

## A grading system to assess female sexual and reproductive psychiatry and identification of a new syndrome

### **Abstract**

Female reproductive and sexual psychiatry is an unexplored arena and little has been done to qualify and quantify the female sexuality and reproductive psychiatry. This work puts forward a systemic quantitative and qualitative study of it. A questionnaire based system termed “Designed Unorganized Random Gynaecopsychiatric Assessment” or DURGA was made and used for the purpose. A scale termed as DURGA scale was designed to quantify reproductive behaviour as well. Survey was conducted in Russian population to validate the system and a new syndrome was identified as well. The aim and objective of this research is to understand gynaecological and female sexual psychiatry in depth in correlation with associated psychiatric spectrums. The introduced system as mentioned can be hence used in clinical setup for assessment and by governments to conduct population study and decide national health policy.

### **Introduction**

Female reproductive and sexual psychiatry is an unexplored arena and little has been done to qualify and quantify the female sexuality and reproductive psychiatry. The classical basis of this was put forward first by Sigmund Freud in his treaty “studies on hysteria”. This work puts forward a systemic quantitative and qualitative study of it. Sexual hypoactivity and low libido has become a dreadful condition in female across many communities around the world <sup>(1)</sup>. Recent researches have pointed out towards few discriminated factors in patches like lack of social interaction in few societies, lack of privacy, patriarchal dominance, etc. But the national fertility rate of such countries doesn't indicate towards these as aetiology. In fact societies with “free culture” and more personal freedom like USA, Russia, UK has a fertility rate of 1.64, 1.50 and 1.56 birth per woman respectively. Whereas societies where women live a little secluded life or freely but in joint family with lack of privacy like India, China, Bangladesh has a much higher fertility rate of 2.18, 1.70, 1.99 birth per woman respectively <sup>(2)</sup>. Again Japan being a country with women traditionally living within few cultural

boundaries and a place where still around 50% of the population stays in joint family, has significantly low fertility rate of only 1.34 births per woman. Hence, all these factors indicated in few studies on isolated population are not absolutely factitious. This research put forwards a new quantitative and qualitative dimension to gynaecological psychiatric well being and thus assessing the reason behind such fertility rate disparity.

### **Aims and Objectives**

The objective of this research is to develop an in depth understanding of gynaecological or female sexual psychiatry in correlation to other psychiatric, gynaecological, metabolic and other systemic factors. Aim is to develop a system to quantify female sexuality based on several identified factors and identify a new syndrome utilising the same.

### **Methodology**

A system was created under the term “Designed Unorganized Random Gynaecopsychiatric Assessment”, abbreviated as DURGA. DURGA is a system in which information is gathered about certain parameters in a random unorganized fashion to assess the psychiatry of a female. Questionnaire as per the system was made with probable answers in it and was distributed through various online platforms. Data was collected from 231 females from different regions of Russian Federation. Based on this data a general assessment of the population was made and efficiency of the system DURGA was demonstrated. A scoring system was created too to quantify female sexual behaviour.

### **The DURGA system and questionnaire**

The system and questionnaire was designed after wide scale literature review. The system assesses female reproductive psychiatry based on few parameters.

1. General information which includes nationality, race, food habit, height, weight and age.
2. Gynaecological status which includes menstrual status, sexual activity, general gynaecological knowledge status and parity status.
3. Psychiatric status which includes assessment of different spectrum of psychiatric conditions.

4. Chronic medical history information which includes information about any persisting or past chronic medical illness including neurological conditions and psychiatric conditions.

The four parameters chosen above are to be asked to the patient in a random and unorganized fashion. This was done to ensure that there is less time to rethink before answering one question and answers are prompt and fast. Slow answering to any question as has been perceived is less sincere and confabulated<sup>(3)</sup>. General information was taken in order to localize population and assess genetic influences on psychiatric thought procedure. Food habit being an utmost important component of reproductive and sexual health was given special attention. It has been found in cohort study that low-density lipoprotein is a factor increasing libido in females and high density lipoprotein is a factor that increases frequency of sexual activity in females but in males, both types of lipoprotein are associated with low libido and erectile dysfunction. Again, hyperlipidemia causes low libido and psychological sterility in both males and females<sup>(4)</sup>. Knowledge about gynaecological status is of immense importance as it gives an idea about expression of androgen activity. Oestrogen, being the primary androgen in females, controls not only expression of sex organs and oogenesis but sexual and psychiatric behaviour as well. Different phases of menstrual period have shown to cause psychosis too, like premenstrual psychosis, paramenstrual psychosis, epochal psychosis, post-partum psychosis and so on<sup>(5)</sup>. Assessment of psychiatric status related to general thought process, self-assessment and reproductive psychiatry is essential in order to study how such conditions interact with sexual behaviour and social behaviour. Past or persistent chronic medical history is equivalently essential to understand the pathological interactions. It has been studied already that recurrent urinary tract infection and gliosis of basal ganglia is linked with acute and sometime persistent psychosis<sup>(6)</sup>. Such link has also been evident in population study presented in this research.

The questionnaire distributed was in a randomized and unorganized fashion. Most of the questions had pre-written answers and the most suitable answer was to be selected. Each of these answers had a psychiatric implication and assessment was made based on it. Few questions were designed in short answer type module to obtain descriptive information on few parameters.

## **Results obtained**

Results obtained from 231 women from different parts of Russian Federation and from different racial background demonstrated path-breaking efficiency of the DURGA questionnaire system and scale. Below, section wise discussion has been done.

### **General Information Section**

Among the female candidates who participated in the survey, 76.8% were in the age group of 17-24 years; 21.9% in the age group of 25-35 years and 0.4% each from the respective age groups of 36-45 years, 46-53 years and 54 years and more.

Most of the women were Russian by racial identification. Others were Armenian, Slavic, Tartars, Moldovian, Caucasians, Ukrainian, Dagestanian, Uzbeks, Georgian, Azerbaijanians, Belarusians, etc.

The candidates were from different parts of Russian Federation and its neighbouring countries. Most of the survey takers were from Moscow. Some were from Kazan, Voronezh, Tver and others.

On enquiring about general food habit, 3.1% said that they think it's absolutely normal to fast or have an insufficient diet even if no increment in body weight was noticed for a year; 0.9% claimed that they often go for stringent low diet without any reason; 5.2% does fasting if they gain even a little body weight and 2.6% consumes food only once daily. Rest have normal or slightly reduced diet plan. Hence, 11.8% are having diet pattern of anorexia nervosa <sup>(7)</sup>. It is to be mentioned that on investigation of individual answers to the questionnaire, it was found that most of the candidates among this 11.8% were absolutely abstaining from lipid of any kind.

### **Gynaecological Status Assessment**

Among them, 85.1% had normal menstrual status, 13.2% had irregular menstrual cycles, 1% had just reached menarche (though lately as minimum age of survey is 17 years), 1% had no menstruation (signifying pathology), 0.4% had menopause and 0.4% was pregnant.

95.2% of the survey takers were nulliparous. 2.6% had 1 child. Rest were multiparous with 1.3% had 2 children, 0.4% had 3 children and another 0.4% had 4 or more children.

### Psychiatric Status Assessment

The questionnaire henceforth, with answers and their psychiatric implications and with percentage of population opting for each is given in tabulated form below with explanation, for few selected important questions. Rest have been mentioned with results and explanation in descriptive format.

Question and answers	Related psychiatric implication	Percentage of females opted (%)
Would you like to dress like the person you like; maybe parents, close friend, relative or favorite movie-star or singer?		
<ul style="list-style-type: none"> <li>• Maybe</li> </ul>	Initiation stage of personality disorder – mirroring type	43.00
<ul style="list-style-type: none"> <li>• Yes, I like it</li> </ul>	personality disorder – mirroring type	21.50
<ul style="list-style-type: none"> <li>• No</li> </ul>	Normal	35.50

It is to be noted that 21.50% of the candidates openly and widely accepted that they mirror others in terms of dressing, implying that they might do so in other aspects as well. 43% of the candidates who answered ‘maybe’ are about to initiate or are initiating the behaviour of ‘mirroring’. This is an observable dangerous trend in the studied Russian population as such mirroring habit can in its full potential result into nymphomania and morbid jealousy or Othello syndrome<sup>(8)</sup>. The research outcome data tally with rate of divorce in Russian population which is currently at 44% as per recent studies.

Question and answers	Related psychiatric implication	Percentage of females opted (%)
Do you sometimes feel jealous of your best friend?		

• Yes sometimes	Initiation of borderline personality disorder	37.70
• Often	Borderline personality disorder	04.40
• No	normal	57.90

It is to be appreciated that 37.7% of the candidate are about to initiate or have just initiated borderline personality disorder or BPD and 4.4% have persisting borderline personality disorder. Reason for such assertion being that jealousy is initiation of BPD <sup>(9)</sup>. It is proven that BPD is directly related to nymphomania and sex addiction and most of the persons having it land into multiple sexual relationships <sup>(10)</sup>. In this research as well, while asked about sexual preferences, persons with multiple sex partners accounted for about 2.6% or 6 persons which is nearing the confirmed BPD incidences from this question. Among these 6 persons, 4 persons i.e. 66.6% either answered 'yes sometimes' or 'often' to the above question. Apart from this, 2.6% claimed that they hate sex or never will get married and another 25.8% claimed that they fear they will never be able to get into a relationship. This 28.8% population are exposed to hypoactive sexual desire disorder (HSDD). Rest 14% claimed not to have a sex partner and 55% were satisfied with their sex-life.

Question and answers	Related psychiatric implication	Percentage of females opted (%)
What is love?		
• It depends on attractiveness.	Erotomania	01.30
• It's divine and will do anything for my love	Obsession	06.10
• It's a strong affection, I own my lover, it's like my property, a part of me	Attachment disorder	04.40
• It is a mutual	Normal	72.90

bond between two people (normal).		
<ul style="list-style-type: none"> <li>• Write your own answer</li> </ul>		15.30

It is to be noted here that 1.3% was having erotomania, 6.1% obsession and 4.4% an attachment disorder. From those candidates who chose to elaborate their definition of love, approximately 2/4<sup>th</sup> had explained 'normal' definition in their own words. Rest 1/4<sup>th</sup> described 'obsession' and another 1/4<sup>th</sup> from their description showed attachment disorder as they described 'love' as comfort and few had thanatophobia. Erotomania mostly can cause unprecedented high libido and orgasm but ultimately culminates in hyposexuality<sup>(11)</sup>. The 6.1% and more having obsession which should be complemented by some compulsion and anxiety disorder are at a greater risk of unsatisfied sex life as any spectrum of Obsessive compulsive disorder or OCD rapidly regress libido with females specifically having anorgasmia and arousal phase problems. While the rest 4.4% and more having attachment disorder is also a specific type of OCD<sup>(12)</sup>. On query about reason behind their current relationship, a huge amount of candidates, 37.6% feel that it is due to some external power or destined supernatural cause. This is indicative of classical 'made volition phenomenon' described by Kurt Schneider.

Question and answers	Related psychiatric implication	Percentage of females opted (%)
If you have a sexual partner (boyfriend/husband), how often do you have sex?		
<ul style="list-style-type: none"> <li>• Once a week</li> </ul>	Normal	05.20
<ul style="list-style-type: none"> <li>• Several times a month</li> </ul>	Normal	06.10
<ul style="list-style-type: none"> <li>• Few times a week</li> </ul>	Normal	12.70
<ul style="list-style-type: none"> <li>• 1 time in 2-3 months</li> </ul>	Normal	09.20
<ul style="list-style-type: none"> <li>• About once every six months</li> </ul>	Hypoactive Sexual Desire Disorder	00.90

<ul style="list-style-type: none"> <li>• Once a year or less</li> </ul>	Hypoactive Sexual Desire Disorder	00.40
<ul style="list-style-type: none"> <li>• I don't like intimacy</li> </ul>	Schizoid type personality disorder	01.30
<ul style="list-style-type: none"> <li>• I don't have a sexual partner</li> </ul>		40.60

From the frequency of sexual intimacy data it may be ascertained that around 10.5% of the candidates are having hyposexual disorder. This approximately tally with the answers of previous question where 1.3% was having erotomania, 6.1% obsession and 4.4% an attachment disorder, that is a total of 11.8%. This exactly matches with the percentage of candidates having diet pattern of anorexia nervosa at 11.8% too.

On assessment of the psychiatric and social status in all the candidates who participated, some strange and surprising results were derived. A huge 35.8% was having associability disorder which is a spectrum of schizoid cluster 'A' personality disorder and 48.9% had narrow social sphere. 18.8% had negative attitude towards themselves, 9.2% towards future, 5.2% had negative views about their surroundings and 8.7% had complete Aeron Beck's cognitive triad. Such trend is devastating as Aeron Beck's triad increases vulnerability to suicide<sup>(13)</sup>. This result is in tally with recent macro statistical finding which puts female suicide rate in Russia at 9.2%. Among the candidates, 27.9% who were primarily from the age-group of 17-35 years claimed that they fancy suddenly running across the street or jumping in the snow in the winter, when alone. Such behaviour in such age group is indicative of hyperkinesia and thus schizotypal cluster 'A' personality disorder<sup>(14)</sup>. Apart from these, approximately 3% claimed to change their social network profile picture or social network profile slogan every week or every month. This is directly indicative of attention seeking or histrionic personal disorder<sup>(15)</sup>.

It was asked to the candidates, if they consider looking 'gorgeous' is how much important to them. A high number of 28.8% considered it highly important and that they try to look fascinating every day. Along with it, on asking to rate their intelligence as per their own opinion, 31% said "I am the most intelligent and

mature in all sphere of my life”. This is a direct indication of narcissism and delusion of grandeur <sup>(16)</sup>.

The participating candidates were asked whether at times they suddenly get angry without any continuity. Among them 37.6% claimed to have possessed such impulsive behaviour. This indicates existence of paranoid personality disorder in quite massive extent in the examined population <sup>(17)</sup>. Additionally, 18.8% had ambivalence as candidates claimed that all their decisions are influenced by someone else or taken by someone else.

### **Chronic Medical History Information**

The candidates were asked if they have any present gynaecological condition. To this 30.3% claimed to have such condition and rest 69.7% denied. Diseases which were most frequently prevalent were ectopic cervix, polycystic ovarian syndrome, myoma, endometriosis, ovarian cyst, candidyiasis and vaginosis. It is to be noted that 10.2% had ectopic cervix, which increases the chance of cervical cancer. This data matches to a sudden extent to the recent study conducted by utilizing the data from P.A. Herzen Moscow Oncology Research Institute in 2022, which puts 7.5% - 10.7% total incidences over the years from 2007-2018 <sup>(18)</sup>.

The candidates were asked to name any other chronic medical conditions persisting apart from gynaecological disorders. Frequently prevalent diseases were gastritis, GERD, tonsillitis, bronchial asthma, Hashimoto’s thyroiditis, dermatitis of various types, ankylosing spondylitis, arthritis of different types and pyelonephritis. Pertinent to mention that some connection between kidney disease or history of kidney disease and sex drive exists <sup>(19)</sup>. On individual level analysis it was found that 66% of the patients who reported pyelonephritis and were in the age group of 17-24 years had very low frequency of sexual intimacy.

The candidates were asked if they have any diagnosed psychiatric or neurological condition. Around 43% of the candidates had some kind of psychiatric disorder. 17% of the candidates proclaimed to have chronic depressive disorder, 41% of these had some kind of hyposexual disorder. Such has been reported in multiple studies <sup>(20)</sup>. It was noticed that 29% had of them had normal sexual activity and rest inferred nothing in this regard. It was further noticed that 20% of them were using sex as a method to escape or cope up with depression as defined love under the

category of ‘obsession disorder’ <sup>(21)</sup>. Other reported disorders were Bipolar disorder type 2, few types of mood disorders, adult ADHD, types of personality disorders, schizophrenia and bulimia nervosa.

### **Identification of a new syndrome**

It was noticed in clinical practice by colleagues and among acquaintances that a peculiar behavioural disorder persisted among women primarily of reproductive age group. There was a wide spectrum of psychiatric aberrations in permutation with each other, culminating into unfruitful, unstable and indecisive sexual behaviour. Mostly these women were not able psychiatrically to get into a sexual relationship or even if they achieved it, were having obsessive behavioural disorder with regards to their partner and at the same time were unsatisfied. Late onset of such syndrome is rare but has been found in the survey in one woman after menopause where the person was categorically having attention deficit. For the purpose of categorizing, the symptoms were divided into two groups; major and minor symptoms based on their effects on sexual psychological health.

Major symptoms comprises of;-

- Hyposexuality based on frequency and eagerness
- Delusion of Grandiosity
- Attention deficit disorder
- Personality disorder spectrum

Personality disorder spectrum includes – mirroring disorder and transition between multiple symptoms of cluster ‘A’ like schizoid type behaviour, schizotypal behaviour and paranoid behaviour <sup>(22)</sup>

Minor symptoms comprises of;-

- Aeron Beck Triad
- Asociability
- Anorexic pattern
- Hyperkinesia / Hyperactivity disorder
- Ambivalence
- Made volition phenomenon

To define the new syndrome, minimum of three major symptoms and minimum of 2 minor symptoms must be present in an individual.

As per the data obtained from the survey, 14.3% had this syndrome. 90.9% of them had hyposexuality disorder of various types. Few candidates among this 90.9% were frequently having sex but claimed that they hate sexual intimacy and will never get married; indicating anorgasmia. Moreover, peculiarly the individuals with hyperactivity disorder should exhibit hypersexuality, which was not the case in this syndrome. The, hence identified syndrome is to be termed after the authors as Samajpaty-Ibragimova-Vlasova syndrome or SIV syndrome.

### **The Developed Grading Scale**

A scale to quantify sexual psychiatric stability in females was designed, named as DURGA scale. With zero being stable point, signifying neither a state of hyperactivity of any type nor hypoactivity, to each extremity fifteen gradations were kept. Positive 15 points signifies nymphomania and negative 15 points signifies psychological sterility.

The first criterion is age; 11 to 15 years has -1 point, 16 to 20 years has +1 point, 21 to 30 years has +2 points, 31 to 37 years has +3 points, 38 to 45 years has -1 point, 46 to 55 years has -2 points and 56 to death have -3 points. This was graded considering the hormonal and psychological changes through which a woman goes through in different ages of her life, beginning to develop sexual characters after menarche and losing sexual drive after menopause at around 56 years of age <sup>(23)</sup>.

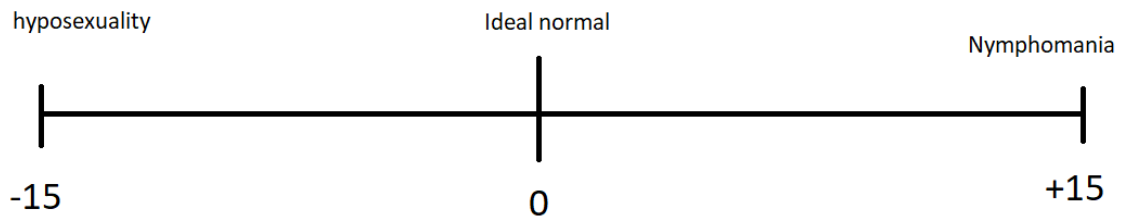
Second criterion is menstrual status. Before menarche has -1 point, onset year of menarche has 0 points as most individuals try to explore themselves at this stage. Disrupted cycle has +1 point, amenorrhea and pregnancy has +2 points, as pregnancy or amenorrhea reduces libido significantly which has been pointed out in multiple studies <sup>(24)</sup>. Menorrhagia and menopause transition has +3 points as studies have already shown increment in libido in such situations <sup>(25)</sup> and menopause has -3 points. It is worthy to be mentioned here that this criteria is tuned with the age criteria as individuals with early onset of menarche are to have a higher sex drive as has been reported by Kinsey <sup>(26)</sup>.

Third criterion is based on prevalence of psychiatric spectrum which has been divided into group 'A' and group B symptoms. Group 'A' symptoms are clinically more alarming than group B. In group 'A' there are – delusional disorder with -2 points, hyposexual disorder with -3 points, personality disorders with -3 or -2 points depending on number of spectrums. Attention deficit disorder has +1 point as studies have shown that such individuals are significantly hypersexual<sup>(27)</sup>. Disorders related to partnership like erotomania, obsessive disorder and others has +3 points, as such disorders primarily being sprung up as a subtype of OCD has higher chance of aggressive sexual behaviour<sup>(28)</sup>.

Group B symptoms include – associability with -2 points, ambivalence and ambivalence with -1 point, anorexia or anorexic pattern with -3 points, hyperkinesias or hyperactivity with +2 points, made volition phenomenon with +3 points and Aaron beck triad with -2 points.

The fourth criterion is based on food habits. Absolute abstention from lipid with or without intermittent fasting has -3 points. Low lipid intake has -2 points. Balanced diet with normal lipid intake has +1 point, balanced diet with increased lipid intake has +2 points with 3 or 2 main meals a day and high lipid intake has -3 points. Lipid diet and sexuality has very complicated relationship. High levels of low density lipoprotein (LDL) intake in females increase number of sexual relationship and resulting into unfulfilled targets and on the other hand high levels of high density lipoprotein (HDL) increases frequency of sex<sup>(29)</sup>.

An additional criterion of adding -5 points in diagnosed neurological or psychiatric condition which categorically decreases libido has been proposed.



In the study it was found that 94% of the candidates with diagnosed Samajpaty-Ibragimova-Vlasova syndrome were having negative points in this scale. From all the candidates who took the survey, 60 random were assessed on this scale and 87.5% of the candidates with satisfactory sex life and sex frequency were having positive points in the scale. It was noted that few candidates who had satisfactory or more than average sex frequency proclaimed that they hate sex. Such candidates were having a score between -8 to -11 points in the scale, signifying that frequency of sex is not a specific parameter for determining psychiatric sexual well-being.

## **Discussion**

Female mental well-being and cognitive performance is co-related with their sexuality. Female individuals with low self-esteem regarding their sexuality are often indecisive in other important spheres of life and turn up to show poor performance<sup>(30)</sup>. This study has efficiently displayed how the chosen four parameters quantify the dynamics of reproductive health and social well-being. A new syndrome has been identified which displays wide range of psychiatric spectrum with hyposexual disorder being a major outcome. It is prominently visible from the study that reproductive function is not just a physiological

procedure but a psychiatric phenomenon as well. Hence, societies with less socio-emotional care of the females are to notice a fall in reproductive rate, due to reduced parametric well-being on the DURGA scale. The reason might be varying like social insecurity, sexual violence, discrimination, etc. Although it might occur from general narrative that western societies have more secure and open environment for women than the oriental societies but statistical reports suggest otherwise; where official data of equalities office of UK reported 72% women experiencing sexual harassment, whereas total number of crimes against women in India in 2020 was 3,71,503 which is around which is 0.062 % of the female population as per official data of their NCRB. Hence, it is perceived that emotional and social support is infallible for development and successful functioning of female psychology.

## **Conclusion**

The research put forwards a new dimension to understand female psychiatry. It is an essential study enlisting a new discovered syndrome, the Samajpaty-Ibragimova-Vlasova syndrome and successfully quantifies female psychiatry. It is also pertinent to mention that further research and study is required to enrich our understanding in this direction and improve the quantifying scale DURGA and the DURGA questionnaire as well. It is perceived from the study that there is huge lack of social and emotional support among people in the current society; this has to be done away with for factual women empowerment.

## **Acknowledgement**

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