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Analises of Domestic Violence for Women in Theni (DT)

S. Pavithra[1], S. Irudhaya Ananthi[2]
[*1]M. Sc (CS&IT), Department Of Computer Science, Jayaraj Annapackiam College for Women (Autonomous) Periyakulam.Theni DT, Tamil Nadu, India
[2]Assistant Professor, Department Of Computer Science, Jayaraj Annapackiam College for Women (Autonomous) Periyakulam, Theni DT, Tamil Nadu, India

ABSTRACT

It is in fact a major constraint to development in many parts of the world. However, it seems that the causes, consequences and management strategies used in different places vary. In effect, there is need to study this vice in other parts of the country. This study was therefore carried out in Central Division of Theni District and its purpose was to analyse the causes based domestic violence for women. More so, the study attempted to find out if there are management strategies used to address the problem. Frequencies and percentages were used to analyse the causes, consequences, and management strategies addressing gender based domestic violence. Further, the t-test was used to examine if there was a statistically significant difference between the rate of violence among women. Mental stress, reduced family income and poor family health were some of the mentioned consequences of gender violence. There was a significant relationship between the rate of violence and the level of education, the level of income and the rate of alcohol consumption. The study findings also showed a statistically insignificant difference in the rate of violence for married women. Therefore, it was recommended that there is need for education on harmonious family living, provision of guidance and counselling services to the affected population, and formulation of policies that lead to legal procedures in settling of family disputes.

Key words : Domestic Violence, Consequences, And Management Strategies, Analysis

I. INTRODUCTION

Legally, domestic violence cases are characterized by the relationship between the two parties and the nature of the abusive acts. For instance, the relationship may be a current or former spouse; a child, including foster children; parents of a child in common; and unmarried persons who are intimate partners. The laws recognize that victims are not always women and that such offenses are not limited to traditional domestic relationships.

Common acts of domestic violence include physical attacks, sexual attacks, psychological abuse, the withholding of financial means, isolation from others, and the destruction of property. Additionally, the act of stalking is often associated with domestic violence. The U.S. Department of Justice (DOJ) defines domestic violence as "a pattern of abusive behavior in any relationship that is used by one partner to gain or maintain power and control over another intimate partner. Domestic violence can be physical, sexual, emotional, economic, or psychological actions or threats of actions that influence another person. This includes any behaviors that intimidate, manipulate, humiliate, isolate, frighten, terrorize, coerce, threaten, blame, hurt, injure, or wound someone."

II. RESEARCH METHODOLOGY

2.1 Methodology

The present study is an exploratory research conducted among the people in Theni. In order to pursue the aims and objectives outlined in the introduction, a content analysis of information gained from a multimedia research process was conducted to establish the underlying trends in location to find common diseases

The first stage involved gathering of secondary information from people. The second stage involved identifying the age group among them and structuring a comparative analysis of the five identified parameters under each category.

A summary of interpretations was also given. In the third stage, analysis was carried out by making specific assumptions in a hypothetical situation. In the last and the fourth stage, on the basis of the results and interpretations, specific postulates were framed, and on each postulate hypotheses were framed that can be tested through quantitative research in the future. The above-mentioned stages have been described as objectives in the preceding paragraph.

2.2 Algorithm used

2.2.1 APRIORI ALGORITHM

Apriori algorithm is a fundamental algorithm mining association rule. It contains two processes:

- ✓ Detect all frequent itemsets by scanning db.
- ✓ Form strong association rules in the frequent itemsets.

Process one needs to scan DB several times, which consumes a lot of time and space. As a result, what needs to be improved is the mining competency of frequent group of things in DB. Apriori algorithm is a significant algorithm for mining frequent itemsets for Boolean association rules. Apriori algorithm is formed by Agrawal and Srikantin 1994. It is the most fundamental and important algorithm for mining frequent itemsets. Apriori is used to detect all frequent itemsets in a provided database db.Thekeynote of Apriori algorithm is to form multiple passes over the database. It employs a repetitive approach called as a breadth-first search (level-wise search).

2.2.2 Key Concepts

Frequent Itemsets: Theitemsets which has minimum help (denoted by li for i^{th}-itemsets), Apriori property: any subgroup of frequent things must be frequent.

Join Operation: to detect lk, a group of candidate k-group of things is developed by adding lk-1with itself.

How Apriori Works?

Find All Frequent Itemsets.

Get Frequent Things: Things whose occurrence in database is more than or equal to the minimum help threshold.

Frequent Itemsets: Develop candidates from frequent things. Prune the results to detect the frequent itemsets.Develop strong association rules from frequent itemsets.Rules which satisfy the minimum support and minimum confidence threshold.

Association Rule: Association rule of data mining involves picking out the unknown inter-dependence of the data and finding out the rules between those items [3]. Agrawal introduced association rules for point of sale (POS) systems in supermarkets. A rule is defined as an implication of the form A=>B, where $A \cap B \neq \emptyset$. The left-hand side of the rule is called as antecedent. The right-hand side of the rule is called as consequent.

Support: $I = \{ i_1, i_2, i_3, \ldots , i_m\}$ is a collection of items. T be a collection of transactions associated with the items. Every transaction has an identifier TID [6]. Association rule A=>B is such that $A \in I$, $B \in I$. A is called as Premise and B is called as Conclusion. The support ,S, is defined as the proportion of

transactions in the data set which contains the itemset.

Support(X=>Y) = Support (XUY) = P (XUY).

Confidence: The confidence is defined as a conditional probability Confidence (X=>Y) = Support (XUY) / Support(X) = P(Y/X). Lift: is the ratio of the probability that L and R occur together to the multiple of the two individual probabilities for L and R, i.e. lift = Pr(L,R) / Pr(L).Pr(R).

Conviction: is similar to lift, but it measures the effect of the right-hand-side not being true. It also inverts the ratio. So, a conviction is measured as:

conviction = Pr(L).Pr(not R) / Pr(L,R)

2.3 Sample used:

Association Rule Mining Algorithms in R

APRIORI I a level-wise, breadth-first algorithm which counts transactions to find frequent itemsets and then derive association rules from them I apriori() in package arules.

2.4 TOOLS FOR THE STUDY

2.4.1 Cluster Analysis in R

R has an amazing variety of function for cluster analysis. In this section, We use three of the many approaches: hierarchical agglomerative, partitioning, and model base

Data preparation: Prior toclustering data, you may want to remove or estimate missing data and rescale variables for comparability.

```
#prepare Data
Mydata<-na.omit(mydata) # listwise deletion of missing
Mydata<- scale(mydata)
```

Partitioning: K-means clustering is the most popular partitioningmethods. It requires the analyst to specify the number of cluster to extract. A plot of the within groups sum of squares by number of cluster extracted can help determine the appropriate number of cluster. The analyst looks for a bend in the plot similar to a screen test in factor analysis.

```
# Determine number of cluster
>wss<-(nrow(mydata)-1)*sum(apply(mydata,2,var))
        >for(i in 2:27) wss[i] <-
sum(kmeans(mydata,centers=i)$withinss)
        > plot(1:27, wss, type="b", xlab="Number of
Clusters",  ylab="Within groups sum of squares")
#K-means cluster analysis
        > fit <- kmeans(mydata, 5)
# get Cluster means
        >aggregate (mydata,by=
  list(fit$cluster),FUN=mean)
# append cluster assignment
Mydata<- data.frame(mydata, fit$cluster)
```

A robust version of K-means based on mediods can be invoked by using pam() instead of kmeans(). The function pamk() in the fpc package is a wrapper for pam that also prints the suggested number of cluster based on optimum average silhouette width

2.5 Statistical techniques used

Data sources and methodology:

Target population*:* This survey covers all the students of Theni district.

Instrument design: This questionnaire collects data on the attitude of the students using ATM card. The items and reasons on the questionnaire have remained unchanged for several years. However, should modifications become necessary, proposed changes would go through a review committee and a field test with respondents and data users to ensure its relevancy.

Sampling: This survey is a census with a cross-sectional design. Data are collected for particular units of the target population, therefore sampling is done.

III. ANALYSIS OF DATA

3.1 Data Mining Definition:

Data mining is the process of analyzing data from different perspectives and summarizing it into useful information- information that can be used to increase revenue, cuts costs, or both. It allows users

to analyze data from many different dimensions or angles, categorize it, and summarize the relationships identified. Technically, data mining is the process of finding correlations or patterns among dozens of fields in large relational databases. However, continuous innovations in computer processing power, disk storage, and statistical software are dramatically increasing the accuracy of analysis while driving down the cost.

3.2 Data Mining Process

Data mining is primarily used today by companies with a strong consumer focus retail, financial, communication and marketing organizations. It enables these companies to determine relationships among "internal" factors such as price, product, positioning or staff skills and "external" factors such as economic indicators, competition and customer demographics. And, it enables them to determine the impact on sales, customer satisfaction, and corporate profits. Finally it enables them to "drill down" into summary information to view detail transactional dat. With data mining, a retailer could use point-of-sale records of customer purchases to send targeted promotions based on an individual's purchase history. By mining demographic data from comment or warranty cards the retailer could develop products and promotions to appeal to specific customer segments.

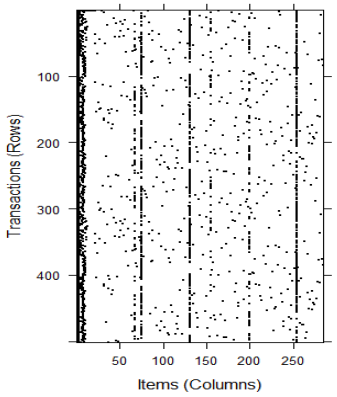
Data mining consists of five major elements:

- ✓ Extract, transform and load transaction data onto the data warehouse system.
- ✓ Store and manage the data in a multidimensional database system.
- ✓ Provide data access to business analysts and information technology professionals
- ✓ Analyze the data by application software.
- ✓ Present the data in a useful format, such as a graph or table

Findings And Interpretations

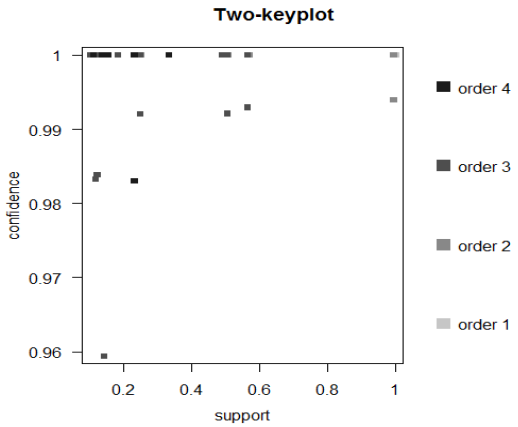
>image(tr)

image(tr)

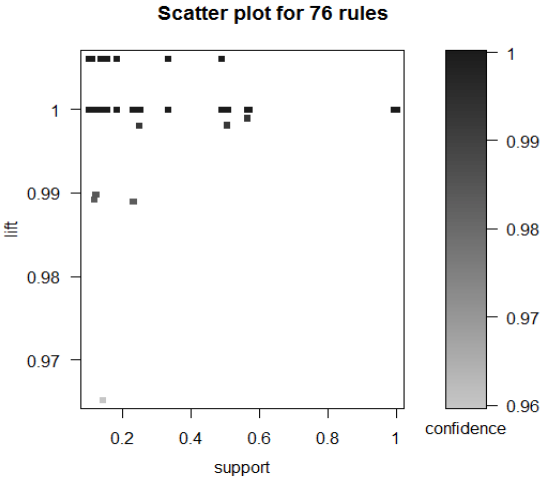


>plot(rules)

>plot(rules,shading="order", control=list(main="Two-keyplot"));



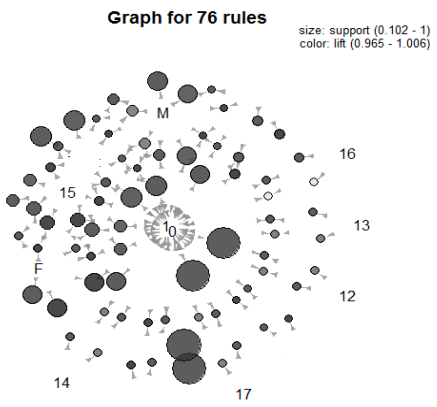
>plot(rules,measure=c("support","lift"),shading="confidence");



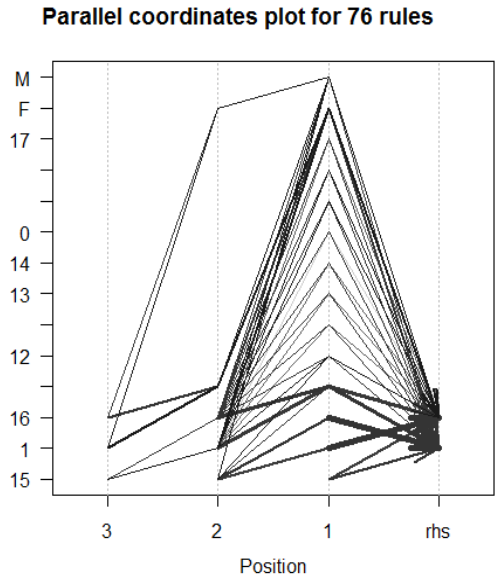
>plot(rules,method="graph")

ANU

Tamil SB



>plot(rules,method="paracoord",control=list(reorder=TRUE))



IV. CONCLUSION AND FUTURE ANALYSIS

The problem of domestic violence for women is complex and broad. More research is necessary in different parts of the world, Kenya and even among specific communities. The causes, consequences and management often differ and therefore the best way to alleviate the problem is through the people's opinions. The study therefore, recommends further research in the following areas:

- ✓ The rate of partner abuse between newly married partners and aged married partners
- ✓ A nationwide study on causes, consequences and management strategies of gender based domestic violence
- ✓ Cultural beliefs that perpetuate based domestic violence in other communities of India.
- ✓ Rate of violence among spouses from different religious background.
- ✓ A comparative study on the rate of violence among married partners in rural and in urban areas.

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