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# Socio-personal Characteristics and their Association with the Knowledge and Adoption level of Home Science Technologies

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## ABSTRACT

*Home science is the science that deals all the things that includes an individual, his or her home and family members and the resources at home available to them. Home science education encourages better living and it mostly revolves around the sphere of the family and its ecosystem. Home Science is dedicated to women's development since women shoulders the family responsibilities. So certain low cost technologies have developed which improve the work efficiency of women. Disseminating of technologies results in adoption of technologies at individual level. Adoption of technologies would be an effective means of bringing relief to the rural women from their back breaking tasks with this view the study was conducted in three districts of Northern Karnataka during the year 2015. From three districts, three villages and from each village 40 SHG members were selected. Thus total sample constitute 120. The technologies selected for the study were, Developmental mile stones and Stimulating play materials, Importance of Food and Food Pyramid, Consumer Education and Standard Signs and Stain Removal. The result reveals that independent variables namely education, occupation, family type, land holding, mass media utilization, extension contact and cosmopoliteness, income have influenced significantly to the probability of knowledge and adoption level of selected home science technologies. Whereas education, mass media utilisation and cosmopoliteness influenced negatively.*

*Key words: Home Science, Technologies, Adoption, Dissemination*

## INTRODUCTION

Home Science is also a multidisciplinary field which is the combination of Science and Art altogether. In Home Science, the science is studied in an artistic way and at the same time art is developed scientifically in the form of skills. Many times Home Science Education being the basis for education of family ecosystem is referred to as the "Education for Better Living". It deals with the natural as well as man-made environments in a family and inter as well as intra family relationships. By its very content and nature Home Science services at the grass root level to satisfy individual needs and also the community through appropriate technology generation and its transfer for use.

Scientists have contributed in the field of Home Science like, Extension and Communication Management, Family Resource Management, Food Science and Nutrition, Human development and Textile and Apparel designing. This education is extremely important for 70-80 per cent of the population living in rural areas, specially when 50 per cent of it is women. Since women are the backbone of family, Home Science is dedicated to overall development of women folk. It has developed certain low cost technologies suitable for alleviating drudgery in women's life. Technologies related to drudgery reduction, simplification of working pattern, consumer education, educating about health and hygiene, introducing improved equipments, etc. are developed by the scientists across the country. Home Science colleges are located in agricultural universities with the purpose of benefiting rural women folk, besides giving education to rural girls in the college. So Home Science College has the major responsibility of disseminating or popularizing Home Science technologies to the concerned or needy rural women folk.

## MATERIAL AND METHODS

The study was conducted in Belgum, Dharwadand Haveri district in the year 2015. One village from these three districts were selected namely Gundenatti (Belgum district), Baada (Dharwad district) and Kagenele (Haveri district), where the intervention carried out. Total one hundred and twenty rural women (SHGs members) were selected for the present study. Out of the total sample forty sample were selected from each district. The data was collected from the SHGs members with the help of pre-structured schedule by personal interview technique. The data was tabulated and appropriate statistical methods were adopted.

## RESULTS AND DISCUSSION

**Association between socio-personal characteristics and knowledge level about developmental mile stones and stimulating play materials**

The results of the Logit binary regression, which analyzed the effects of the socio-personnel characteristics of the women on the knowledge and adoption level of the home science technologies.

The results of the logit model are presented in Table 1. The dependent variable in the model was dichotomous (adopter=1 and non-adopters=0). The results of the analysis showed that only occupation and mass media utilization significantly influenced the probability of acquiring knowledge on developmental milestones and stimulating play materials. Occupation of the respondents was significant at five per cent level. Mass media utilization was significant at ten per cent level, but it negatively influenced the acquiring knowledge on technology. The coefficient of occupation (0.495) suggests that if the occupation increased by one unit the probability of acquiring knowledge on developmental mile stones & stimulating play materials increased by 0.49 per cent. In case of mass media utilization, if the mass media utilization increased by one unit the probability of acquiring knowledge on developmental mile stones & stimulating play materials went down by 0.70 per cent. The other variables included in the study did not influence the knowledge level of developmental mile stones & stimulating play materials.

**Association between socio-personal characteristics and knowledge level about importance of food and food pyramid**

Table 2 shows that association between independent variables and knowledge level of importance of food and food pyramid. The independent variables age, education, occupation, family type, income, land holding, social participation, mass media utilization and cosmopoliteness did not have any association with knowledge level of respondents about importance of food and food pyramid. Only extension contact significantly influence the probability of acquiring knowledge level at ten per cent. Which means if one unit increase in the extension contact the probability of acquiring knowledge on importance of food

and food pyramid was increased by 0.78 per cent.

## Association between socio-personal characteristics and knowledge level about consumer education and standard signs

Table 3 shows association between socio-personal characteristics and knowledge level about consumer education and standard signs. The results of analysis showed that income and cosmopoliteness influence significantly at 10 per cent level while cosmopoliteness was negatively influenced. The co-efficient off income (0.533) suggests that, if one unit increases in the income of the respondents the probability of acquiring knowledge level on consumer education and standard signs increased by 0.53 per cent. The co efficient of cosmopoleteness (-0.598) indicate that if one unit decreases in the cosmopoliteness the probability of acquiring knowledge on consumer education and standard signs was decreased by 0.59 per cent. Other independent variables did not influence the knowledge level of consumer education and standard signs.

## Association between socio-personal characteristics and knowledge level about stain removal

The results of Logit model in table 4 showed association between socio personal characteristics and knowledge level of stain removal. The independent variables age, family type, income, education, land holding, social participation, extension contact and cosmopoliteness did not influenced knowledge level of stain removal. Out of ten only occupation and mass media utilization significantly and negatively influenced at ten per cent level. It means if one unit increases in the occupation and mass media utilization, the probability of acquiring knowledge on stain removal decreased by 0.10 per cent and 0.28 per cent respectively.

## Association between adoption of developmental mile stones and stimulating play materials technology with socio-personal characteristics of respondents

Table 5 indicated that independent variables namely education, occupation, land holding and extension contact significantly influenced, however education and occupation

significantly influenced at five per cent level but education was negatively influenced while land holding and extension contact significant influenced at ten per cent level. Which means if one unit increases in education the probability of adoption of developmental miles stones and stimulating play materials was decreased by 0.54 per cent. In case of occupation, land holding and extension contact, if one unit increase in these variables the probability of adoption of developmental mile stones & stimulating play materials was increased by 0.64 per cent, 0.96 per cent and 0.10 per cent respectively.

## Association between socio-personal characteristics of respondents and adoption level of importance of food and food pyramid

Data in Table 6 shows that age, occupation, family type, income, social participation education, mass media utilization and cosmopoleteness did not influence the adoption level of importance of food and food pyramid. Only extension contact was significantly influenced at five per cent level. Which means if one unit increases in the extension contact the probability of adoption of importance of food and food pyramid increased by 0.22 per cent.

## Association between socio-personal characteristics of respondents and adoption level of consumer education and standard sign

Table7 reveals that for the adoption of consumer education and standard signs, the independent variables namely, occupation, income, education, land holding, social participation, extension contact, mass media utilization and cosmopoliteness did not influenced adoption of consumer education and standard signs. Only Family type was significantly influence at five per cent level, means if one unit increases in the family type the probability of adoption of consumer education and standard sins increased by 1.24 per cent.

## Association between socio-personal characteristics of respondents and adoption level of stain removal

Table 8 reveals that Association between socio-personal characteristics of respondents and adoption level of Stain removal. Only one independent variable namely land holding was significantly influenced the probability of adoption of stain removal technology, which means if one unit increases in the land holding the probability of adoption of stain removal technology was increased by 0.72 per cent. The other independent variables included in the study did not influence adoption of stain removal. The result reveals that independent variables namely education, occupation, family type, land holding, mass media utilisation, extension contact and cosmopoliteness, income have influenced significantly (Table 1, 2, 3, 4, 6, 7and 8) to the probability of knowledge and adoption level of selected home science technologies. Whereas education, mass media utilisation and cosmopoliteness influenced negatively (Table 1, 3, 5, 7,). Since agricultural labours have more extension participation as compared to house wives. Among those most of women were SHG members and also participate in the trainings conducted by SHGs. Which means the occupation which provide greater exposure also influence on knowledge level of rural women. When a women exposed to different categories of extension personnel it might have motivated them in various ways to have wider exposure and contact with sources of technical knowledge. Similarly when rural women had high income, the knowledge level was increased. This may be due to better economic condition which might have helped the respondents by participating in SHGS group, trainings and extension activities. The results indicates that adoption increases with the increase in the land holding. As a land holding increase naturally family income will increases. Because of better economic condition rural women have more extension contact and also participate in SHGs meetings and social organisation. These may be probable reasons for land holding influenced the adoption level. Family type found to be significantly influenced the adoption level of selected home science technologies. Most of the women who participated in intervention belonged to nuclear family. The reason could be that in nuclear families, every member has the responsibility to support their family and women themselves involved in purchasing and other marketing activities. Similar findings were reported by Rupleka and Nalini[4], Ranganatha *et.al.*[3] and Pillegouda and Narayanagouda[2]. Mass media influenced negatively, most of the rural women using television and radio for entertainment purpose only. Television these days is a household item owned by almost all respondents. It is now a common sight to see women completing their household work and sit before the T.V. to watch serials. They are probably unaware of the educated programmes aired on the T.V. The results revealed cosmopoliteness have influenced negatively with knowledge and adoption level of home science technologies. Similar findings were reported by Malabasari (2015). It indicated that with increase of cosmopoliteness, there was decrease in the knowledge and adoption level. This may be due to the fact that only the older women were having contact with outside members than the young ones.

**Table 1: Association between independent variables and knowledge level of developmental mile stones & stimulating play materials**        **n=120**

| Sl.No. | Variables | Coefficients | Standard Error |
|--------|-----------|--------------|----------------|
| 1 | Age | -.120 | .299 |
| 2 | Education | -.245 | .188 |
| 3 | Occupation | .495** | .213 |
| 4 | Family Type | .256 | .520 |
| 5 | Land holding | .475 | .435 |
| 6 | Income | -.287 | .265 |
| 7 | Social Participation | .215 | .450 |
| 8 | Extension contact | -.118 | .629 |
| 9 | Mass media utilization | -.702* | .906 |
| 10 | Cosmopoliteness | -.349 | .292 |

**\*\* Significant at 5 per cent level   \* Significant at 10 per cent level**

**Table 2: Association between Independent variables and knowledge level of importance of food and food pyramid**

| Sl.No. | Variables | Coefficients | Standard Error |
|--------|-----------|--------------|----------------|
| 1 | Age | .158 | .303 |
| 2 | Education | -.067 | .189 |
| 3 | Occupation | .207 | .216 |
| 4 | Family Type | .283 | .538 |
| 5 | Land holding | .299 | .440 |
| 6 | Income | -.113 | .267 |
| 7 | Social Participation | .213 | .456 |
| 8 | Extension contact | .787** | .619 |
| 9 | Mass media utilization | -2.527 | 1.152 |
| 10 | Cosmopoliteness | -.167 | .299 |

** Significant at 5 per cent level

**Table 3: Association between Independent variables and knowledge level of consumer education and standard signs**

| Sl.No. | Variables | Coefficients | Standard Error |
|--------|-----------|--------------|----------------|
| 1 | Age | .218 | .312 |
| 2 | Education | -.135 | .196 |
| 3 | Occupation | -.104 | .206 |
| 4 | Family Type | .601 | .514 |
| 5 | Land holding | -.413 | .456 |
| 6 | Income | .533* | .276 |
| 7 | Social Participation | -.149 | .467 |
| 8 | Extension contact | -.849 | .659 |
| 9 | Mass media utilization | -.028 | .954 |
| 10 | Cosmopoliteness | -.598* | .317 |

* Significant at 10 per cent level

**Table 4: Association between Independent variables and Knowledge level of stain removal**

n=120

| Sl.No. | Variables | Coefficients | Standard Error. |
|--------|-----------|--------------|-----------------|
| 1 | Age | .218 | .312 |
| 2 | Education | -.135 | .196 |
| 3 | Occupation | -.104* | .206 |
| 4 | Family Type | .601 | .514 |
| 5 | Land holding | -.413 | .456 |
| 6 | Income | .533 | .276 |
| 7 | Social Participation | -.149 | .467 |
| 8 | Extension contact | -.849 | .659 |
| 9 | Mass media utilization | -.028* | .954 |
| 10 | Cosmopoliteness | -.598 | .317 |

** Significant at 10 per cent level

**Table 5: Association between independent variables and adoption level of developmental mile stones and stimulating play materials**

n=120

| Sl.No | Variables | Coefficients | Standard Error. |
|-------|-----------|--------------|-----------------|
| 1 | Age | .138 | .333 |
| 2 | Education | -.544** | .225 |
| 3 | Occupation | .641** | .270 |
| 4 | Family Type | 1.064 | .742 |
| 5 | Land holding | .964* | .499 |
| 6 | Income | -.086 | .298 |
| 7 | Social Participation | .500 | .494 |
| 8 | Extension contact | .104* | .684 |
| 9 | Mass media utilization | -1.704 | .941 |
| 10 | Cosmopoliteness | -.525 | .334 |

** Significant at 5 per cent level  * Significant at 10 per cent level

**Table 6: Association between independent variables and adoption level importance of food and food pyramid**

| Sl.No | Variables | Coefficients | Standard Error. |
|---|---|---|---|
| 1 | Age | .035 | .301 |
| 2 | Education | -.076 | .187 |
| 3 | Occupation | .029 | .202 |
| 4 | Family Type | .271 | .520 |
| 5 | Land holding | .141 | .437 |
| 6 | Income | .181 | .268 |
| 7 | Social Participation | .432 | .445 |
| 8 | Extension contact | .225** | .616 |
| 9 | Mass media utilization | -2.400 | 1.148 |
| 10 | Cosmopoliteness | -.379 | .295 |

** Significant at 5 per cent level

**Table 7: Association between independent variables and adoption level of consumer education and standard signs**

| Sl.No | Variables | Coefficients | Standard Error. |
|---|---|---|---|
| 1 | Age | .132 | .301 |
| 2 | Education | -.273 | .190 |
| 3 | Occupation | .044 | .207 |
| 4 | Family Type | 1.240** | .525 |
| 5 | Land holding | -.283 | .442 |
| 6 | Income | .247 | .271 |
| 7 | Social Participation | -.175 | .447 |
| 8 | Extension contact | -.556 | .628 |
| 9 | Mass media utilization | -1.323 | 1.164 |
| 10 | Cosmopoliteness | -.404 | .303 |

** Significant at 5 per cent level

**Table 8: Association between independent variables and adoption level of stain removal**

n=120

| Sl.No | Variables | Coefficients | Standard Error. |
|---|---|---|---|
| 1 | Age | .414 | .301 |
| 2 | Education | .074 | .185 |
| 3 | Occupation | -.102 | .197 |
| 4 | Family Type | -.433 | .498 |
| 5 | Land holding | .728* | .436 |
| 6 | Income | .118 | .258 |
| 7 | Social Participation | -.382 | .445 |
| 8 | Extension contact | .784 | .654 |
| 9 | Mass media utilization | .437 | .930 |
| 10 | Cosmopoliteness | .299 | .295 |

* Significant at 10 per cent level

## CONCLUSION

- Education, occupation, land holding and extension contact significantly influenced the probability of adoption level, however education and occupation significantly influenced at five per cent level but education was negatively influenced while land holding and extension contact significant influenced at ten per cent level.
- Extension contact was significantly influenced the probability of adoption of Importance of food and food pyramid at five per cent level.
- Extension contact and mass media utilization were significant and positive relationship with respect to adoption level of Home Science technologies
- Independent variable namely land holding was significantly influenced the probability of adoption of stain removal technology.

- The efforts put by intervention programme had a good impact on knowledge gain and adoption of Home Science technologies of rural women. Intervention programme helped in capacity building of rural women by creating awareness, increasing the knowledge about innovative technologies and developing skills and there by empowering the women. The adoption of the disseminated Home Science technologies was found to be good, because rural women understood the concept and scientific reasons behind the technologies used by them in their day to day life.

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