



Achanakmar -Amarkantak Biosphere Reserve: Development and traditional knowledge of Baiga

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An anthropological survey was carried out in the Achanakmar - Amarkantak Biosphere Reserve (AABR) core zone to analyse the impact of government development schemes on tribal culture and indigenous knowledge. For this purpose, three non-rehabilitated villages from the core zone of AABR having maximum Baiga population according to the census 2011 viz., Sarasdol, Tilaidabara and Chhirhatta were selected. The Baiga population of the chosen village was divided into three age groups and interviewed to compare and observe the changes in the traditional culture and customs with time. The data was analysed by comparing the adaptability among the generations. The survey result indicates that indigenous knowledge and tradition have been altered significantly. Due to the influence of outer culture and new technologies introduced in the area through various governmental schemes, the preferences of all generations have shifted towards modern trends. Further, it has resulted in the deterioration of traditional knowledge of the Baiga tribe by introducing facilities. This study has examined the change in the age-old traditional practice of the Baiga tribe of the core zone. The major identified reasons were the interference of the outside culture and the conversational gaps between the two successive generations. The new generation was not ready to adopt their traditional knowledge because they had discovered the ease of life through modern culture. This has resulted in the loss of knowledge of traditional healing techniques and the identification power of various valuable plants that were not passed down to their next generations.

Keywords: Baiga tribe, Culture and customs, Development schemes, Traditional knowledge

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The Achanakmar-Amarkantak Biosphere Reserve is the 14th notified biosphere reserve of India, Madhya Pradesh's 2nd notified biosphere reserve, and Chhattisgarh's 1st notified biosphere reserve. It was declared a Biosphere Reserve on 30th March 2005 with a 3835.51 km² area covering some area of Dindori and Anupur districts of M.P. and parts of Bilaspur, Mungeli and Gaurela-Pndra-Marwahi districts of Chhattisgarh State. The total area (3835.51 km²) is divided into 551.55 km² of Core Zone & 3283.86 km² of Buffer Zone¹. The Core zone and some parts of the Buffer Zone area of 2058.98 km² fall in the Chhattisgarh State, whereas the remaining buffer Zone of 1224.98 km² falls in Madhya Pradesh. It is rich in floral and faunal biodiversity and is home to various medicinal plant species and the home of the indigenous tribal communities. According to information obtained from the Divisional Forest Office, Bilaspur CG, the AABR

lies between 22°15'N to 22°58' N latitudes and 81°25'E to 82°50' E longitudes. In a total area of 3835.51km², about 27 tribal communities live in 418 villages. Out of 418 villages, only 67 villages are forest villages. The main occupation of tribes inside the forest is agriculture, bamboo handicraft, and collection of non-timber forest products (at buffer zone and transition zone). Among 27 tribal communities, Baiga, a vulnerable tribe, also lives here².

Previously, in the core zone of the Biosphere reserve, there were 18 villages. In 2013, according to the rules of the biosphere reserve declaration, a decision was taken by the Government of Chhattisgarh to rehabilitate all 18 villages outside the core zone to minimize human interference inside the forest. Presently, six villages have been rehabilitated, and the remaining 12 villages are in the process of rehabilitation. Many governmental development schemes, such as the Indira AwasYojna, AYUSH Yojna, MahatariYojna and the appointment of

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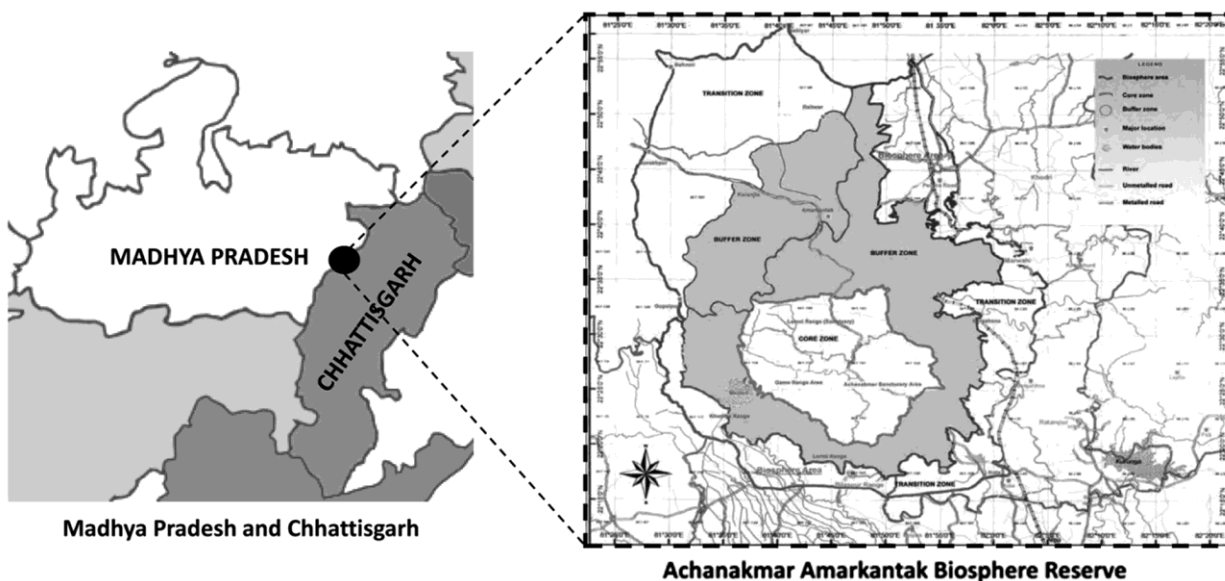


Fig. 1 — Map of the Study area (Core zone of AABR) in Chhattisgarh, India¹¹.

Mitanin and Asha didi for health services, are being implemented in selected villages to improve the lives of tribes living within the core zone of the Achanakmar-Amarkantak Biosphere Reserve (Fig. 1).

The Baigas are a semi-nomadic tribe that lives in the forest area and on the outskirts of Chhattisgarh and Madhya Pradesh (MP) in central India. They mostly belong to the Primitive Tribal Groups (PTGs); however, the term that has been used up in recent times is Particularly Vulnerable Tribal Groups (PVTGs), one of the 75 remaining vulnerable tribes in India³. The Baiga tribe is an ethnic community found in Central India, Madhya Pradesh, Chhattisgarh, Uttar Pradesh and Jharkhand. The largest population is in Madhya Pradesh, 414,526 followed by Chhattisgarh 89,744, Uttar Pradesh 47,393 and Jharkhand 3,585. Tribal communities generally use different types of temporary and permanent decorations to identify their community and their position, social status, rank, sex, occupation, local and ethnic identity, or religion⁴. According to villagers, the Baigas are divided into five subcastes: the Binjhwaras (also known as Gond Baigas), the Bharotiyas, Rai Bhaina, Nahads and KadhBhaina. Baiga males are famous as "Medicine Men" as they use ethnomedicine for treat various diseases and injuries. Baiga females are well-known for tattoos on their entire body, locally known as "Godna," as they believe it remains until the last breath and even after death. The tattoo artists are known as "Godharins" and belong to the Ojha, Dewar, and Badni tribes.

By revoking indigenous knowledge and blindly adopting Western education and science, several states have lost the sense of gluiness and unique cultural identity within indigenous communities. This was also observed in African tribes⁴. The present study assessed the impact of various direct and indirect government interventions on indigenous knowledge.

Methodology

Selection of villages

According to the information obtained from the official website of the State Forest Department of Chhattisgarh, and the Divisional Forest Office, Koni, Bilaspur, 12 non-rehabilitated villages of the core zone were shortlisted for study. Among the shortlisted 12 villages of the Core Zone, three villages, Sarasdol, Tilaidabara, and Chirhatta of the core zone with the maximum Baiga population (according to the 2011 census) were selected. To study the impact of government development schemes on indigenous and unique tribal traditional knowledge, culture and customs of Baiga, selective sampling method was used.

Collection of information

The administrative information of the biosphere reserve was collected by secondary sources. The primary information of the core zone and the transition zone villages was collected from the Divisional Forest Office, Bilaspur, Chhattisgarh. The

information regarding the Biaga population of the area was obtained from the official census report of India, 2011 from the information available on the official website of the Ministry of Home Affairs, Government of India.

Detailed information on old and current practices of the indigenous population was collected through the direct interviews conducted on different age groups of people of the selected villages (Fig. 2). To get proper study and better-quality information, villagers were classified into three different age groups, the older generation covering people of ages between 50-90 years, the middle generation covering people of ages between 25-50 years and the younger generation covering people of ages between 12-25 years and two different gender groups. The random number table sampling technique was adopted for the selection of individuals of each group for an interview. The questionnaire was designed to learn about the village's traditions and indigenous knowledge based on the different genders and age groups. To learn about the old culture and customs, the elderly were interviewed separately to compare present and past differences in indigenous knowledge.

Tools and techniques

The assessment was conducted based on qualitative and quantitative aspects. The method was followed based on a questionnaire survey amongst the Baiga tribe of selected villages. A questionnaire containing 150 questions and sub-questions was developed to cover six categories to be asked by villagers to collect data for the study. The six categories were:

- a. Religious customs and traditions
- b. Medicines and treatment
- c. Livelihood analysis

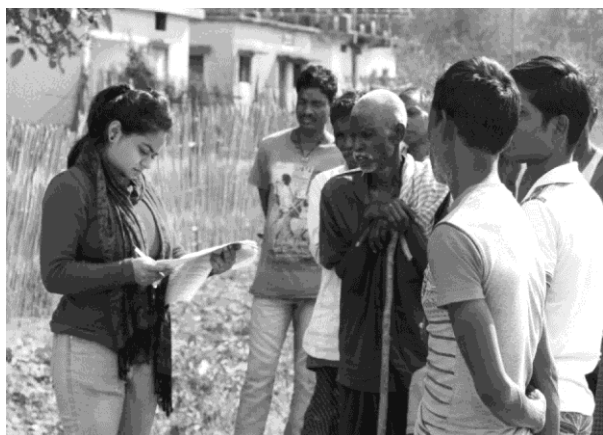


Fig. 2 — Direct interview of an old Baiga man for collection of information using the questionnaire.

- d. Fashion trend
- e. Other information
- f. Tribal development schemes

Results and Discussion

The study was conducted in the three villages at the core zone of AABR, which has maximum Baiga population according to the census 2011. By interacting with the local people of the village, we found a notable change in the customs and traditional religious practices of the Baiga tribe. The change that occurred during the period has been influenced by the surrounding cultures due to the interference of the outer population into their native places to utilize natural resources. The following major findings were observed in the three villages:

Religious customs and traditions

Due to various developmental schemes being implemented by the Government, the tradition and customs of Baigas have changed. Most Baigas adopted a modern lifestyle instead of their tradition (Fig. 3).

The graph showed the direct influence of modern outer culture on traditional culture. To celebrate any ceremony in the past, all villagers used to come together, sit together in groups and enjoy the game of puzzles locally known as "Janaula", but presently they entertain themselves with movie songs played on the sound system instead of their traditional songs. Close supervision of the Baiga hamlet or village clearly indicates why the Baiga community has been placed under the PVTG category. Exceedingly poor and neglected, the Baigas not only experience a deep sense of detachment from the larger mainstream society but also live a hand-to-mouth existence. In the older era, ploughing the earth was prohibited in the tradition of Baiga as it was equated with ploughing the heart of their mother. So, in the past, in addition to hunting and gathering, shifting cultivation, also known as "Bewar" (slash and burn), was widely practised⁵ and agriculture was rainfed with no irrigation facility⁶. In the modern era, agriculture is primarily based on the use of modern tools and techniques such as chemical fertilizer application and the use of cultivators. In contrast, previous generations did it in a traditional manner that included the use of FYM and the use of bulls when necessary. Many government schemes have been developed for the Baiga community. Unfortunately, some of them have no utility to the community⁵.

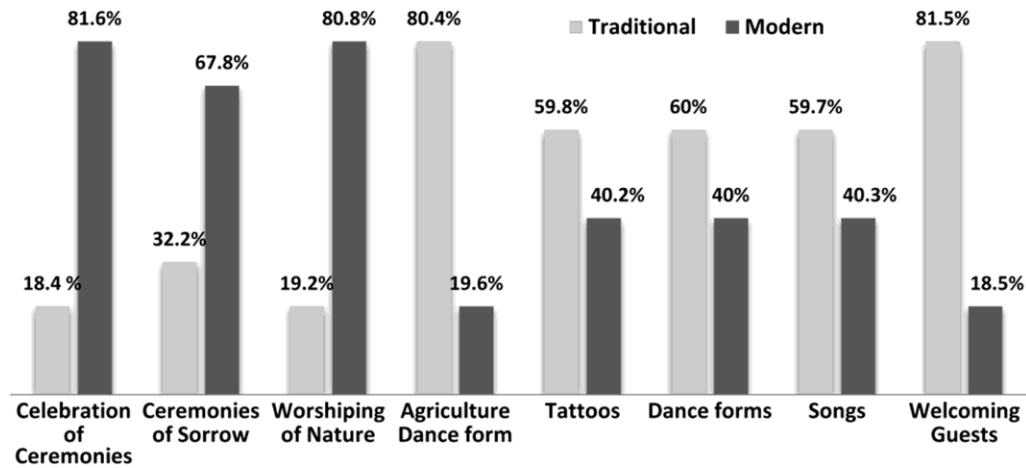


Fig. 3 — Change in lifestyle preferences of Baiga population (Traditional vs modern). Over time the involvement of outer people and government policies had significantly altered the people's lifestyle choices.

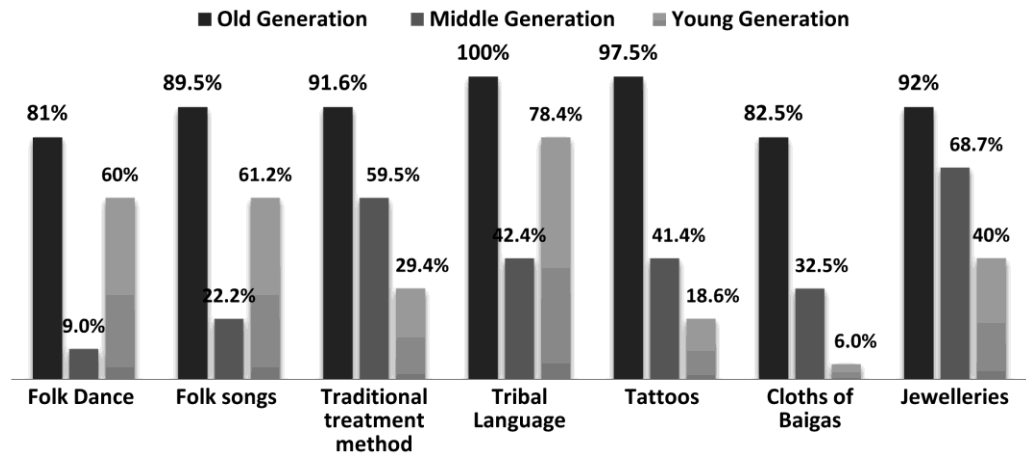


Fig. 4 — The impact of development schemes on traditional knowledge. As the result of the enormous interference of outsiders in the name of development and tourism, the traditional knowledge, customs and rituals have altered among the age groups of the population.

In the same way, ladies usually have traditional tattoos on their entire bodies. Also, males usually have some traditional tattoos on some parts of their bodies, but the present generation usually doesn't prefer tattoos or prefers the current trend of tattoos instead of the traditional ones.

The influence of the interference of outsiders in the execution of developmental schemes in the area on the villagers classified into three different age groups can be observed and understood by the graph (Fig. 4). During the study and interaction with locals about their folk dance and songs, traditional treatment methods, tribal language, tattoos, Baigas' clothing and jewellery were considered for observation. A remarkable difference was observed with groups of three different generations, namely the old, middle and new generations. The results revealed a significant deterioration in the knowledge of middle-generation

people, as they have adopted most of the changes implemented by the Government under various development schemes. In contrast, the younger generation has more knowledge about their traditions as they tend to spend most of their time with their grandparents; however, they may not accept some of their totems, such as tattoos.

The knowledge about their traditions and customs has been affected by the development schemes. The way of living of the Baigas is, in some ways, an engagement of our perceived social value of a regulated and regimented way of life. The struggle will be a long-drawn one, and sustainable livelihoods for the families, education of the children of the community and the availability of basic facilities such as roads and electricity will go a long way to address the convenience of the community⁵.

Medicines and treatment

The Baigas are well known as "Medicine Men of Godh" because they use various plant parts to cure diseases and injuries. Still, due to the declaration of the core zone, they are no longer allowed to collect medicinal plants from the forest as it is considered human interference, so they have shifted to Indian traditional medicine systems such as Ayurveda or modern treatment systems such as allopathic systems (Fig. 5). They also prefer to go to hospitals for treatment. According to an old man, in the village of Sarasdol, Amavasya of the Hindi month Bhado is celebrated as the "Pola" festival among Baiga, which is a crop harvesting festival, and the next day is celebrated as the Narbod festival. On the occasion of the festival, the older generation of the Baiga tribe transfers their traditional knowledge of herbs and treatment methods to the younger ones. On the next day in Pola, the local liquor of the "Mahua" flower is offered to the Mother Earth, and the root of the shrub called "Bhaisa tard" is consumed. But nowadays, the Government has appointed trained "Mitandin" and "Asha", female health workers who work as an intermediate between villagers and hospitals. Therefore, villagers nowadays generally prefer alternate medicine systems over their traditional healing methods.

Livelihood's analysis

The term livelihood indicates securing the necessities of life by earning through different

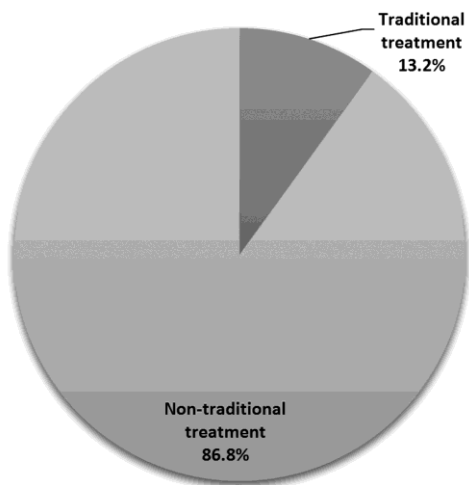


Fig. 5 — Current preferences for treatment methods have shifted towards the modern treatment systems as Primary Health Care Centres and Government health workers are appointed under various government development schemes. Another major reason is the fast recovery and curing rate of Modern treatment systems than the traditional system.

sources^{6,7}. The Baigas are the forest habitants and hunters who collect food and medicine from the forest and depend on forests for their ailments and livelihood. They used to prefer fishing and hunting and gathering edible items from forests. Agriculture was the major source of livelihood. About 80-90% of the population depends on agriculture either as farm owners or labour⁸. The occurrence of drought, frequent farming on the same land, no or least use of fertilizer or other changes have caused the agricultural losses of the poor farmers and reduced their income. At present, due to pressure on land, government control on all forest resources, reduction in forest production, and decline in forest areas, the Baiga tribe has been influenced to cultivate agricultural and horticultural crops. Due to lack of electricity and source of water, they prefer a single cropping system only.

Non-farming activities provide them with income in the off-season when farming isn't possible for them. But most young and middle-aged men do not work to earn their livelihood. Some literate Baiga youths are employed as tour guides, and some are employed as health care representatives. They not only preferred to work as farm labour on other farms, but some of them also migrated to cities for a temporary living (Fig. 6).

Fashion trend

On the socio-cultural ground, the fashion trend is an aesthetic sphere that mostly deals with utilizing visual and haptic characteristics applied to clothing and apparel products and considers specific kinds of tattoos. These are often considered fads or short-term trends⁹.

Godna (tattooing on the body) is an very imperative community marker for the tribal groups. Every special

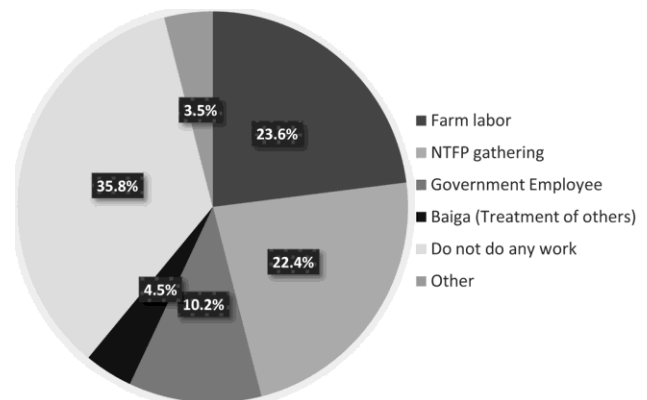


Fig. 6 — Sources of livelihood. The locals adopted the sources for survival which has shifted towards other sources than agriculture. Agriculture accounted for about 80-90% of the source of living during 1997 (Kumar, 1997)⁸, which now left only 23.6% as labour in other fields.

form of tattoo denoted a special purpose, like religion, belief system, body decoration, social status, health care practice, wealth, etc. But there is tremendous cultural variation in the parts decorated and how. Body decoration may be used to delineate gender, social position or occupation (Fig. 6). The tribes of Central India usually like to tattoo different symbols related to their totems, gods and goddesses. It is an ordinary belief among them that these deities and ancestors protect them from other natural calamities, black magic, evil spirits, wild animals, enemies, etc.^{4,10}. Nowadays, due to accessibility to remote areas, either for tourism and educational purposes or for the enforcement of the new governmental policies, the interaction of outsiders with the indigenous population has increased many times. That is influencing the vogue of the younger generation and the older generation. They prefer modern clothes and pieces of jewellery to wear. The tradition of wearing traditional costumes and pieces of jewellery daily has now become occasional (Fig. 7). Furthermore, only the older generation prefers traditional attire, whereas the younger generation prefers the latest fashion (Fig. 8). All societies decorate or adorn the body, temporarily or permanently.

Other information

When the core zone was inaccessible to people from the surrounding area, tribes used to go about their daily lives differently. Most of the activities are performed to utilise natural products more in their daily activities. But with an increase in connectivity to the population of the outer world and frequent interaction with outsiders, their daily activities are affected by modernization.

According to a group of older adults, the older generation, which was not directly or indirectly related to the outer population, feared humans from the outer region. Their boot marks were used to scare the tribes. There were no connecting roads or any connectivity to the outer region from their village, which was surrounded by dense forests. Therefore, they used to collect food sustainably. But after the declaration of the Biosphere Reserve and Tiger Reserve area, they could not collect their livelihood from the forest. They were restricted from performing traditional activities as those were directly or indirectly connected to the forest. A comparative analysis of daily routines was developed based on interviews with people of all three age groups. All information on the present preference was compared with the past preference of the Baiga tribe. The major differences in preferences are shown in Table 1.

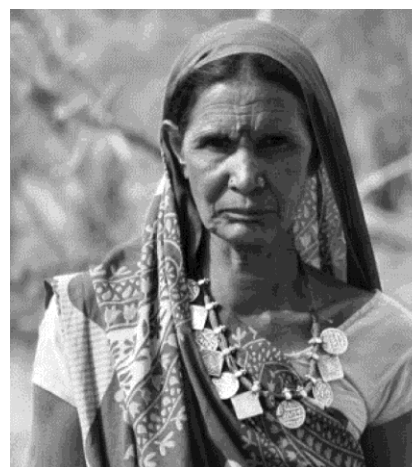


Fig. 7 — An old Baiga lady spotted during the survey wearing a traditional jewellery Sikka neckless also had tattoos on her arms but was wearing a modern saree.

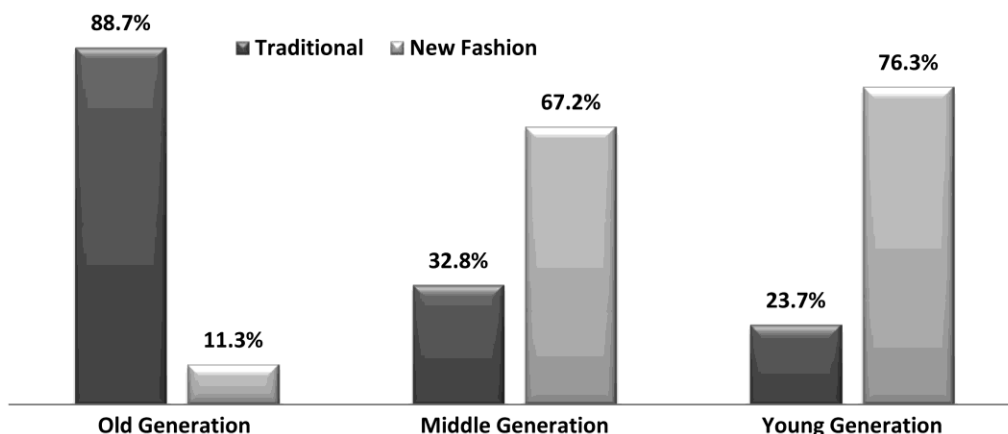


Fig. 8 — Change in the fashion trends over time, directly showing more adaptations towards the modern accessories than the traditional. This was observed in terms of clothing and jewellery and haircuts and attitudes.

Table 1 — Change observed in preference of tribes

Mode	Earlier Era	Present Era
Transportation	Walking	Walking, Bike, 4 Wheelers of Government
Cropping pattern	Single and Traditional	Single and Supplemented with Fertilizer and modern machine
Trade System	Exchange in terms of other goods and services	Exchange in terms of other goods and Services also Money
Wedges	Goods	Money
NTFP Collection	All kinds of NTFP	Only some Medicinal plants and bamboo
Trade of collected NTFP		To Forest Department
Source of water	Pond	Pond, Tube well
Mode of Entertainment	Dance, songs and Puzzles	T.V., Radio

Conclusion

Development is the need of the time, but it should not be worth the rich cultural heritage which has been passed to next-generation by descendants for ages. This is true that up to a certain extent accepting the changes and modernizing their thoughts would be helpful to the tribal society.

Development schemes were selected per the recognized indices of the definite level of human development in the context. They should not affect the traditional knowledge and age-old practices of the native population as it harms not only the local people but also the surrounding habitat. The idea of the study arose from the fact that tribal traditions and cultures needed to be preserved and conserved as these are our indigenous traditions and cultures. If we do not make any attempt to preserve them, then we would lose our heritage which otherwise was an integral part of our everyday existence. Outsiders should not be allowed to intrude into the tribal community in order to administer it, but should work with the tribes to preserve their cultural and social institutions, not overwhelm them with schemes.

The study was only concentrated in the core zone of the Achanakmar-Amarkantak Biosphere Reserve. The primary source of information collection was direct interviews and interaction with villagers, as the socio-economic conditions and other conditions can differ for buffer zone communities.

Acknowledgement

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Conflict of Interest

Authors declare that they have no conflict of interest.

Authors' Contributions

YV conducted the survey, analysed the data and wrote the article; GP supervised and guided all of these activities.

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