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# A study on knowledge about gold Jewellery with special reference to Coimbatore city

**[*1] Dr. C Gomathy, [2] Dr. N Yesodha Devi**
[1] Assistant Professor in Commerce, PSGR Krishnammal College for Women, Coimbatore, Tamil Nadu, India
[2] Secretary, PSGR Krishnammal College for Women, Coimbatore, Tamil Nadu, India

**Abstract**
The industry of gems and jewellery has boomed in the past few years due to the increased demand for gold jewellery. Gold jewellery consumers differ from each other by age, income, education, lifestyle, character etc. which influences their purchasing decisions. In order to understand the knowledge about gold jewellery among the consumers, a sample of 400 gold jewellery consumers from Coimbatore city have been selected by applying random sampling technique. The study reveals that consumers have knowledge about gold jewellery and there is no significant difference between knowledge about gold jewellery and the demographic factors viz., age, education, monthly family income and monthly savings.

**Keywords:** gold jewellery, lifestyle, Coimbatore

## Introduction
The industry of gems and jewellery has boomed in the past few years due to the increased demand for gold jewellery. India has consumed 977 tonnes of gold in the year 2013 for jewellery and other uses (Gems and Jewellery Export Promotion Council, 2014). The export and import of jewellery have also improved. Indian gems and jewellery market possess tremendous potential growth in future. According to World Gold Council estimates, southern states of India, viz., Tamil Nadu, Kerala, Andhra Pradesh and Karnataka have a large number of gold jewellery consumers. The consumers differ from each other by age, income, education, lifestyle, character etc. which influences their purchasing decisions. Hence, this paper deals with the consumers' knowledge about gold jewellery.

## Objectives of the study
1. To find out the demographic profile of the consumers
2. To find out the consumers' knowledge about gold jewellery

## Methodology
To undertake this study a sample of 400 gold jewellery consumers from Coimbatore city have been selected by applying random sampling technique. A structured questionnaire has been administered to the consumers and primary data have been collected. Simple percentage analysis and Descriptive statistics have been used to analyze the primary data. Secondary data have been collected from journals, magazines, websites and books.

## Results and Discussions
### General Profile of Gold Jewellery Consumers
The general profile of gold jewellery consumers has been presented in the following Table.

**Table 1:** Demographic Profile of the Consumers.

| Demographic Factors | | No. of Consumers | Per cent |
|---|---|---|---|
| Gender | Male | 81 | 20.2 |
| | Female | 319 | 79.8 |
| Age (years) | Less than 25 | 46 | 11.4 |
| | 26-35 | 76 | 19.0 |
| | 36-45 | 159 | 39.8 |
| | 46-55 | 100 | 25.0 |
| | Above 55 | 19 | 4.8 |
| Marital Status | Married | 347 | 86.8 |
| | Unmarried | 53 | 13.2 |
| Educational Qualification | No formal education | 20 | 5.0 |
| | School level | 159 | 39.8 |
| | College level | 126 | 31.4 |
| | Professional | 95 | 23.8 |

| | | | |
|---|---|---|---|
| Occupational Status | Agriculture | 26 | 6.5 |
| | Professional | 60 | 15.0 |
| | Salaried | 109 | 27.2 |
| | Business | 67 | 16.8 |
| | Unemployed | 138 | 34.5 |
| Type of Family | Joint family | 91 | 22.8 |
| | Nuclear family | 309 | 77.2 |
| No. of Members in the Family | 2 | 8 | 2.0 |
| | 3 | 64 | 16.0 |
| | 4 | 198 | 49.5 |
| | 5 | 74 | 18.5 |
| | 6 and above | 56 | 14.0 |
| Monthly Family Income (Rs.) | Less than 25000 | 171 | 42.8 |
| | 25001 – 50000 | 129 | 32.2 |
| | 50001 -75000 | 59 | 14.8 |
| | 75001 and above | 41 | 10.2 |
| Monthly Savings (Rs.) | Less than 5000 | 232 | 58.0 |
| | 5001 – 10000 | 106 | 26.5 |
| | Above 10000 | 62 | 15.5 |
| Total | | 400 | 100.0 |

The above table indicates the general profile of the 400 consumers who have purchased gold jewellery. About 79.8 % of the respondents are females, 39.8 % of the respondents are between 36-45 years of age, 86.8 % of them are married, 39.8 of them are educated upto school level, 34.5% of them are unemployed and have 4 members in their family. 42.8% of the consumers earn less than Rs. 25,000 and save less than Rs.5,000 for a month.

**Knowledge about Gold Jewellery**

**Table 2:** Knowledge about Gold Jewellery.

| Knowledge and Awareness | Factors | No. of Consumers | Per cent |
|---|---|---|---|
| Source of Information | Brochure | 21 | 5.3 |
| | Dealer sales staff | 30 | 7.5 |
| | Advertising | 254 | 63.5 |
| | Word of mouth | 80 | 20.0 |
| | Jewellery shows | 67 | 16.8 |
| Media of Advertisement (Multiple Response) | Television | 217 | 85.4 |
| | Radio | 5 | 2.0 |
| | Newspaper | 48 | 18.9 |
| | Magazines | 11 | 4.3 |
| | Internet | 29 | 11.4 |
| | Pamphlets | 9 | 3.5 |
| | Banners | 13 | 5.1 |
| Awareness of BIS 916 | Yes | 361 | 90.2 |
| | No | 39 | 9.8 |
| Differentiate between Ordinary Jewellery with Hallmark Jewellery | Yes | 283 | 78.4 |
| | No | 78 | 21.6 |
| Awareness of KDM Jewellery | Yes | 308 | 77.0 |
| | No | 92 | 23.0 |
| Awareness of Karat Meter | Yes | 270 | 67.5 |
| | No | 130 | 32.5 |
| Check the Purity of Gold Jewellery | Yes | 228 | 84.4 |
| | No | 42 | 15.6 |
| Check the Weight of Gold | Yes | 361 | 90.3 |
| | No | 39 | 9.8 |
| Update Gold Price | Always | 262 | 65.5 |
| | Sometimes | 77 | 19.3 |
| | Rarely | 20 | 5.0 |
| | Never | 41 | 10.3 |

***Source***: Primary data

It is observed from the above table 2 that, 63.5 per cent of the consumers have knowledge about gold jewellery like BIS hall mark, karatmeter etc., by seeing advertisement. Among the consumers who have gathered information about gold jewellery through advertisement, 83.5 per cent of the consumers have gathered information through television, 90.2

per cent of the consumers are aware of BIS 916 hallmark jewellery, 78.4 per cent of the consumers are able to identify the difference between ordinary jewellery and hallmark jewellery, 77 per cent of the consumers are aware of KDM Jewellery, 67.5 per cent of the consumers are aware of karat meter, 84.4 per cent of the consumers check the purity of gold when they purchase gold jewellery, 90.2 per cent of the consumers check the weight of gold when they purchase gold jewellery, 65.5 per cent of the consumers always update gold price while purchasing.

**Knowledge about Gold Jewellery - Descriptive Statistics**

Mean ratings have been assigned to find out the consumers knowledge about gold jewellery. The ratings have been assigned as 5 for 'Strongly Agree', 4 for 'Agree', 3 for 'Neutral', and 2 for 'Disagree' and 1 for 'Strongly Disagree'. High score indicates consumers more knowledge about gold jewellery.

**Table 3:** Descriptive Statistics – Knowledge about Gold Jewellery.

| Statements | Mean | S.D |
|---|---|---|
| I have full awareness about the jewellery I purchase | 4.1250 | .7489 |
| All the items are genuine and reasonable in the jewellery where I purchase | 3.6675 | .9692 |
| Knowledge about purity is important to me while purchasing jewellery | 3.8875 | .9911 |
| The wastage and making charges by the jewellers are unreasonable | 3.6425 | .9809 |
| Most of the claims by the jewellers about purity and standard are false. | 3.3325 | .9588 |
| The buyers have no way of knowing the purity of the jewel purchased | 3.3225 | 1.0080 |
| Knowing that I am not convinced by the quality and purity I prefer to buy jewels | 3.2925 | 1.0269 |

***Source***: Computed

The above table 3 shows the consumers knowledge about gold jewellery. The average rating has been highest (4.1250) for the consumers' awareness about the jewellery they purchase followed by knowledge about purity (3.8875) which is important for the consumers while purchasing gold jewellery. Consumers have highly agreed that, they have awareness about the gold jewellery they purchase as television provides knowledge about gold jewellery.

**Demographic Factors and Knowledge about Gold Jewellery**

**H01**: Knowledge about gold jewellery do not differ significantly among demographic factors

ANOVA and 't' test have been employed to find the significance difference if any in respect of Demographic factors with Knowledge about Gold Jewellery

**Table 4:** Demographic Factors and Knowledge about Gold Jewellery.

| Demographic Factor | | Mean | SD | No. of Consumers | t value | F value | Sig |
|---|---|---|---|---|---|---|---|
| Gender | Male | 25.06 | 2.92 | 81 | 0.616 | - | NS |
| | Female | 25.32 | 3.52 | 319 | | | |
| Marital Status | Married | 25.24 | 3.42 | 347 | 0.463 | - | NS |
| | Unmarried | 25.47 | 3.31 | 53 | | | |
| Age (years) | Less than 25 | 26.02 | 3.40 | 46 | - | 2.183 | NS |
| | 26-35 | 25.89 | 4.06 | 76 | | | |
| | 36-45 | 24.95 | 3.24 | 159 | | | |
| | 46-55 | 24.83 | 2.93 | 100 | | | |
| | Above 55 | 25.95 | 3.79 | 19 | | | |
| Educational Qualification | No formal education | 25.00 | 3.85 | 20 | - | 0.715 | NS |
| | School level | 25.09 | 3.22 | 159 | | | |
| | College level | 25.63 | 3.52 | 126 | | | |
| | Professional | 25.15 | 3.48 | 95 | | | |
| Occupational Status | Agriculture | 25.31 | 3.17 | 26 | - | 0.194 | NS |
| | Professional | 25.05 | 3.39 | 60 | | | |
| | Salaried | 25.49 | 3.73 | 109 | | | |
| | Business | 25.15 | 3.12 | 67 | | | |
| | Unemployed | 25.25 | 3.36 | 138 | | | |
| Monthly Family Income (Rs.) | Less than 25,000 | 24.96 | 3.17 | 171 | - | 1.567 | NS |
| | 25,001-50,000 | 25.70 | 3.42 | 129 | | | |
| | 50,001-75,000 | 25.56 | 3.48 | 59 | | | |
| | 75001 and above | 24.78 | 3.53 | 41 | | | |
| Monthly Savings (Rs.) | Less than 5,000 | 25.32 | 3.41 | 232 | - | 2.569 | NS |
| | 5,001-10,000 | 25.65 | 3.60 | 106 | | | |
| | Above 10,000 | 24.44 | 2.92 | 62 | | | |

***Source***: Computed

't' test has been applied and it is found that, knowledge about gold jewellery do not differ significantly between married and unmarried consumers because television advertisement gives the information about gold jewellery which reaches both married and unmarried consumers.

ANOVA has been employed to find the significant difference, if any, in respect of demographic factors viz., age, education, occupation, monthly family income and monthly savings with knowledge about gold jewellery.

The mean score on knowledge about gold jewellery is found to be high (26.02) in the age group of less than 25 years, consumers with college level education (25.63), consumers who are salaried (25.49). The score has been high (mean 25.70) among the consumers with monthly family income of Rs. 25,001-Rs. 50,000 and the consumers with the monthly savings of Rs. 5,001- Rs. 10,000 (25.65).

ANOVA results have shown that there is no significant difference between knowledge about gold jewellery and the above stated demographic factors as consumers of all the category have knowledge about gold jewellery, since they have awareness and view this as an investment as men also take part in decision making.

**Factor Analysis for Knowledge about Gold Jewellery**

Factor analysis is used to summarize the information contained in a number of original variables in to a smaller set of new composite dimensions (Factors) with minimum loss of information. The Factor Analysis technique is applied in order to find out the underlying dimensions in the set of statements relating to the knowledge of consumers regarding their gold jewellery purchase.

Factor analysis usually proceeds in four steps:

1. First, the correlation matrix for all variables is computed. Variables that do not appear to be related to other variables can be identified from the matrix. The appropriateness of the factor model can also be calculated.
2. Factor extraction, the number of factors necessary to represent the data and the method of calculating them must be determined. At this step, how well the chosen model fits the data is also ascertained.
3. Rotation focuses on transforming the factors to make them more interpretable.
4. Scores for each factor can be computed for each case. These scores are then used for further analysis.

The set of 7 statements (items) which measure the awareness of consumers about gold jewellery has been used to find the underlying factors in it.

**Step 1**

Correlation matrix for the variables, item 1 to item 7, has been analyzed initially for possible inclusion in Factor Analysis. Since one of the goals of the factor analysis is to obtain 'factors' that help explain these correlations, the variables must be related to each other for the factor model to be appropriate. A closer examination of the correlation matrix may reveal what are the variables which do not have any relationship. Usually a correlation value of 0.3 (absolute value) is taken as sufficient to explain the relation between variables. All the variables from 1 to 7 have been retained for further analysis. Further, two tests are applied to the resultant correlation matrix to test whether the relationship among the variables is significant or not.

**Table 5:** KMO and Bartlett's Test for Knowledge about Gold Jewellery.

| **Kaiser-Meyer-Olin Measure of Sampling Adequacy** | **0.639** | |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 279.177 |
| | Df | 21 |
| | Sig. | ** |

** - Significant at 1% level (P<0.01)

One is Bartlett's test of sphericity. This is used to test whether the correlation matrix is an identity matrix. i.e., all the diagonal terms in the matrix are 1 and the off-diagonal terms in the matrix are 0. In short, it is used to test whether the correlations between all the variables is 0. The test value (279.177) and the significance level (P<.01) are given above. With the value of test statistic and the associated significance level is so small, it appears that the correlation matrix is not an identity matrix, i.e., the variables included in the factor model are correlated with each other.

Another test is Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. This test is based on the correlations and partial correlations of the variables. If the test value, or KMO measure is closer to 1, then it is good to use factor analysis. If KMO is closer to 0, then the factor analysis is not a good idea for the variables and data. The value of test statistic is 0.639 which means that the factor analysis for the selected variables is found to be appropriate to the data.

**Step 2**

The second step is to determine the method of factor extraction, number of initial factors and the estimates of factors. Here Principal Components Analysis (PCA) has been used to extract the factors. PCA is a method used to transform a set of correlated variables into a set of uncorrelated variables (factors) so that, the factors are unrelated and the variables selected for each factor are related. Next PCA is used to extract the number of factors required to represent the data. The results from principal components analysis are given below.

In the Correlation matrix, the variances of all variables are equal to 1.0. Therefore, the total variance in that matrix is equal to the number of variables. For this study, 7 variables (items) each with a variance of 1, then the total variability that can potentially be extracted is equal to 7 times 1. The variance accounted for by successive factors has been summarized as follows:

**Table 6:** Total Variance Explained for Knowledge about Gold Jewellery.

| Initial Eigen values | | | Extraction Sums of Squared Loadings (Rotated) | | | |
|---|---|---|---|---|---|---|
| **Component** | **Total** | **% of Variance** | **Cumulative %** | **Total** | **% of Variance** | **Cumulative %** |
| 1 | 1.948 | 27.828 | 27.828 | 1.935 | 27.637 | 27.637 |
| 2 | 1.461 | 20.878 | 48.706 | 1.475 | 21.069 | 48.706 |
| 3 | .896 | 12.796 | 61.502 | | | |
| 4 | .844 | 12.059 | 73.561 | | | |
| 5 | .718 | 10.263 | 83.824 | | | |
| 6 | .599 | 8.563 | 92.387 | | | |
| 7 | .533 | 7.613 | 100.000 | | | |

***Source***: Computed

From the table given above, in the second column (Initial Eigen values) the column titled 'Variance' new factors were successively extracted. In the third column, these values are expressed as a percent of the total variance. As it can be seen, factor 1 account for about 27.37 percent of the total variance, factor 2 about 21.069 percent, and so on. As expected, the sum of the Eigen values is equal to the number of variables. The third column contains the cumulative variance extracted. The variances extracted by the factors are called the eigen values.
Factors with eigen values greater than 1 are retained. Using this criterion, only 2 factors (principal components) are retained. The total variance explained by the three factor model in the original set of variables is given in the last column (48.7%).

The table shown below gives the Component Matrix or Factor Matrix where PCA extracted 2 factors. These are all coefficients used to express a standardized variable in terms of the factors. These coefficients are called factor loadings, since they indicate how much weight is assigned to each factor. Factors with large coefficients (in absolute value) for a variable are closely related to that variable. For example, Factor 1 is the factor with largest loading (0.754) for the item, namely **"**The buyers have no way of knowing the purity of the jewel purchased"**.** These are all the correlations between the factors and the variables, Hence, the correlation between this item and Factor 1 is 0.754. Thus the factor matrix is obtained. These are the initially obtained estimates of factors.

**Table 7:** Component Matrix for Knowledge about Gold Jewellery.

| Statements | Component | |
|---|---|---|
| | **1** | **2** |
| The buyers have no way of knowing the purity of the jewel Purchased | 0.746 | -0.112 |
| Most of the claims by the jewellers about purity and standard are false. | 0.746 | 0.052 |
| Knowing that I am not convinced by the quality and purity I prefer to buy jewels | 0.629 | -0.157 |
| The wastage and making charges by the jewellers are unreasonable | 0.612 | -0.173 |
| Knowledge about purity is important to me while purchasing Jewellery | 0.075 | 0.737 |
| All the items are genuine and reasonable in the jewellery where I Purchase | 0.236 | 0.667 |
| I have full awareness about the jewellery I purchase | 0.059 | 0.636 |

Extraction Method: Principal Component Analysis. 2 components extracted.

**Step 3**

The factor matrix (Table titled **Component Matrix**) obtained in the extraction phase indicates the relationship between the factors and the individual variables, it is usually, difficult to identify meaningful factors based on this matrix. Often variables and factors do not appear to be correlated in any interpretable pattern. Most factors are correlated with many variables. Since the idea of factor analysis is to identify the factors that meaningfully summarize the sets of closely related variables, the Rotation phase of the factor analysis attempts to transfer initial matrix into one that is easier to interpret. It is called the rotation of the factor matrix. There are several methods available for rotated factor matrix. The one used in this analysis is Varimax Rotation, the most commonly used method, which attempts to minimize the number of variables that have high loadings on a factor. This should enhance the interpretability of the factors. The Rotated Factor Matrix (Table titled Rotated Component Matrix) using Varimax rotation is given in Table where each factor identifies itself with a few set of variables. The variables which identify with each of the factors were sorted in the decreasing order and are highlighted against each column and row.

**Table 8:** Rotated Component Matrix for Knowledge about Gold Jewellery.

| Statements | Component | |
|---|---|---|
| | 1 | 2 |
| The buyers have no way of knowing the purity of the jewel purchased | 0.754 | 0.013 |
| Most of the claims by the jewellers about purity and standard are false. | 0.727 | 0.174 |
| Knowing that I am not convinced by the quality and purity I prefer to buy jewels | 0.647 | 0.050 |
| The wastage and making charges by the jewellers are unreasonable | 0.632 | 0.070 |
| Knowledge about purity is important to me while purchasing jewellery | 0.048 | 0.739 |
| All the items are genuine and reasonable in the jewellery where I purchase | 0.123 | 0.697 |
| I have full awareness about the jewellery I purchase | 0.047 | 0.637 |

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 3 iterations.

**Step 4**

Normally, from the factor results arrived above, factor score coefficients can be calculated for all variables (since each factor is a linear combination of all variables) which are then used to calculate the factor scores for each individual. Since PCA has been used in extraction of initial factors, all methods will result in estimating same factor score co-efficient. However, for the study, original values of the variables have been retained for further analysis and factor scores have thus obtained by adding the values (ratings given by the consumers) of the respective variables for that particular factor, for each respondent.

**Table 9:** Factors identified against Statements relating to the Consumers Knowledge on Purchase of Jewellery.

| Factors | Statements | Factors Identified |
|---|---|---|
| Factor 1 | The buyers have no way of knowing the purity of the jewel purchased | Jewellery Shop Knowledge |
| | Most of the claims by the jewellers about purity and standard are false. | |
| | Knowing that I am not convinced by the quality and purity I prefer to buy jewels | |
| | The wastage and making charges by the jewellers are unreasonable | |
| Factor 2 | Knowledge about purity is important to me while purchasing jewellery | Jewellery Knowledge |
| | All the items are genuine and reasonable in the jewellery where I purchase | |
| | I have full awareness about the jewellery I purchase | |

It is found from the above table that, 7 variables have been reduced to 2 factor models and each factor is identified with the corresponding variables viz., jewellery shop knowledge and jewellery knowledge.

## Conclusion

The study reveals that 63.5 per cent of the consumers have knowledge about gold jewellery like BIS hall mark, karatmeter etc., ANOVA results have shown that there is no significant difference between knowledge about gold jewellery and the demographic factors viz., age, education, monthly family income and monthly savings. Factor analysis reveals that 7 variables have been reduced to 2 factor models and each factor is identified with the corresponding variables viz., jewellery shop knowledge and jewellery knowledge.

## References


1. Madhupriya. *A Study on Consumer Awareness and Satisfaction on Gold Jewels with Special Reference to Coimbatore District*, an unpublished Thesis, Bharathiar University, 2009.
2. Anbumani, Sundar. *A Study of Consumer Preference towards Gold Jewellery in Tamil Nadu*", Research Explorer. 2014; 3(8):18-21.
3. Anna Ong. *A Study on the Gold and Jewellery Industry*, an Unpublished Thesis, Penang, 2012.
4. Asha, Rashid Khan, Sreeranganathan. *Impact of Marketing Strategies on the Gold Ornament Market in India*, International Journal of Business and Management Tomorrow. 2012; 2(5):1-9.
5. Burcak Ertimur. *Gold and Gold Jewellery: Exploration of Consumer Practices*, an Unpublished Thesis, Ankara, 2003.
6. Christianne Kvalsumd Wahl. *Consumers' Fairs for Jewellery*, an unpublished Thesis, Bergan, 2011.
7. Deepa, Natarajan. *A Study on Customers' Attitude and Behaviour on Jewellery Purchase in Salem District"*, International Journal of Research in Commerce and Management. 2013; 4(2):137-142.
8. Devi. *A Study on Customer Satisfaction of Jos Alukkas Jewellery in Erode Taluk*, an unpublished Thesis, Bharathiar University, 2009.
9. DineshKumar. *A Study on Marketing Strategy about the Purchase of Gold Jewellery*, an unpublished Thesis, Bharathiar University, 2002.
10. FICCI Ladies Organization *Survey on Gems & Jewellery (G& J) Sector including Fashion Jewellery Challenges/Issues/Concerns for Women Entrepreneurs*, 2012.
11. Flora Noyal. *A Study on Consumer Attitude towards Purchase of Gold and its Quality* an unpublished Thesis, Bharathiar University, 2008.
12. Ganapathy, Manikandan, Lakshmi Priya. *A Study on Customer Preferences and Satisfaction towards Jewellery Shops with Special Reference to Coimbatore City* an unpublished Thesis, Bharathiar University, 2010.
13. Gem, Jewellery Export Promotion Council Report, 2006. http://www.gjepc.org/admin/PressRelease/14756_kpmg.p

df, retrieved on 11th December 2010.
14. Gems, jewellery. Promising Sector in Indian Economy, 2014. http://www.knnindia.co.in/ features/ gems-and-jewellery:-promising-sector-in-indian-economy-/26-5065.go, retrieved on 3rd March 2014.