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## Health problems associated with bamboo artisans and its recommendations

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### Abstract

The study was conducted in North Karnataka districts and the respondents were interviewed personally to elicit the primary information by using self structured interview schedule. Exploratory research design was used. Random sampling method was applied to select a sample size of 120 bamboo artisans' family. Cent per cent of the respondents stated that weight of the tool caused more discomfort while performing the cutting and stripping activities followed by length of the tool and shape of the tool. Cent per of the respondents always experienced cuts and piercing as health problems. Cutting and stripping activities were more drudgery prone activities in bamboo products making enterprise. According to the priority the ranking was given to the recommended suggestions for health problems. The first priority was given to the recommended suggestions- introduction of technology/tools or bamboo cutting machine for reduction of pain and health hazards.

**Keywords:** Manual load operative and piercing

### Introduction

Bamboo is called as "poor man's timber" as it feeds millions of traditional workers. Bamboo has large potential for economic and environmental development, because bamboo grows faster and requires less management and expertise. The largest producer of bamboo in the World is China and India holds the second place for growing bamboo plant.

There are number of policies and plans adopted by the central governments and state governments to protect the bamboo industry. However the bamboo artisans are suffering from many problems related to occupation.

Bamboo workers suffer from occupational health hazards such as musculoskeletal disorder due to awkward posture used for prolong time, postural discomfort, pain in different body parts due to reparative work, health problems- injuries like cuts, piercing while stripping the bamboo for weaving purpose.

Based on these situations the following objectives have been framed:

1. The examine the occupational health problems faced by the bamboo artisans
2. To review respondents opinion towards recommended suggestions to combat the occupational health problems

### Methodology

The present study was conducted in North Karnataka of three major bamboo growing districts viz., Dharwad, Belagavi and Uttar Kannada districts. Representative sample of 120 bamboo artisans were randomly selected from six selected villages of the study area (Narendra and Upinbatigeri village from Dharwad district, Munavalli and Yeragatti from Belagavi district, Malagi and Palla from Uttar Kannada district). Thus the total sample comprised of 120 bamboo artisans including both women and men. Exploratory research design was used. Participation refers to the different activities performed by bamboo artisans. The respondents were interviewed personally to elicit the primary information by using self structured interview schedule. The appropriate statistical tools like frequency, percentages, mean and garret ranking was used to analyze the data.

### Categorization and quantification

The occupational problems of bamboo artisans are analyzed by using the methodology adopted in AICRP Home Science FRM research component for various occupations.

### Drudgery Experience

The drudgery score was given based on the drudgery experienced by bamboo artisans and was assessed by using six drudgery parameters viz., work demand, feeling of exhaustion, postural assumed, manual loads, difficulty perception, workload perception. The rating of drudgery parameters was done by using five point scale according to AICRP Home Science annual report FRM, 2014-2015 of the detail is as follows.

**Rating on work demand:** The rating on work demand is given in five point scale:

The rating on work demand is given in five point scale

Sl. No.	Category	Score
1	Very demanding	5
2	Demanding	4
3	Moderate	3
4	Less demanding	2
5	Very less demanding	1

**Rating of feeling of exhaustion:** The rating on feeling of exhaustion is given in five point scale:

The rating on feeling of exhaustion is given in five point scale

Sl. No.	Category	Score
1	Very exhausted	5
2	Exhausted	4
3	Moderately exhausted	3
4	Mildly exhausted	2
5	No exhaustion	1

**Rating on posture assumed in work:** The rating on posture assumed in work is given in five point scale:

The rating on posture assumed in work is given in five point scale

Sl. No.	Category	Score
1	Very difficult	5
2	Difficult	4
3	Moderately difficult	3
4	Mild pain	2
5	No pain	1

**Rating on manual loads operatives:** The rating on manual loads operatives is given in five point scale:

The rating on manual loads operatives is given in five point scale

Sl. No.	Category	Score
1	Very painful	5
2	Painful	4
3	Moderately painful	3
4	Mild pain	2
5	No pain	1

**Rating difficulty perception:** The rating on difficulty perception is given in five point scale:

The rating on difficulty perception is given in five point scale

Sl. No.	Category	Score
1	Very heavy loads	5
2	Heavy loads	4
3	Moderately heavy loads	3
4	Light loads	2
5	No loads	1

**Rating on work load perception:** The rating on work load perception is given in five point scale:

The rating on work load perception is given in five point scale

Sl. No.	Category	Score
1	Very heavy	5
2	Heavy	4
3	Moderately heavy	3
4	Light	2
5	Very light	1

### Results and Discussion

**Table 1:** Discomfort with the use of tools while performing bamboo activity

N=120

SI No	Particulars	Frequency	Percentage
1	Weight of the tool	120	100
2	Shape of the tool	82	63.33
3	Length of the tool	98	81.66

The discomfort experienced by the bamboo artisans with the use of tools while performing bamboo activities in presented in Table 1. Cent per cent of the respondents opined that weight of the tool caused more discomfort while performing the cutting and stripping activity followed by length (81.66%) and shape of the tool (63.33%). The reasons for discomfort with the use of the tool might be bamboo tools are heavy which are made of iron and caused discomfort and edges are too sharp which cause injury to the hands while using tools. As the cutting tool is not ergonomically designed and caused discomfort.

**Table 2:** Perceived drudgery experience by selected bamboo artisans

N=120

Sl. No.	Drudgery Experience	Cutting	Stripping	Weaving
1	Work demand	3.81	3.15	2.12
2	Feeling of exhaustion	3.90	3.89	2.20
3	Posture assumed in work	4.20	3.13	2.30
4	Manual loads operatives	3.98	2.60	2.00
5	Difficulty perception	4.07	3.75	2.25
6	Work load perception	4.12	3.22	2.30
	Total score	24.08	19.74	13.17

Table 2 reads that the respondents experienced more drudgery while performing cutting activity followed by stripping activity. Respondents involved in weaving activity experienced lesser drudgery as compare to cutting and stripping activities.

The reasons for drudgery experience may be that the artisans experiences more problems during bamboo cutting and stripping because it require to work with heavy and sharp tools which is made of iron and cause discomfort as occupational health hazards like well as injury during cutting and stripping the bamboo. Awkward posture adopted during cutting and stripping also cause for postural discomfort and experienced more pain; even though artisans are not interested to work need to do to fulfill their needs.

**Table 3:** Health problems perceived by the selected bamboo artisans

N=120

Sl. No.	Health problems	Always	Often	Sometimes	Rarely	Never
1	Cuts	120 (100)	-	-	-	-
2	Boils	95 (79.16)	-	25 (20.84)	-	-
3	Skin irritation/Burning	110 (91.70)	-	10 (8.30)	-	-
4	Piercing	120 (100)	-	-	-	-
5	Stress	110 (91.70)	-	10 (8.30)	-	-
6	Headache	-	-	120 (100)	-	-
7	Strain	95 (79.16)	-	25 (20.84)	-	-
8	Fatigue	113 (94.16)	-	7 (5.84)	-	-

**Note:** Figures in the parenthesis indicate percentages

Health problems of bamboo artisans is showed in table 3 which says cent percent of the respondents had perceived always cuts and piercing as health problems followed by fatigue, stress and skin irritation while performing bamboo activities and equal per cent of the respondents had reported that boils and strain as health problems. All respondents sometimes perceived headache as health problem followed by boils and strain.

Reasons may be that the artisans generally uses sharp edged tool for cutting bamboo and while cutting artisans' had chance of having cuts in their hands and fingers. Due to cuts in the hands of the artisans leads to boils (Puss) sometimes. Respondents may experience sensation of piercing in palms by sharp bamboo while splitting bamboos. While performing cutting activity the respondents will be having skin irritation. Artisans used to work for longer period in the same posture which leads to stress, headache, strain and fatigue.

**Table 4:** Respondents opinion towards recommended suggestions to combat the occupational health problems

N=120

Sl. No.	Suggestions	Garret score	Garrett rank
1	Introduction of technology/tools or bamboo cutting machine for reduction of pain and health hazards	880	I
2	Comfortable grip handle for manual bamboo cutting tool	763	II
3	Supporting pads for knee while stripping/cutting bamboo	322	VI
4	Back support pillow while weaving the bamboo products	652	III
5	Floor cushion while working with bamboo	432	V
6	Handle for wooden plank	545	IV

According to the importance priority the ranking was given to the recommended suggestions for health problems. The first priority was given to the recommended suggestions-introduction of technology/tools or bamboo cutting machine for reduction of pain and health hazards followed by second rank with suggestion comfortable grip handle for manual bamboo cutting tool. Third rank is for back support pillow while weaving the bamboo products (table4)

Reasons maybe artisans are not comfortable with the tools they use, as the tools have sharp edges which cause cuts while using it, so ergonomically designed tools must be introduced for the artisans, and supporting pillow should be kept at the back when artisans performing weaving activity, as the artisans sit in the same posture for longer time so they need to have supporting pillow at back to prevent back ache or pain in the lower back. Protective kits should be provided to the

artisans to prevent the occupational hazards while doing cutting, stripping activity and in weaving by which artisans experiences cuts, piercing and burning sensation. Supporting pads should be given below the knee so that artisans can use while cutting bamboo because while cutting bamboo the artisan's right leg will be used more so supporting pads should be given for keeping below right knee. Floor cushion must be provided because artisans sit at floor whole day which cause buttock pain.

### Conclusion

Weight of the tool cause more discomfort while performing cutting and stripping activity. Cutting and stripping activities were more drudgery prone activities in bamboo products making enterprise. Cent per of the respondents always experienced cuts and piercing as health problems. The first priority was given to the recommended suggestions-introduction of technology/tools or bamboo cutting machine for reduction of pain and health hazards followed by second rank with suggestion comfortable grip handle for manual bamboo cutting tool.

### References

1. Alemu AK. Opportunities and challenges to highland bamboo-based traditional handicraft production, marketing and utilization in Awi zone, Northwestern Ethiopia. *Int. J His. Cul. Stud.* 2018;4(4):57-67.
2. Lakhimi J, Anjan B. Rural women weavers of Assam skills and entrepreneurial issues. *Asian J Manage. Res.* 2014;5(3):296-311.
3. Minto E. The present scenario of bamboo and cane handicrafts industry of Galo tribe in Arunachal Pradesh. *Int. J Innov. Res. Prac.* 2014;2(8):31-42.
4. Sourabh DK, Surojit SM. Indian handicraft-A way of livelihood (with a special reference to the basor caste). *Adv. Econ. Bus. Manage.* 2015;2(15):1447-1450.
5. Taiebur R, Dhanonjoykumar. Problems and prospects of cottage industry in Khulna division of Bangladesh: An empirical assessment. *J Bus. Manage.* 2018;20(6):45-52.