RESEARCH PAPER

Epidemiology Of Newly Proposed Samajpaty-Ibragimova-Vlasova Syndrome: A Cross-sectional Study

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ABSTRACT
Background: The Samajpaty-Ibragimova-Vlasova (SIV) syndrome is a psychiatric condition characterized by a wide range of behavioural aberrations leading to non-productive, unstable, and indecisive sexual behaviour. The diagnosis is based on a cluster of psychiatric disorders. First classified by Samajpaty et al. in 2023 in a population study conducted in Russia, the syndrome has since gained attention for its potential epidemiological variation across different populations.
Aim: To assess the epidemiology and prevalence of SIV syndrome in female populations of the Russian Federation and India through an online cross-sectional study.
Materials and Methods: A cross-sectional, online-based study was conducted among female participants from the Russian Federation and India. Statistical analyses included probability testing, confidence interval estimation, calculation of odds ratios, and comparison of prevalence using Z-score analysis.
Results: The probability of SIV syndrome in the Russian female population was $p = 0.00083$ at a 95% confidence interval, with an odds ratio of 0.0968. In the Indian female population, the probability was $p = 0.00029$ at a 95% confidence interval, and the odds ratio was 0.191. The difference in prevalence between the two populations was statistically significant, with a Z-score of 2.04 and a corresponding p-value of 0.0418.
Conclusion: The study indicates a statistically significant difference in the prevalence of SIV syndrome between female populations of the Russian Federation and India. These findings highlight potential population-specific variations and support further research into the sociocultural and psychological factors associated with SIV syndrome..
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INTRODUCTION

The Samajpaty-Ibragimova-Vlasova syndrome (SIV syndrome) is a psychiatric condition with wide range of psychiatric aberrations culminating into non-productive, unstable and indecisive sexual behaviour. The diagnosis is based on a combination of group of disorders. The symptoms are divided into major and minor symptoms. The major symptoms include: Hypoactive sexual desire disorder (HSSD), delusion of grandiosity, attention deficit disorder and personality disorder spectrum. The minor symptoms include: Aeron-Beck triad, associability, anorexic behaviour pattern, hyperkinesias or hyperactive disorder, ambivalence and made volition phenomenon. A combination of minimum of three major symptoms and 2 minor symptoms is defined as the Samajpaty-Ibragimova-Vlasova[1]. This article is a cross-sectional study conducted among women in Russian Federation, CIS countries and the Republic of India to study the epidemiology of the syndrome reported by *Samajpaty et. al*.

METHODS

The study was conducted in a cross-sectional model. Online questionnaire with specific questions asked in order to identify the symptoms was circulated in Russia, CIS countries and India. It was made in four languages, Russian, English, Hindi and Bengali to maximize the reach and gather data from women of different socio-cultural or socio-economic strata. The questionnaire was designed in such a fashion that it included components of adult ADHD Self-report (ASRS) scale to screen attention deficit hyperkinetic disorder symptom (ADHD), female sexual function index scoring (FSFI) scale to screen hypoactive sexual desire disorder and structured clinical interview for DSM-IV axis II personality disorders (SCID II) scale for screening type of personality disorder trait in the subjects. Apart from that questionnaire contained questions about general information of the subjects, chronic diseases and opinion on their sexuality. A questionnaire was designed to ascertain the clinical symptoms necessary to screen-positive Samajpaty-Ibragimova-Vlasova syndrome. Certain behavioural examples were culturally adapted to improve item comprehensibility for participants in different regions. A total of 170 participants took part in the study from the Russian Federation and countries of the Commonwealth of independent states (CIS) and a total of 181 participants from the Republic of India. Statistical analysis was conducted based on the results of the survey conducted. The study was done on an online basis through link generation once in a single electronic device in Russia, CIS countries and India from October 2023 to June 2024.

A rational interconnection between arbitrary disorders of SIV syndrome

Samajpaty and co-workers first proposed Samajpaty-Ibragimova-Vlasova syndrome in 2023. Although the symptomatic domains included under SIV syndrome may initially appear heterogeneous, they can be understood through a coherent neuro-psychiatric framework. The major and minor symptom clusters—hypoactive sexual desire, attentional instability, narcissistic or grandiose tendencies, affective negativity, hyperkinesia, ambivalence, and altered volition—are not arbitrarily grouped but converge along three broad neuropsychological dimensions: **(1) reward-circuit dysregulation, (2) executive-control and attention instability, and (3) maladaptive cognitive–affective schemas.**

Hypoactive sexual desire disorder reflects a chronic decline in reward prediction and reduced dopaminergic gain in mesolimbic circuitry, causing sexual stimuli to generate insufficient prediction error or incentive salience. This blunted reward responsiveness is also observed in individuals exhibiting a positive Aron–Beck triad[2], revealing the first dimension**: reward-circuit dysregulation**. A complete or partial Aron–Beck triad can also predispose individuals to adopt compensatory self-enhancing cognitive styles, contributing to narcissistic behaviour or delusional grandiosity as coping mechanisms[3].

The second dimension, **executive-control and attention instability**, emerges from dysregulation of dopaminergic and adrenergic neuromodulatory systems. Compromised dopaminergic signalling in reward pathways diminishes motivational drive [4,5], while altered catecholamine transmission disrupts fronto-striatal networks responsible for top-down control. This results in attentional instability, impulsivity, and motor hyperactivity[6,7]. The biochemical interdependence between dopamine and noradrenaline further reinforces the coherence of this dimension: dopamine conversion to noradrenaline via dopamine-β-hydroxylase creates a metabolic feedback loop, and bidirectional projections between the locus coeruleus and ventral tegmental area link their activity anatomically and functionally[8].

The third dimension, **maladaptive cognitive–affective schemas**, integrates features such as the Aron–Beck triad, ambivalence, anorexic tendencies, and personality-disorder traits. Declining dopaminergic signaling lowers interoceptive precision in the insula, reducing reward-seeking behaviour from food intake and predisposing individuals to anorexic behaviour[9]. Cognitive–affective patterns characterized by uncertainty, negativity, or excessive self-evaluation can also contribute to reliance on external suggestion (behavioural ambivalence) and heightened sensitivity to interpersonal cues. Noradrenergic signaling of unexpected uncertainty increases attentional salience to unpredictable events, thereby heightening associability[10].

Hyperkinesia, meanwhile, reflects dopaminergic imbalance within basal ganglia circuits[11], while disturbances in agency attribution—such as perceiving voluntary actions as externally influenced—arise from disruptions in dopaminergic prediction of sensory consequences[12]. These phenomena align with the combined effects of **reward-circuit vulnerability, executive-control dysregulation,** and **maladaptive cognitive–affective processing**, revealing that SIV syndrome represents an interconnected pattern rather than an arbitrary symptom cluster.

Assessment criteria

Three questions were asked to ascertain traits of personality disorders. To diagnose mirroring or mimicking borderline personality disorder or echopraxia disorder it was asked whether the subject likes to dress or behave like close relatives, friends or some celebrity and additionally it was asked whether the subject feels jealous about their close friend[13]. To diagnose histrionic personality disorder, it was asked how often the subject changes her social media image or 'status/tagline'[14]. To diagnose, paranoid behaviour, it asked whether the subject had experienced sudden uncontrolled anger but later realized that it was irrational[15]. Hence, personality disorders from all three clusters, A, B and C were assessed[16]. To assess the prevalence of narcissism and delusion of grandeur two questions were asked. First subjects were asked how important it is for them to look 'gorgeous' or 'splendid' and about how do they rate their intelligence. The subjects who proclaimed that being 'gorgeous' is an utmost necessity for them all the time and they are confident that they know everything were classified to be having both[17]. Here, it is noteworthy to mention, traits described along a personality spectrum are interpretive behavioural descriptors rather than diagnostic determinations. Individuals were classified based on their frequency of sexual intimacy. Those who indulged in sexual intimacy once in a six-month period of time or once in a year were diagnosed with hypoactive sexual desire disorder (HSSD) [18] and those who reported a strong dislike or avoidance of sexual intimacy were not classified as having schizoid personality disorder per se, but were considered to exhibit schizoid-like detachment from intimacy, a behavioural feature commonly described in schizoid personality trait[19] which co-occurred with anorexic behaviour in the survey, consistent with patterns noted in contemporary psychiatric literature[20]. Subjects were diagnosed to be having associability when proclaimed to be enjoying maximum time of their day in lonely environment without any social interaction. Subjects were asked if they like to jump in snow (in Russia and CIS countries) or run across the street or in a park without any reason as such in isolation (without any intention of inflicting self-injury). The ones opted for 'yes' were diagnosed to be having hyperkinetic disorder[21]. Both Diagnostic and Statistical Manual of Mental disorders (DSM) and International Classification of Diseases (ICD) fail to set any concrete criteria to diagnose ADHD or hyperkinetic disorder apart from defining it. Hence, such prompts were used to describe purposeless sudden episodes to motor activity, conceptualized from the Conners adult ADHD rating scale[22]. Subjects were asked whether they routinely sought suggestions from a trusted or experienced person before making minor decisions. Participants who endorsed this pattern were classified as exhibiting decisional-ambivalent behaviour. It is important to clarify that this construct does not refer to Bleulerian ambivalence; rather, it was used as a behavioural proxy for decisional hesitancy or dependent decision-making tendencies, consistent with contemporary descriptions of decisional ambivalence in the psychological literature[23]. Also the subjects were not diagnosed to be individuals with abulomania as generally in case of life decisions more than one option are available. Subjects were asked if they feel that their current sexual relationship or any sexual relationship as such in the past was not their sole decision but was influenced by destiny or divinity and the ones responded positively it were classified as individuals having *'made volition'* phenomenon on their sexuality from the classical Schneiderian conception of schizophrenia[24]. A complete Aeron Beck triad was diagnosed in women who claimed to be having negativity against their surroundings, their future and themselves. Subjects apart from these were asked to describe the term "love" as per their own definitions. Individuals who opted for "It's a mutual bonding between two people" were classified to be having normal outlook towards sexuality as per the triangular theory of love[25]. Others were found to be having various aberration spectrums like attachment disorder, obsession disorder and erotomania.

RESULTS

A cross-sectional study was conducted among Russian and Indian female population. In both the populations the study was highly randomized, collecting data from different parts of the countries and across different ethnic backgrounds.

From Russian Federation and from the regions of CIS countries, a total of 170 (n=170) women took part in the assessment survey. The individuals were from cities like Moscow, suburbs of Moscow, Samara, Ryzan, Krasnodar, Dagestan, Tambov, Voronezh, Rostov-on-Don, St. Petersburg and some regions of the CIS countries. Primarily around 71.5% identified themselves as ethnic Russians, others were Tartarians, Mordovians, Cheheniyans, Polish, Kazaks and others. 71.2% of the subjects were from the age group of 18-24 years, 20.6% were from the age group of 25-35 years and others were from older age group with 1.8% from non-reproductive age group. Among these 78.8% were having normal menstrual cycle, 16.5% were having irregular menstruation. 2.4% were having suspected delayed or slow progressive thelarche as menstruation was present but not completely developed as per their opinion, 1.2% was pregnant and another 1.2% was in menopause.

From India, a total of 181 (n=181) participated in the same survey. Respondents were from different parts of the country, including cities like Kolkata, Mumbai, Muzaffarpur, Ajmer, Tiruchirapalli, Delhi, Ara, Siliguri and from second tier cities and parts of Rajasthan, Karnataka, Bihar and Odisha. Among respondents from India, the ethnic identity lacked clarity. Subjects identified themselves as per religious or reservation backgrounds. Although mainly identified ethnic groups were Bengalis, Marathis, Kannadigas, Bihari, Tamilians and others. 82.87% were from the age group of 18-24 years, 13.26% were from the age group of 25-35 years 1.66% were from the age group of 36-45 years and rest were above 45 years. 83.9% were having normal menstrual cycle, 3.86% were having irregular or disrupted menstruation, 1.65% was pregnant, 6.62% was having amenorrhea due to other reasons than conception and 1.9% was in menopause.

Statistical Analysis And Output

It is being considered that the subjects went through the questionnaire truthfully and independent of one another, as it was distributed in an online mode and women in the survey took them individually from their electronic devices individually.

Among the respondents from Russian Federation (n=170) and CIS countries, had an average height of 160-169 cm. It was assumed in null hypothesis that the women are normal and the women being patient of Samajpaty-Ibragimova-Vlasova syndrome was the alternative hypothesis. A frequency distribution of large number of response of 1,00,000 “dummy” responses were generated from the model which mimicked the distribution of major and minor symptoms under the null hypothesis.

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> z0

     00      01      02      03      04      05      06      10      11      12
0.01690 0.02986 0.02158 0.00737 0.00113 0.00011 0.00001 0.09133 0.15989 0.11085
     13      14      15      16      20      21      22      23      24      25
0.03701 0.00620 0.00057 0.00002 0.10584 0.18695 0.12690 0.04137 0.00678 0.00059
     26      30      31      32      33      34      35      40      41      42
0.00001 0.01058 0.01953 0.01276 0.00423 0.00066 0.00002 0.00029 0.00035 0.00018
     43      44
0.00010 0.00003
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Fig1: The probabilities of a “dummy” respondents from Russia and CIS countries falling under the category where the first literal stands for the number of major symptoms, and the second literal for the number of minor symptoms.

The logarithm of p-values with SIV syndrome plotted on graph (red dots) showed very low values with minimum p-value at 0.00083 and maximum p value at 0.01755, voiding the null hypothesis and establishing alternative hypothesis.

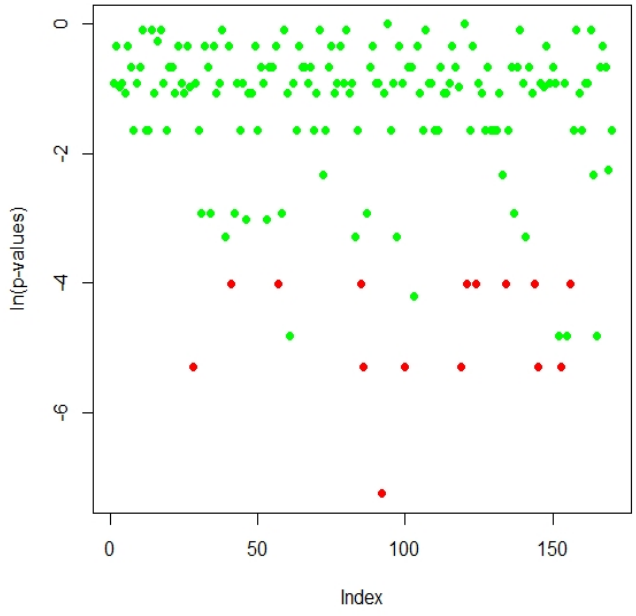

Fig2: Logarithm of p-values for the 170 respondents from Russia and CIS countries

Moreover, a logistic regression of SIV syndrome versus age, weight and height showed weight factor to be significant at 5% significance level, indicating association with anorexic behaviour. Considering the minimum p-value, using Wilson score method, the prevalence of SIV syndrome was found to be at 8.82% at a confidence interval (CI) of 95%. The Odds of it in Russia and CIS countries was found to be 0.0968.

Similarly, respondents from India (n=181) had an average height range of 160-169 cm. Similar statistical assumptions were made too while analysing the data from Indian population. Frequency distribution of 1,00,000 “dummy” responses were generated from the model mimicking distribution of major and minor symptoms under null hypothesis.

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> z0

     00      01      02      03      04      05      10      11      12      13
0.00350 0.01293 0.01787 0.01038 0.00322 0.00038 0.03151 0.11962 0.16043 0.09500
     14      15      16      20      21      22      23      24      25      26
0.02886 0.00394 0.00020 0.02826 0.11200 0.15198 0.09160 0.02655 0.00363 0.00015
     30      31      32      33      34      35      36      40      41      42
0.00652 0.02562 0.03460 0.02077 0.00588 0.00080 0.00005 0.00035 0.00103 0.00139
     43      44      45
0.00072 0.00023 0.00003
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Fig3: The probabilities of a “dummy” respondents from India falling under the category where the first literal stands for the number of major symptoms, and the second literal for the number of minor symptoms.

Indian responses when analysed, the logarithmic p values of SIV syndrome plotted on graph (red dots) showed very low values with minimum p-value at 0.00029 and maximum p value at 0.06399, voiding the null hypothesis and establishing alternative hypothesis.

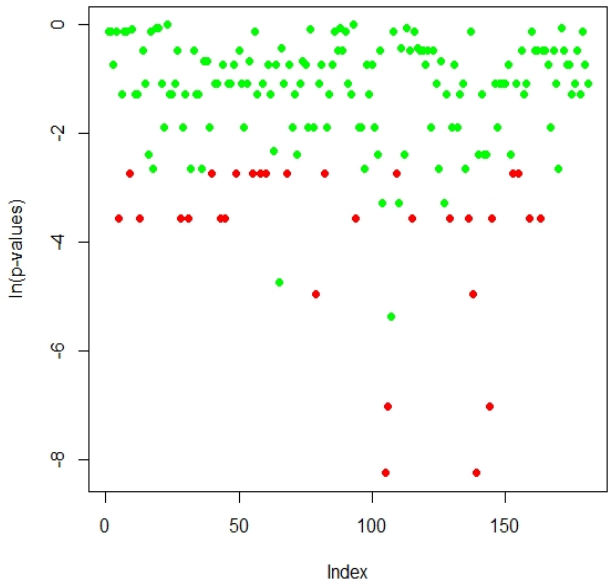

Fig4: Logarithm of p-values for the 181 respondents from India

From the responses obtained from Indian population, a logistic regression of SIV syndrome versus age, weight and height showed no probable associations like that of on logistic regression analysis of responses from the data obtained from Russia and CIS countries.

Using Wilson score method, among 181 respondent subjects, 16.02% women were likely to be having SIV

syndrome at a CI of 95% and the Odds of having SIV in Indian population was found to be at 0.191.

Apart from the above mentioned statistical data on Samajpaty-Ibragimova-Vlasova syndrome, percentage of population affected individually by the major and minor symptoms are tabulated below; -

Major symptoms: -

Symptoms	Affected population in Russia and CIS countries (%)	Affected population in India (%)
Hypoactive sexual desire disorder	08.20	16.57
Delusion of Grandeur	32.35	24.30
Attention deficit disorder	04.10	14.36
Personality disorder trait	82.40	60.22

Table 1: Percentage of manifested major symptoms

Minor symptoms: -

Symptoms	Affected population in Russia and CIS countries (%)	Affected population in India (%)
Aeron Beck triad (satisfied)	07.10	17.12
Asociability	52.90	51.93
Anorexic behaviour	17.67	08.28
Hyperkinesia/Hyperactive disorder	30.60	68.50
Ambivalence	25.30	38.67
Made volition phenomenon	37.10	22.65

Table 2: Percentage of manifested minor symptoms

On comparing the data obtained from both the isolated populations of Russia along with CIS countries and India, the Odds ratio (OR) of SIV prevalence was found to be at 0.51. On conducting a two proportion Z test, with results from the two data sets, a Z-score of 2.04 and a p-value of 0.0418 were calculated. Thus, p-value being less than 0.05, the difference of prevalence of SIV syndrome between Russia-CIS country population and India is statistically significant.

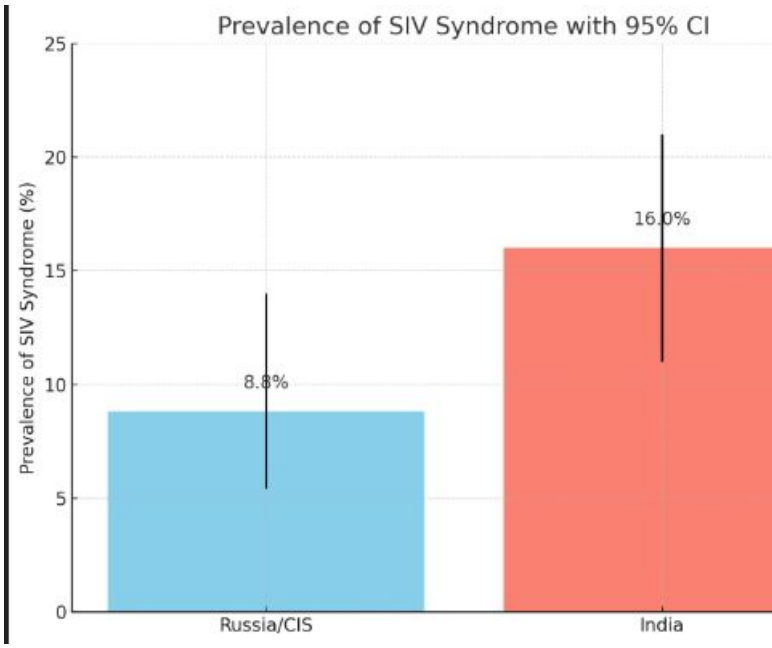

Fig5: Comparison of prevalence of SIV syndrome in both the isolated sample populations; Russia-CIS countries and India

DISCUSSION

The study of human sexuality is one of the most neglected disciplines of medical science, although attachment of such negligence to it in no way reduces its importance. Samajpaty-Ibragimova-Vlasova is one of such syndromes reported by *Samajpaty et. al.* in 2023 which may contribute to the observed decline in global fertility rates[26]. The results of the study shows the prevalence of SIV syndrome in Russian population (including few regions of the CIS countries) at 8.82% with a confidence interval of 95% (p=0.00083) and that of in the Indian population at 16.02% with a confidence interval of 95% (p=0.00029) and the OR in between both the populations was found to be 0.51. This shows statistical significance of SIV syndrome in both the populations. Understanding for reproductive psychiatry is of utmost importance to the medical community as it unfurls the mystery of genesis. In the same work of *Samajpaty et. al.*under project DURGA, an insight into female reproductive psychiatry have been given[27]. Attention to be paid to the fact that country like India which country has the highest population in the world as of June 2024 is facing a latent steady decline in total fertility rate (TFR). As per Lancet report India's fertility rate is projected to decline below 1.75 by 2026[28]. Further it has been investigated that young Indian women are not willing to reproduce[29]. Although a debated justification on such trend might be given citing the demographic cycle, but the fact that the demographic cycle is a hypothesis and has been proven to be non-uniform, oversimplified and a failure in lot of instances, should never be neglected[30]. From social point of view, different factors might be playing role in generating unwillingness to reproduce in women but development of female reproductive psychiatry is a complex topic and it is not just the availability of sexual

intimacy. The prevalence of SIV syndrome has to be taken seriously by medical community and thoroughly investigated from the point of view of gynaecology, psychiatry, behavioural science and even social sciences.

LIMITATIONS

Unique in its type, the study has its own limitations. Such cross-sectional study has to be conducted further with larger resources and in a larger population to ascertain the significance of the proposed syndrome in terms of its effect on fertility and reproduction rate and demographic designs.

CONCLUSION

This study introduces to the medical community a novel construct in reproductive psychiatry. The data gathered thus is useful for family planning strategies at a national level. It puts forward a new dimension to the study of reproductive psychiatry and defines the complexity of reproductive process.

Ethics statement

Participation was anonymous and voluntary. No identifiable personal data or person identifying information were collected. Informed consent was electronically obtained from each participant, as per applicable ethical guidelines and local laws. The ethical guidelines outlined in the Helsinki Declaration were rigorously followed.

Participants' consent

Participant's informed consent was obtained by electronic signature as per local laws of countries were the survey was conducted.

Conflict of interest

It is hereby declared that none of the authors have conflict of interest

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