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A study on the Socio-Economic Status and level of Cognitive, Psychomotor and Affective Domains of Sidi Tribes in Open Sea Cage Culture

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ABSTRACT

A study on the level of socio-economic conditions of communities/beneficiaries provides the base to formulate development plans and undertake corrective action for the posterity. The present study deals with the socio-personal, socio-psychological and socio-economic characteristics of *Sidis* a primitive tribal group who are the beneficiaries of the ambitious cage culture programme of CMFRI under the Tribal Sub-Plan. A sample of 135 *Sidi* tribals consisting of 45 numbers of *Sidis* practicing cage culture, 45 numbers of non-practicing beneficiaries of the tribal society and 45 numbers of *Sidis* who were non practicing and non-beneficiaries of society were selected using multistage random sampling method. The findings of the study revealed that majority of the participant beneficiaries (58.33 percent) were having high school level of education, when compared to non-participant beneficiaries majority of whom were illiterates (55.55 percent). It could be inferred that, the participant beneficiaries had a higher average monthly income ie ₹ 1516.25 when compared to non-participant beneficiaries who earned an average monthly income of ₹ 854.25. Majority of the participant beneficiaries (41.67 per cent) had medium level of knowledge in cage culture followed by (50.00 per cent) who had medium level of attitude followed by 75 per cent had medium level of perceived skill towards cage culture.

Key words: Cage culture diaspora, *Sidis*

INTRODUCTION

Sidis are a very ancient tribe, a diaspora whose ancestry rests in the African subcontinent. Various theories abound with respect to the origin of the *Sidi* tribes. History records that, these tribes were brought to India way back in 997 A.D when they were brought as soldiers to work in the army of "Mahmud of Ghazni" the most prominent ruler of the Ghaznavid Empire who conquered and plundered the northwestern Indian subcontinent. Thereafter, the major influx of *Sidis* to India occurred during the 17 th -19 th centuries, when the Portuguese brought them as slaves to India. Characterized by a strong physiognomy, unique to this race, these tribes were most sought after, to engage in hard and laborious tasks which expended physical energy to a great extent. These unique tribesmen later dispersed to the States of Gujarat, Karnataka and Andhra Pradesh. (Shah *et al.,* 2011) The Central Marine Fisheries Research Institute (CMFRI), Kochi has taken up the ambitious sea cage culture and field demonstration trials of fin fishes and lobsters among the "*Bharat Adim Juth Matsyodhyog Mandali"*, which is a society of primitive tribals – the *Siddi* tribal group of Veraval and Talala Taluka, Junagadh district, Gujarat.

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The Central Marine Fisheries Research Institute has demonstrated the cage culture in various strategic locations of its respective regional and research centres. In modern times, cage culture is also seen as an alternate livelihood, for example, for persons displaced by the construction of reservoirs or acquisition of land for other developmental activities. (Rao, 2009)

Against this background, it was decided to conduct a socio-economic benchmark survey among the *Sidis*. Benchmarking has the intention of comparing performance (not only against external actors, but also introspectively over time), in a structured manner with the intention of identifying a desirable future, alternative pathways and adapting practices and processes to achieve a better performance (Auluck, 2002; Papaioannou *et al,* 2006). Thus the study was undertaken with the following objectives to assess the personal and socio-economic characteristics of *Sidis* practicing cage culture (participant beneficiaries of the tribal society), non-participant beneficiaries of society and non-member, non-participant beneficiaries and compare the levels of cognitive (knowledge), affective (attitude) and Psycho motor (skill perception) among the (participant beneficiaries of the tribal society), non-participant beneficiaries of society and non-member, non-participant beneficiaries.

METHODOLOGY

Multistage random sampling method was followed for the present study. For the present study, *Sidis* practicing cage culture of finfishes and lobsters in the State of Gujarat were selected. From the State of Gujarat, the district having maximum number of *Sidi* population namely Junagadh was selected. From Junagadh district, Veraval and Talalataluks where maximum number of *Sidis* practicing cage culture of finfishes and lobster were selected. The *Sidis* practicing cage culture have been registered under the tribal society namely "Bharat Adim Juth Matsyadhyog Sahkari Mandali". A sample of 45 numbers of *Sidis* practicing cage culture, 45 numbers of non-practicing beneficiaries of the tribal society and 45 numbers of *Sidis* who were non practicing and non beneficiaries of society were selected randomly to form a total sample of 135 *Sidis*. A well structured interview schedule was constructed and the necessary socio-personal, socio-psychological and socio-economic variables which were relevant for the bench mark analysis were included for the present study. Accordingly, 17 independent variables were selected. The behavioural variables used for the study were Knowledge, Attitude and skill perception of the 3 respondent categories towards the cage culture practices. Knowledge of the respondents was measured using a Teacher made Knowledge test as adopted by Tesfaye *et al*, (2010). The test consisted of 11 items. For every correct answer on the knowledge item a score of 1 was given and for every incorrect answer a score of 0 was given. The total score for each respondent for all the 11 items gave the knowledge score for that particular respondent. The attitude towards cage culture was measured using a 5 point Likert scale in which statements were rated along a continuum ranging from strongly agree to strongly disagree. The attitude of a respondent was measured by adding the total scores obtained for 4 items in the scale, by attributing 5 score for 'strongly agree', 4 score for 'agree', 3 score for 'undecided', 2 score for 'disagree' and 1 score for 'strongly disagree' responses in the case of positive items. In the case of negative statement the scoring pattern was reversed. The total scores were calculated by adding individual scores that each respondent obtained for all statements. For measuring the perceived skills of the farmers towards cage culture, 4 point Likert type response scale was used. Each statement on perceived skill of the respondent was rated on a continuum ranging from good, fair, undecided and poor. Accordingly scores of 3, 2, 1 and 0 were administered based on the responses obtained. The sum total of all the scores obtained for all the individual statements formed the score for the perceived skill towards cage

culture. The data thus collected on all the variables was tabulated and analysed using necessary statistical tools like percentage analysis, mean and standard deviation.

RESULTS AND DISCUSSION

In order to have a in depth analysis of the socio-economic status of the *Sidis*, it was decided to compare the three groups of *Sidis* namely the participant beneficiaries who were actively involved in the cage culture of finfishes and lobsters and who were members of the tribal society i.e. *"Bharat Adim Juth Matsyodhyog Mandali* ", the non participant beneficiaries who were beneficiaries of the tribal society but who were not participating in the cage culture and the non participant and non beneficiaries who completely fell outside the purview of the tribal society as well as the related cage culture activities. It could be observed from figure 1 that among the participant beneficiaries, majority (58.33 per cent) belonged to young age category (ie<35 years of age), followed by 41.60 per cent in the middle age category (36-45 years) and none of the respondents were in the old age category. (>45 years). A similar trend was observed among the non participant non beneficiary category also. The implication of these findings is that majority of the respondents belong to the young and middle aged group. This is an advantage since they are supposed to be physically able and more mentally alert in learning new technologies than the older farmers. (Agwu, 2004) As the technology of cage culture diffuses across the other members of the social system, such respondents in the young and middle aged category could be effectively identified for adoption of cage culture practices.

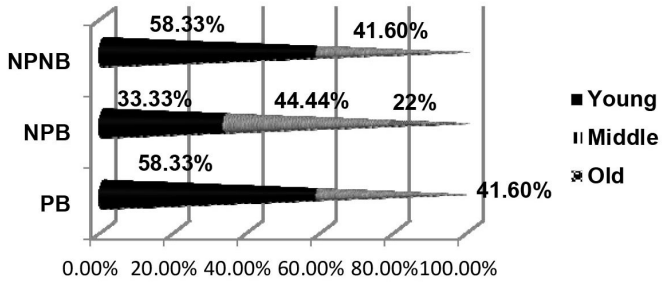
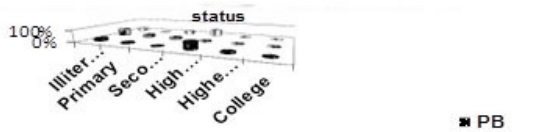


Fig 1: Distribution of respondents by age

The educational status of the three categories of *Sidis* are presented in figure 2. It could be observed that, among the participant beneficiaries majority (58.33 per cent) were having high school level of education. Among the non participant beneficiaries a higher percentage (55.55 per cent) were found to be illiterate. Among the non participant non beneficiaries it was observed that, 50 per cent were educated up to high school level and an equal percentage (25 per cent) were illiterate and having secondary level of education respectively.



	Illiterate	Primary	Secondary	High school	Higher secondary	College
PB	25%	8.33%	0%	58.33%	8.33%	0%
NPB	55.55%	22.22%	16.66%	5.55%	0%	0%
NPNB	25%	0	25%	50%	0%	0%

Fig 2: Distribution of respondents based on educational status

Figure 3 depicts the distribution of respondents based on their average monthly income. It could be inferred that, the participant beneficiaries had a higher average monthly income ieRs.1516.25 when compared to non participant beneficiaries who earned an average monthly income of Rs.854.25. The non-participant non-beneficiaries earned an average monthly income of Rs. 1000. The non-participant non-beneficiaries were found to be working as agricultural laborers, rickshaw pullers, auto drivers and the females in the households were found to work as domestic helps in the houses of well do people. This finding clearly implies that the participant beneficiaries were getting a relatively higher income than the other two categories due to their involvement

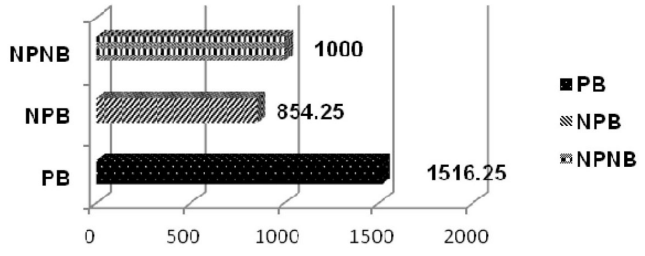
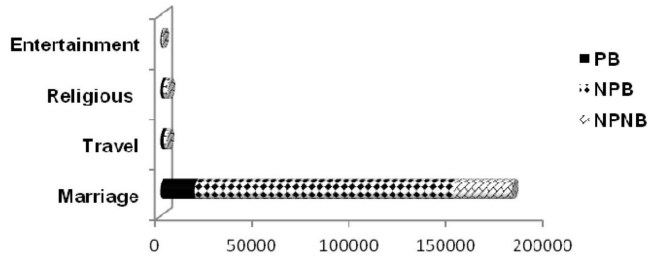


Fig 3: Distribution of respondents based on average monthly income (Rs.)

in cage culture. Besides it shows that *Sidis* practicing cage culture of finfishes and lobsters are wielding greater economic gains than their non-practicing counterparts. This enterprise would continue to play an increasing important role in the livelihood of the resource poor *Sidis* and has tremendous potential to develop further in the area.

The yearly social expenditure incurred by the respondents belonging to the 3 categories is shown in figure 4. Among the various items of social expenditure it was observed that, the expenditure incurred on marriage ceremonies was highest. Category wise, it was highest for non participant beneficiaries (Rs.1,33,389) followed by Rs.30,000 for non participant non beneficiaries and Rs. 18,083 for participant beneficiaries.



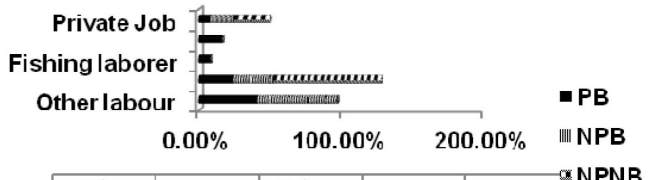
	Marriage	Travel	Religious	Entertainment
PB	18083	2070	1783.33	558.33
NPB	133389	1280.55	1851.11	376.47
NPNB	30000	475	600	300

Fig 4 : Social expenditure (Rs.) by categories (yearly)

It could be noted that, the participant beneficiaries and non-participant beneficiaries spend substantially on travel and their yearly expenditure on travel is Rs.2070 and Rs.1280.55 respectively.

Figure 5 shows the major occupations practiced by the 3 categories. Majority of the participant beneficiaries (41.66 per cent) were involved as different types of laborers in various fields followed by 25 per cent working as farm laborers, followed by 16.66 per cent in fishing and 8.33 per cent as fishing labourers and private jobs respectively.

In this context, it was felt necessary to assess the knowledge, attitude and skill perceptions of the *Sidis* towards cage culture. Knowledge is the cognitive



	Other labour	Farm laborer	Fishing laborer	Fishing	Private Job
PB	41.66%	25%	8.33%	16.66%	8.33%
NPB	55.56%	27.77%	0%	0%	16.67%
NPNB	0%	75%	0%	0%	25%

Fig 5 : Major Occupations practiced category wise

domain. Attitude is defined as the degree of positive or negative affects towards a psychological object. (Thurstone and Chave, 1946) Assessing farmers' perceptions is an important means to evaluate their knowledge level on a particular issue, as perception refers to an individual's current appraisal of an object or program The levels of knowledge, attitude and skill perceptions were assessed and depicted using kite diagrams/radar graphs in figures 6-7. As could be observed from figure 6, majority of the participant beneficiaries (41.67 per cent) had medium level of knowledge in cage culture followed by 33.33 per cent possessing high level of knowledge and only 25 percent were observed to be in the low level of knowledge. With respect to the non-participant category and non-participant non-beneficiary category, none of the respondents had any knowledge towards cage culture. This was obviously because these respondents were not practically involved in the open sea cage culture activities. In a similar study on the impact of farmer-field school programme on farmers knowledge of IPM Practices related to potato cultivation, conducted by Godtland *etal* (2003) it was

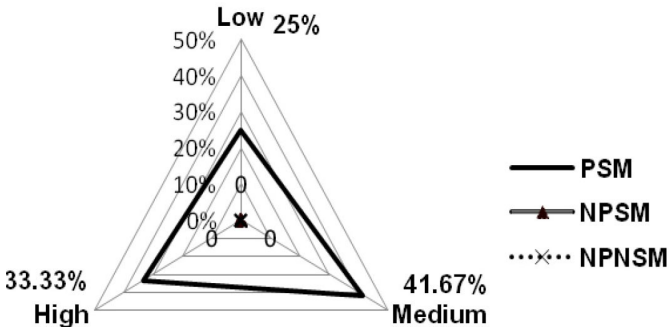


Fig 6: Knowledge level of Sidi tribes on Cage culture (Category wise in %)

observed that, farmers who participated in the programme have significantly more knowledge on IPM practices than those in the non-participant comparison group.

The attitude of the *Sidis* towards cage culture is depicted in figure 7. It could be observed from the figure that, majority of the respondents among participant beneficiaries (50.00 per cent) had medium level of attitude towards cage culture, followed by 33.33 per cent in the high category and 17 per cent in the low level of attitude category. This finding implies that the non-participant beneficiaries might have developed a positive attitude towards cage culture due to their interaction with the participant beneficiaries since both the categories are coming under the purview of the tribal society namely the "Bharat Adim Juth Matsyodhyog Mandali". This finding also implies the enormous scope of motivating and persuading the non-participant beneficiaries to practice cage culture in the long run. The study further shows that, the non-participant non-beneficiaries had not yet formed any attitude towards cage culture.

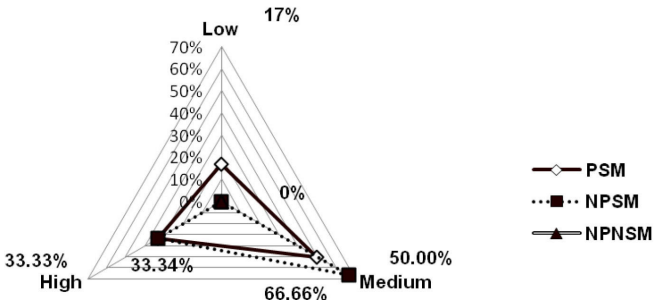


Fig 7: Attitude of Sidi tribes towards cage culture (Category wise in %)

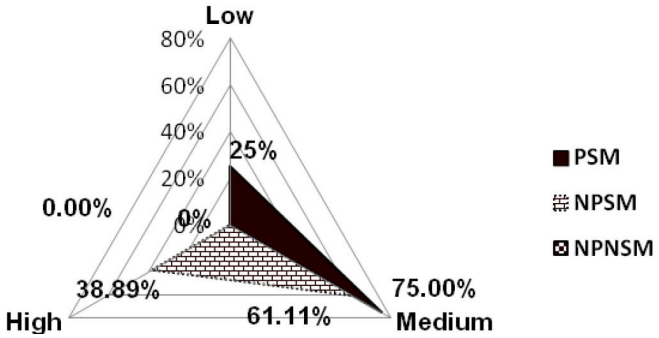


Fig 8: Skill perception of Sidis towards cage culture

The kite graph on figure 8 showed the skill perception of the three categories of *Sidis* in cage culture. It could be inferred from the figure that, majority of the participant beneficiaries (75 per cent) had medium level of perceived skill towards cage culture followed by 25 percent in the low level of perceived skill.

CONCLUSION

The foregoing study revealed that the participant beneficiaries of cage culture scored high over the nonparticipant beneficiaries in terms of their monthly income, education and also cognitive, affective and psychomotor skills. Further, cage culture as an important income earning avocation has bought about a socio-economic transformation on this ethnic diaspora.

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