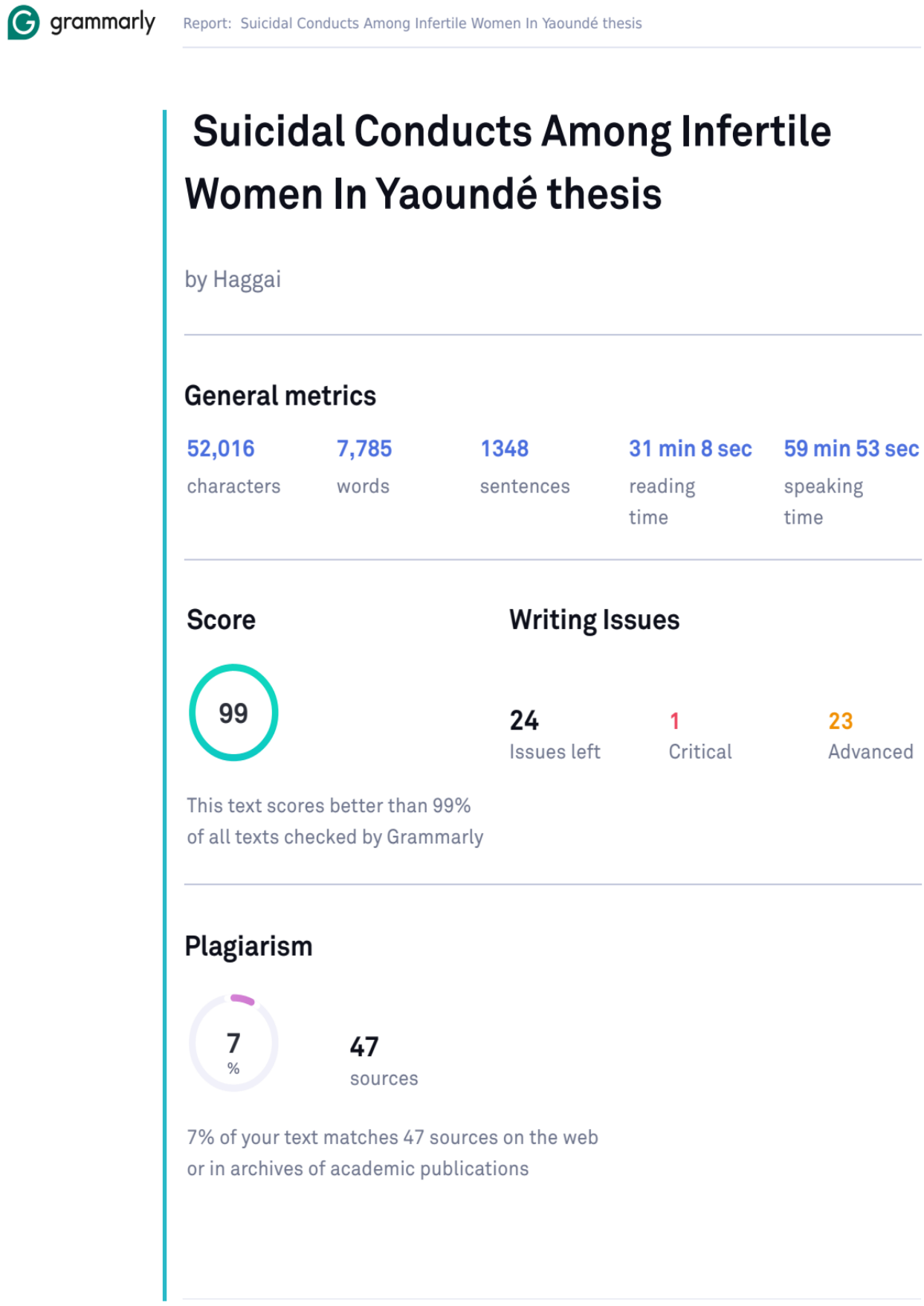
HOPITAL CENTRAL DE YAOUNDE — Le Conseiller Médical

Pr. Mgr Pierre Ongolo Zogo

Ampliations :

- Conseiller Médical ;
- Chef service concerné ;
- Intéressé ;
- Chrono/Archives.

Appendix VI: ANTI-PLAGIARISM



grammarly

Report: Suicidal Conducts Among Infertile Women In Yaoundé thesis

Suicidal Conducts Among Infertile Women In Yaoundé thesis

by Haggai

General metrics

52,016	7,785	1348	31 min 8 sec	59 min 53 sec
characters	words	sentences	reading time	speaking time

Score

99

This text scores better than 99% of all texts checked by Grammarly

Writing Issues

24	1	23
Issues left	Critical	Advanced

Plagiarism

7 %

47 sources

7% of your text matches 47 sources on the web or in archives of academic publications

Report was generated on Thursday, Jun 13, 2024, 04:24 AM

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Appendix VII: RESEARCH QUESTIONNAIRE

SECTION 1: DEMOGRAPHIC INFORMATION

1	Code du patient : [Unique identifier]	.....
2	Region of origin :	[ ] NORTH WEST [ ] SOUTH WEST [ ] CENTRE [ ] NORTH [ ] FAR NORTH [ ] ADAMAWA [ ] LITTORAL [ ] WEST [ ] SOUTH [ ] EAST .....
3	Age	..... years
4	Marital Status	[ ] Single [ ] Free union [ ] Married [ ] Divorced [ ] Widow(er)
5	Profession :	[ ] Housewife [ ] Employed [ ] Unemployed [ ] Retired

6	Level of Education	[ ] Primary [ ] Secondary [ ] University
7	Residence	[ ] Urbarn [ ] Rural

SECTION 2: INFERTILITY INFORMATION

8. How long have you been diagnosed with infertility? .....

9. Who diagnosed your infertility? (General practitioner/Specialist/Other)

[ ] General practitioner [ ] Gynecologist [ ]Psychiatrist [ ] Other	If Other's Please Specify .....

10. Have you received any treatment for infertility? [ ] Yes [ ] No

11. If yes, what kind of treatment have you received?

[ ] Medication [ ] Surgery Specialist [ ] Assisted reproductive technology [ ] Others	If Other's Please Specify ..... And for how long .....

12. How has infertility affected your relationship with your partner?

[ ] Not at All [ ] Slightly [ ] Moderately [ ] Severely	If Other's Please Specify ……

SECTION 3: EMOTIONAL WELL-BEING

13. In the past month, how often have you felt down, depressed, or hopeless? (Not at all/A few days/More than half the days/Nearly every day)

[ ] Not at All [ ] A few days [ ] More than half the days [ ] Nearly every day	If Other's Please Specify ……

14. In the past month, how often have you had thoughts of ending your life? (Not at all/A few days/More than half the days/Nearly every day)

[ ] Not at All [ ] A few days [ ] More than half of the days [ ] Nearly every day	If Other's Please Specify ……

15. Have you ever attempted suicide? [ ] Yes [ ] No

16. If yes, how often do you have these thoughts?

Please Specify……

17. How has infertility impacted your mental health? (Not at all/Slightly/Moderately/Severely)

[ ] Not at All [ ] Slightly [ ] Moderately [ ]Severely	If Other's Please Specify ……

SECTION 4: PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems? (Use "✔" to indicate your answer)	Not at all	Several days	More than half the days	Nearly every day
18. Little interest or pleasure in doing things	[ ] 0	[ ] 1	[ ] 2	[ ] 3
19. Feeling down, depressed, or hopeless	[ ] 0	[ ] 1	[ ] 2	[ ] 3
20. Trouble falling or staying asleep, or sleeping too much	[ ] 0	[ ] 1	[ ] 2	[ ] 3
21. Feeling tired or having little energy	[ ] 0	[ ] 1	[ ] 2	[ ] 3
22. Poor appetite or overeating	[ ] 0	[ ] 1	[ ] 2	[ ] 3
23. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	[ ] 0	[ ] 1	[ ] 2	[ ] 3
24. Trouble concentrating on things, such as reading the newspaper or watching television	[ ] 0	[ ] 1	[ ] 2	[ ] 3
25. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	[ ] 0	[ ] 1	[ ] 2	[ ] 3
26. Thoughts that you would be better off dead or of hurting yourself in some way	[ ] 0	[ ] 1	[ ] 2	[ ] 3
FOR OFFICE CODING 0 + _____ + _____ + _____ =Total Score: _____				

SECTION 5: SUICIDAL INTENT SCALE

27. Wish to live	0. None [ ]	1. Weak [ ]	2. Moderate to strong [ ]	
28. Wish to die	0. None [ ]	1. Weak [ ]	2. Moderate to strong [ ]	
29. Reasons for living/dying	0. For living outweigh for dying [ ]	1. About equal [ ]	2. For dying outweigh for living [ ]	
30. Desire to make active suicide attempt	0. None [ ]	1. Weak [ ]	2. Moderate to strong [ ]	
31. Passive suicidal desire	0. Would take precautions to save life. [ ]	1. Would leave life/death to chance [ ]	2. Would avoid steps necessary to save or maintain life [ ]	
32. Time dimension: Duration of suicide ideation/wish	0. Brief, fleeting periods [ ]	1. Longer periods [ ]	2. Continuous (chronic) or almost continuous [ ]	
33. Time dimension: Frequency of suicide	0. Rare, occasional [ ]	1. Intermittent [ ]	2. Persistent or continuous [ ]	
34. Attitude toward ideation/wish	0. Rejecting [ ]	1. Ambivalent; indifferent [ ]	2. Accepting [ ]	
35. Control over suicidal action/acting-out wish	0. Has sense of control [ ]	1. Unsure of control [ ]	2. Has no sense of control [ ]	
36.Deterrents(discouragements) to active attempt (e.g., family, religion, irreversibility)	0. Would not attempt because of a deterrent [ ]	1. Some concern about deterrents [ ]	2. Minimal or no concern about deterrents [ ]	

37. Reason for contemplated attempt	0. To manipulate the environment; get attention, revenge [ ]	1. Combination of 0 and 2 [ ]	2. Escape, surcease, solve problems [ ]	
38. Method: Specificity/planning of contemplated attempt	0. Not considered [ ]	1.Considered, but details not worked out	2. Details worked out/well formulated	
39. Method: Availability/opportunity for contemplated attempt	0. Method not available; no opportunity	1. Method would take time/effort; opportunity not readily available	2a. Method and opportunity available	2b. Future opportunity or availability of method anticipated
40.Do you feel capable of committing suicide?	0.No courage [ ]	1.Unsure of courage [ ]	2. Sure of courage [ ]	
41. Do you anticipate making a suicide attempt?	0.No [ ]	1.not sure [ ]	2.Yes [ ]	
42. Have you made any preparations for a suicide attempt?	0.None	1.partial (e.g. starting to collect pills)	2.complete (e.g. had pills, loaded a gun) [ ]	
43. Have you written a suicide note?	0. none	1.Started	2.Completed	
44. Have you engaged in any final acts in anticipation of death?	0.None	1,Thought about IT	2. Made plans	
45. Have you concealed or deceived others regarding your contemplated suicide?	0.Revealed ideas	1.held back	2. Attempeted to	

SECTION 6: SUPPORT SYSTEMS

[ ] Yes [ ] No

46. Do you have someone you can talk to about your feelings?

47. If yes, who is this person?

[ ] Partner [ ] Family member [ ] Friend [ ] Health professional [ ] Other	If Other's Please Specify ……

48. Have you sought professional help for your feelings of depression or suicidal ideation?

[ ] Yes [ ] No

49. If not, what has prevented you from seeking help?

[ ] Stigma [ ] Cost [ ] Lack of Resources [ ] Other	If Other's Please Specify ……

SECTION 7: COPING STRATEGIES:

50.What strategies do you use to cope with the stress and emotions associated with infertility?

[ ] Seek Professional Help **[ ]** Support Groups **[ ]** Physical Activity **[ ]** Communication [ ] Mind-Body Techniques:yoga,meditation **[ ]** Healthy Lifestyle **[ ]** Self-Care **[ ]** Education [ ] Others	If Other's Please Specify ……

Do you have any social support networks that help you cope? [ ] Yes [ ] No

51.Have you accessed any mental health services for your emotional well-being? [ ] Yes [ ] No

52.What factors would make you more likely to seek mental health support?

[ ] Awareness and availability [ ] Supportive social network [ ] Personal beliefs about mental health [ ] Other

SECTION 8: STIGMA AND CULTURAL ATTITUDES:

53.Do you perceive any stigma surrounding infertility in your community? [ ] Yes [ ] No

54. Does your culture stigmatized suicide and mental health issues ? [ ] Yes [ ] No

55.Do you feel comfortable talking openly about your struggles with infertility and mental health?

[ ] Yes [ ] No

56.How can we raise awareness and reduce stigma surrounding these issues in your community?

[ ] By Speaking More

[ ] collaboration with health care providers

[ ]reduce the cost

[ ] Advocacy and Policy Change

[ ] Other