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## Original Research Article

# Inequalities in menstrual hygiene practices and social stigma among women of particular vulnerable tribal groups (PVTGs) in Madhya Pradesh

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## ABSTRACT

**Background:** This article aimed to understand the menstrual acquaintance, practices and hygiene care of underprivileged women living in difficult terrain. The PVTGs tribes have low literacy and poor socio-economic condition. The study has focused to find out the existing menstrual hygiene by way of the use of sanitary pad and fronting with social stigmas during the menstrual period.

**Materials and Methods:** Community based cross-sectional study was conducted in all three PVTGs Baiga, Bharia, and Saharia women of Madhya Pradesh. Data collection was done in 2019-20 in selected district Dindori, Chhindwara and Sheopur. A total 302 women were interviewed on menstrual hygiene practices and related issues who were in reproductive age (15-49 years). The related relevant information's was collected by female trained investigators through structured questionnaire schedule by conducted interview method after obtained consent.

**Results:** Care of menstrual hygiene as use of sanitary pad (absorbent) was found 11.2% among women. Inequality of the use of sanitary pad was seen lower (6%) in Baiga women in comparison considerably higher (17.6%) in Bharia and (10.4%) in Saharia women. Disposing the used absorbent at outside the village were found significantly higher (44.8%), ( $p < 0.05$ ) in Saharia while burn the used absorbent seen significantly higher (78.3%), ( $p < 0.05$ ) in Bharia women. Cleaning the genital with water only were found alarming 16.5% among women particularly 21% in Baiga, 17.6% in Bharia and 11.5% in Saharia women due to different culture and norms. As regards 28% women feeling menstruation is impure details as 42%, 9% and 31% by Baiga, Bharia and Saharia women. Restrictions as social stigma during menstrual period, about 13% of women were reported that they had not involved in the community social and cultural functions. Social stigma was seen noticeably higher (22%) among Saharia while lower (12.4%) in Bharia and 5% in Baiga community.

**Conclusion:** Use of hygiene absorbent during menstruation period was found comparatively very low (11.2%) among tribal women in comparison to national average. The tribal women are having greater risk of own health and her forthcoming baby. Appropriate IEC campaign program on awareness for menstrual hygiene care among women and easily availability of sanitary pad will be upholding of superior menstrual hygiene which correlated to health of mother and reproductive care.

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## 1. Introduction

We know that all very well but how difficulties it can occur to live in rural areas in different geographical sections especially among tribal communities in India. Where there is lack of education, employment, transportation, and health

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facilities, such most backward tribe's community living in rural areas livelihood life for women makes us think that they are affecting their health.<sup>1</sup> Most of the studies in India have been concentrating on the menstrual hygiene practices among adolescent girls and not the whole of reproductive age group (15-49).<sup>2</sup> The global scenario in India has observed the number of women in the age of reproductive group is more than 31 crores. Also, the menstruation is a common physiological process that causes teenagers and women to bleed from the walls or lining of the uterus for about 3 to 7 days each month from puberty to menopause. Basic sanitation, hygiene, and reproductive health are a fundamental part of health. Unfortunately, in our Indian society even today menstruation is commonly regarded as dirty and unclean in our society. Tribal community is considered as a taboo in society, awareness of many misconceptions, myths, and unscientific attitudes related to menstruation, how their health and social life are adversely affected.<sup>3</sup> In our country, there are about 63 million adolescent girls who live at home without toilets.<sup>4</sup> According to a report by Water Aid, titled "Out of Order; The State of the World Toilets 2017", 355 million women and girls do not have a toilet facility in India. The poor sanitation and hygiene boost is the high risk of the infection during and last birth of child, with accounting for 11% of the maternal deaths worldwide.<sup>5</sup>

In country India menstrual hygiene is one of the enormous concerns among a huge proportion of the rural women. The present use of the sanitary napkins is very little only 10-11% in Indian women as compared to developed countries resembling the USA it is 73-90% of women.<sup>6</sup> Nevertheless, market-based napkin is not a matter for urban women, but for the rural women stable, they are highly using homemade clothes as an absorbent during menstruation.<sup>7</sup> In India, there are about 113 million adolescent girls who are weak in information on the onset of menstruation and facing significant barriers/stigma with menstrual hygiene management (MHM). Girls do not have access to education on puberty and menstrual health, and when they go to their mothers for information and support, most mothers see menstruation as a 'dirty' subject open to shame and hesitation she does not discuss it and ends the subject. Also, most of the girls / women are unable to access them due to high cost of menstrual exploiters and they have no other option but to use homemade option i.e. old clothes, rags etc.<sup>8</sup> Awareness on menstrual protection is most imperative for all women's or girl's health of hygienic practices. According to National Family Health Survey (NHFS-4) of India as per current published research who use of sanitary napkins by women age 15-24 years is 57.6% in India which is 48.2% in rural areas.<sup>9</sup>

Under the National Health Mission (NHM) health has two programs for adolescent health is Rastriya Kishor Swasthya Karyakram (RKSK) provide weekly Iron &

Folic Acid supplement and second is Menstrual Hygiene Program (MHP) with the regular supply sanitary pad facility provided by the ASHA workers in rural area under the NHM subsidy by the government is not sustainable.<sup>10</sup> Along with the Reproductive, Maternal, Newborn, Child and Adolescent Health (Rmnch+A) scheme mainly works for adolescent in five keys: Nutrition; Health clinics; Health related information and counseling; Menstrual Hygiene; and Preventing health checkup.<sup>11</sup> The Rajiv Gandhi Scheme for Empowerment of Adolescent GIRLS (RGSEAG)-SABLA Program, run by the Ministry of Women and Child Development, this Scheme for Adolescent Girls (SAG) is only for in the rural areas for adolescent age groups of 11-18 years, it is aware of menstrual hygiene management for better improvement in Health, Nutrition, Life skills and Empowerment. It is a bad matter of great concern that this is only for the teenage group but not for women of reproductive age.<sup>12</sup> Exposed in the study in India, that high cost, inadequacy of awareness and lack of knowledge of disposing of sanitary napkins are the main barrier to use them. Also, we know that the menstrual hygiene is one of the keys to prevent many mild to grave infection like reproductive tract infections (RTIs), urinary tract, cervix cancer, and bad odor etc.<sup>13</sup> The particularly vulnerable tribal groups (PVTGs) are socially backward as well as economically most, they have low literacy rate, relatively small population size, fall off in numbers and some of the one to three groups are at the verge of extinction.<sup>14</sup> Study aimed to find out the absorbent used during the menstruation period and to describe the social stigma tribe wise and its variations. Women personnel health hygiene is considerable important to control the morbidity, mortality and related complications. The main reason of this study is to determining the menstruation perception, practices, health, social barriers/stigma among all three PVTGs women habituating in different geographical and situational variations.

## 2. Materials and Methods

### 2.1. Study sites

The Baiga, Bharia, and Saharia tribes of Madhya Pradesh are the most backward PVTGs (Particular Vulnerable Tribal Groups). These three PVTGs Baiga, Bharia and Saharia are existing in Madhya Pradesh, constitute 2,012, 1,31,425, and 4,17,171 population respectively of the total tribal population of the state. Baiga are one of the ancient tribes of M.P, mainly located in the six districts; Mandla, Dindori, Shahdol, Anupur, Balaghat and Umaria. But the highest concentration is found in the 'Baigachak' area of Dindori district. This area is surrounded by dense forest patches and hillocks. Bharia is one of the little tribal groups of M.P mainly found in the 'Patakot' area of Chhindwara district, are represented as a primitive tribe. This area is a uniquely

deep and depressed in the Satpura plateau. There are about twelve villages spreads over 79 sq. km. the area with a total population of nearly 1600 people. Saharia is mostly found in the Gwalior, Morena, Guna, Bhind, Ashok nagar, Datia, Sheopur, and Shivpuri border of Rajasthan. They are located in 21 districts of M.P, but the high concentration is found in Shivpuri district.<sup>15,16</sup>

## 2.2. Study area and population

A cross-sectional study was carried out among the tribe. Study area Madhya Pradesh is the largest state of the country which is also known as the heart of India. According to the 2011 census, the total population of the state is 726.27 lakh and its total tribal population is 153.17 lakh. It is about 21.1% of the total tribal population of the state.<sup>17</sup> In the state 46 scheduled tribes are residing in 45 districts. Out of these 46 Scheduled Tribes, 7 tribes are most backward tribes in undivided M.P including Chhattisgarh and identified as primitive tribes indicating pre-agricultural levels of technology, low literacy levels and steady or declining depending on the population.<sup>16</sup> In this study, we have selected five villages in each area and studied in each of the three most backward tribes of PVTGs (Baiga, Bharia, Saharia) in districts in M.P: Baigachak from Dindori, Sheopur district and Patalkot from Chhindwara district.

## 2.3. Data collection

The main data collection was accomplished through an individual door to door interviewed and informal discussions with tribal women. The Indian Council of Medical Research-National Institute of Research in Tribal Health (ICMR-NIRTH) has conducted a study on 'Understanding tribal culture, lifestyle, animal husbandry activities and cause of death in five tribes of India through establishment of tribal habitats in ICMR-NIRTH, Jabalpur' in 2019-20. The designed and pre-tested interview schedule were used to collect the information's regarding knowledge, practices, health, social barrier by female trained investigator during the individual interviews with their consent. The data were collected from 16 villages from different areas of these three primitive tribal groups Baiga of Dindori, Bharia of Chhindwara, and Saharia of Sheopur district of M.P.

## 2.4. Sample size & sampling

The estimated sample size included 101 Baiga women, 102 Bharia women and 105 Saharia women for the study. A total 308 women who living in reproductive age group (15-49 years) were covered as study respondent under the reproductive criteria of menstruation hygiene practices and the personal health. Firstly, we have screened/selected 308 women adopting the standard random sampling procedure. Of them 302 (98.1%) women were interviewed

on menstrual hygiene and 6 (1.9%) women were not interested to discussed on this issue.

## 2.5. Statistical analysis

After collected the primary data, coded the information's using in MS Excel software and analyzed the data through using the SPSS (Statistical Package for Social Science) version 25.0 for results. A chi-square test ( $X^2$ ) was used to find the level of significance at 5% level of probability. Further, analyzed data were presented in tables and graph to describing the data tribe wise.

## 3. Results

Analyzed the data on a different procedure of menstruation practices and social believes aspect among PVTGs women to know their status onward with its effect on social and behavioral. The finding of the study is presented in different tables and graphs.

### 3.1. Socio-demographic characteristics of women

In detailed demographic characteristic of each Baiga, Bharia and Saharia women are presented in Table 1. The data have been placed with their age group, level of education, age at marriage and source of drinking water. Most of the women were found in the age group of 20-29 years as details 80.9%, 59.8%, and 56.3% respectively in Saharia, Bharia, and Baiga tribe. The education level of women was found literate 16.6%, up to primary school 12.1%, middle school 9.0% and high school and above about 12.3%. Illiteracy percentage were found higher (66.3%) among Baiga, (24.5%) among Bharia and (61.9%) among Saharia women. Majority (89.1%) of women was occupied in agriculture, labour and both (agriculture and labour) while the lowest percentage (1.2%) was found in services (Govt. job). The highest number of drinking water sources (37.3%) from hand pump was found significantly higher among Baiga in comparison to Bharia and Saharia. In details, 51.4% by Baiga, 47% by Bharia, and the lowest 14.3% by Saharia tribe. The lowest number was found 23 (7.4%) drinking water from stream/river, the maximum of which was 16.2% from Saharia tribal women. The Saharia tribe were significantly higher in using drinking water from tube wells and panchayat supplies while Baiga and Bharia were found nominal.

### 3.2. Use of sanitary pad, disposing and genital care

The distribution of the type of absorbent materials, disposing used materials and material for cleaning genital are presented in Table 2. Over all on average of these (Baiga, Bharia and Saharia) tribes only 11.2% women are using hygiene sanitary pad during the menstruation period. In details 6% Baiga, 17.6% Bharia and 10.4% Saharia women

**Table 1:** Socio-demographic and women background outline

Characteristics	Baiga (n=101) %	Bharia (n=102) %	Saharia (n=105) %	Total (n=308) %	Statistical test
<b>Main Source of drinking water</b>					
Well	27.7	24.6	1.9	17.9	X <sup>2</sup> cal= 100.59* X <sup>2</sup> tab=15.51 df=8
Hand pump	51.4	47.0	14.3	37.3	
Stream /river	0.9	4.9	16.2	7.4	
Spring	14.0	18.6	0.0	10.8	
Other (tube well, Panchayat supply)	6.0	4.9	67.6*	26.6	
<b>Women age group</b>					
15-19	10.8	1.9	1.0	4.5	X <sup>2</sup> cal= 3.83 X <sup>2</sup> tab=12.59 df=6
20-29	56.3	59.8	80.9	65.9	
30-39	42.9	33.4	16.1	24.6	
40-49	8.0	4.9	2.0	5.0	
<b>Respondent Education</b>					
Illiterate	66.3*	24.5	61.9	51.0	X <sup>2</sup> cal= 55.27* X <sup>2</sup> tab=12.59 df=6
Educate up to primary	13.0	44.2	28.6	28.7	
Middle	12.8	10.8	3.8	9.0	
High school+	7.9	20.5	5.7	11.3	
<b>Occupation</b>					
Agriculture	42.5	15.7	2.0	19.9	X <sup>2</sup> cal= 8.64 X <sup>2</sup> tab=15.51 df=8
Labour	9.0	8.9	11.5	9.7	
Both Agriculture Labour	42.5	56.8	78.0	59.5	
Service	2.0	2.0	0.0	1.2	
House work	4.0	16.6	8.5	9.7	

\*significant at p&lt;0.05

are using the sanitary pad during the menstruation period. Use of old cloth was found significantly higher (88%) among Baiga than to Bharia (77.3%) and (82.9%) in Saharia women. Both (Pad & Cloth) materials are also using during the period as 4%, 5.1% and 2% respectively by Baiga, Bharia and Saharia women. Though it is also observed that the few Baiga (2%) and Saharia (4.7%) women were states that they do not have any using absorbent material. After that the used absorbent materials, disposing at outside the village were found significantly higher 44.8% by Saharia women. The burn the used materials 78.3% were found significantly higher by Bharia women. And used materials throw in the river/ponds were found significantly higher 52.0% by Baiga women. Using material for cleaning genital area, using only water for the cleaning for external genital by Baiga (21%), Bharia (17.6%) and (11.5%) Saharia women. This shows very unhygienic practices may be the cause of reproductive tract infection (RTI). About 79% of Baiga, 82.4% of Bharia and 88.5% of Saharia women using soap with water for cleaning for external genital area.

### 3.3. Reasons for not using sanitary pad

The reason behind for not using the sanitary pad to maintaining the proper hygiene was analyzed and presented in Figure 1. Resulted that the tribes are majorly (51.6%) lack of awareness/knowledge. It was found extensively

(X<sup>2</sup>=25.84, df=10, p<0.05) higher (62.9%) in Saharia women while 53% in Baiga and 38% in Bharia women. Another reason high cost of sanitary pad was reported 25%, 26.9% and 22.9% respectively by Baiga, Bharia and Saharia women due poor socioeconomic condition and poverty. Remarkable Shyness of purchasing and disclosing the menstrual issues were observed 4%, 6.1% and 3.8% among Baiga, Bharia and Saharia women. Obviously the tribes are having the shy nature due to low literacy, geographical location, poor economic conditions, etc. Entirety 10% Baiga and 8.2% Bharia women had reported as a reason of unavailability of pad in local market/areas and 2% Baiga and 3% Bharia women also report the reason behind mother restriction/ disposable problem to her daughter and daughter in-laws.

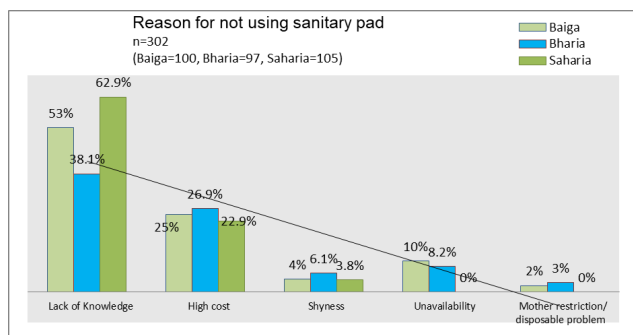
### 4. Cultural and Social Stigma during menstruation

The Table 3 shows that only few (8.7%) of women had taken advice by Doctor concerning the menstruation problem, of them 14.4% Bharia, 11% Baiga and 1% Saharia were consulted to Doctor. Substantial proportion (91.3%) of tribal women had not consulted to Doctor for advice and proper treatment and its accounts 89%, 85.6% and 99% in that order of Baiga, Bharia and Saharia tribe. About 64% of women believed that menstruation is pure and it's revealed significantly (87.6%) in Bharia women than to 46%

**Table 2:** Distribution of menstrual hygiene practices and care

Characteristics	Baiga (100)	Bharia (97)	Saharia (105)	Total (302)	Statistical test
<b>Type of Menstrual materials</b>					
Sanitary pad	6.0	17.6*	10.4	11.2	$X^2_{cal}=13.09^*$
Old cloth	88.0*	77.3	82.9	82.8	$X^2_{tab}=12.59$
Both (Pad & Cloth)	4.0	5.1	2.0	3.7	df=6
Nothing	2.0	0.0	4.7	2.3	
<b>Method of disposing used material</b>					
Outside the village	4.0	6.1	44.8*	18.8	$X^2_{cal}=196.89^*$
Burn	27.0	78.3 *	2.9	35.0	$X^2_{tab}=15.51$
Covering under soil	17.0	8.2	10.4	11.9	df=8
Other (throw in the river/ponds)	52.0*	4.1	33.3	30.2	
Burn and bury both	0.0	4.0	8.6	4.1	
<b>Used material for cleaning genital area</b>					
Only water	21.0	17.6	11.5	16.5	$X^2_{cal}=3.50$
Soap with water	79.0	82.4	88.5	83.5	$X^2_{tab}=5.999$ df=2

\*significant at  $p < 0.05$

**Fig. 1:** Distribution of reasons for not using sanitary pad

Baiga and 58% Saharia. As regards 28% women feeling menstruation is Impure details as 42%, 9% and 31% by Baiga, Bharia and Saharia women. In relation to 9% women did not know whether it is Pure or Impure facts as 12%, 3% and 10.5% as a result of Baiga, Bharia and Saharia women likewise. Restriction as social stigma during menstrual period as not involvement in any social and cultural function like worship, birth ceremony, marriage, death rituals, etc were found strongly among all these tribes Baiga, Bharia and Saharia. Nearly 13% of women were responded that they had not involved in the community social activities and cultural functions during the menstruation period. It was seen noticeably higher (22%) among Saharia community than to 12.4% in Bharia and 5% in Baiga community.

## 5. Discussion

Our study findings are most of the tribal women regarding the menstrual hygiene and practices were found using old cloth 82.8%, sanitary pad 11.2% and 3.7% of women were using both sanitary pad & old clothes. It has dissimilarly to the findings of Pandey B. et al. found that 50.5% women

used old clothes, 20% of the women were using the sanitary pad and 29.5% of women were using both sanitary pad and old clothes, also seen different in the study of S. Radhika et al, Kamaljit et al.<sup>18,19</sup> Analogous to it was very bad condition seen in studies conducted rural North India by Singh A, found that only 5(0.4%) used sanitary napkins. The comparable finding in also seen in the previous study that found 83.6% of the women using reused old clothes during the menstruation.<sup>20</sup>

In our study, 35% of the women higher responded to burned during the menstruation used material as disposed off and 18.8% of women were used material reported as threw outside the village. This finding is alike with finding of the studies conducted by C. Geethu et al. found higher 67.7% burnt, 16.1% threw the used absorbent.<sup>21</sup> The contradictory study found that S. Sangeetha et al studied in Tamil Nadu it was found that 32.5% of women threw it and 15.5% burn it regarding disposing method of used absorbent material.<sup>22</sup> The cleaning practices were using soap with water were 83.5% high as compare to water only 16.5% of women for external genital area care, this contrast the finding from the previous study of S. Sanu et al. found that 64.3% of women cleaning genitalia with water.<sup>23</sup> Our study that about 51.6% of women were not using the sanitary pad due to the reason of lack of knowledge and 25% of women were reported that high cost of sanitary pad.

The causes of menstruation, 5.0% of tribal women were believed that it is by physiological process while 47% of tribal women believed it as a curse of God and also observed that 7% of the tribal women dried the reusable old clothes in sunlight during the menstruation that was very incredible to poor hygiene practices, dissimilarly studied conducted by Gupta M et al.<sup>24</sup>

Accordingly, health ministry data, only 12% of Indian women (355 million) using the sanitary pads and over 88% of the women option to alternatives unhygienic clothes,

**Table 3:** Level of cultural believe and social stigma in tribes

Characteristics	Baiga	Bharia	Saharia	Total	Statistical test
<b>For menstruation problems taken advice by Doctor</b>					
Yes	11.0	14.4	1.0	8.7	$X^2_{cal}=12.73^*$
No	89.0	85.6	99.0*	91.3	$X^2_{tab}=5.999$ df=2
<b>Menstruation is pure or impure?</b>					
Pure	46.0	87.6*	58.1	63.6	$X^2_{cal}= 39.08^*$
Impure	42.0	9.3	31.4	27.8	$X^2_{tab}=9.49$
Don't know	12.0	3.1	10.5	8.6	df=4
<b>Involvement in any cultural function (marriage/death rituals) during menstrual period</b>					
Yes	95.0 *	87.6	78.1	86.8	$X^2_{cal}=12.83^*$
No	5.0	12.4	21.9	13.2	$X^2_{tab}=5.999$ df=2

\*significant at  $p < 0.05$

ashes and husk sand. In India around 70% of the women said their family did not afford to purchase, 88% women use old fabrics.<sup>25</sup> Similarly, in our study 88% of the Baiga women highest use of old clothes they had low awareness, unhygienic practices during the menstruation. It was importantly noted that the many government scheme for adolescent girls empowerment but the reproductive age women were also important to empower to by the health government policy. Singh et al. has studied that very low use of sanitary pad it was 0.4% of the women during the menstruation.<sup>24</sup>

Most importantly in the tribal community, many are women's that they are follows the cultural roles and taboos during the menstruation that they have faced the many problems. Kaur et al (2018) studied reported that many of the girls are unaware about the physiology of menstruation and hence the under social culture first experiences of menstruation are feel embarrassment, panic, and disgust. There is a big fear among the adolescent girls that if they break these social taboos they will sin.<sup>26</sup> In addition, the present study shows that PVTGs tribal women of the menstrual hygiene practices were poor that main reason was absorbent materials are not affordable.

## 6. Conclusion

Overall our study highlights suggests that the tribal women needs to provide accurate and sufficient information about menstruation and its appropriate management. Health workers should play an active role in the distribution of such information and awareness about menstrual hygiene with its connectivity to better health. An appropriate effort should be made by policy-makers to increase menstrual hygiene among the PVTGs tribal women on reducing the various risk factors such as improving female literacy, and health education on use of sanitary napkins. It is important that a sustained public health program is developed for tribal women through the involvement of key stakeholders such as family members, civil society, and healthcare providers. All tribal women are having poor socioeconomic condition, so need to provide sanitary pad at subsidized rate through

the gross root health workers by ANMs and ASHAs of their areas. For maintaining the menstrual hygiene, sanitary pads should be provided and encouraged to tribal women for its use because of poor menstruation is closely associated with unhygienic leads towards bad health for both mother and child. With the right knowledge and proper menstrual hygiene practices, women can be saved. Policy makers can emphasis on this issue through the program.

## 7. Ethical Approval and Consent to Participate

Ethical clearance was obtained from the Institutional Ethics Committee of the ICMR-NIRTH, Jabalpur Madhya Pradesh (Ref no. NIRTH/IEC/01/814 dated 13 June 2019). The content of the study was explained and after obtaining the written informed consent from each study participants, if they were willing to participate in the research with assuring them of the confidentiality. In the case of illiterate consent was obtained in thumb impression. All participant age was 16 years and above were included in the study.

## 8. Consent for Publication

All author has read final manuscript and agreed for publication.

## 9. Source of Funding

The funding for this study was provided by the Ministry of Tribal Affairs, located in Delhi, for the purpose of granting support and sanction

## 10. Conflict of Interest

The author declares that no competing interests.

## 11. Author Contributions

Dinesh Kumar has designed the concept of article. Analyzed the data, manuscript writing, editing and finalization. Nishant Saxena and Suyesh Shrivastava has involved in writing, provide critical explanations and finalizing the

manuscript.

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