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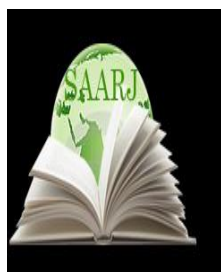
S o u t h   A s i a n   J o u r n a l   o f   M a r k e t i n g   & M a n a g e m e n t   R e s e a r c h   (S A J M M R)

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DESIGNING A MODEL FOR EMPLOYEE PERFORMANCE MANAGEMENT IN RESEARCH CENTERS (CASE STUDY: IRGC NAVY RESEARCH CENTER)

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ABSTRACT

Performance management for organization has many tangible and intangible achievements, and its proper implementation improves employee performance, thus it enhances the efficiency of organization. The purpose of this paper is designing a model of Employee Performance Management of the research centers. In this article, after expressing the problem, goals and research's questions, we explain the requirements for analysis of performance management theory and define the theoretical base and concepts. Then, benefits and steps of performance management implementation are discussed. After reply to the questions, research model was established and relationship between the main components of the model is explained. Validity of the model has been assessed by taking advantage of the experiences and opinions of organizational and academic experts; and all of the validity aspects of the questionnaire including content validity and indicators related to reliability of the proposed model are calculated in the IRGC Navy Research Center over a period of two months. Cronbach's alpha of 0.90 was achieved which represents reliability of the questionnaire above and t-test results indicate that the model is stabilized.

KEYWORDS: *Performance Management; Employee Performance Evaluation; Human Resources; Productivity.*

1. INTRODUCTION

Proper and effective performance of employees is keys to success of organizations. That is why successful organizations worldwide to identify factors affecting the performance and behavior of employees and management. To achieve the success provided by these factors, to promote the employee performance (both in terms of quantity and quality). Obviously, with such an attitude, performance management is of crucial importance as a tool for improving performance and enhancing employees' behavior in the organizations management (Qorbanzadeh, 2013). Quality and effectiveness of performance management are determinant and critical to achieve development and prosperity of society. In order to achieve the expected outcomes from governmental organizations and respond to public stakeholders regarding to the costs of public resources, performance management has a great importance and increases public confidence in government (Berman and Kearney, 1999).

2. EXPRESSION OF PROBLEM

Performance management had expected it to be gone, has not worked and should be reviewed in considering its strengths and weaknesses (Moynihan, 2008). And governmental organizations suffer from severe inefficiencies in the areas of performance management (Modell, 2005). Despite a quarter century of introducing performance management in the public sector, yet there are major problems and expected improvements in performance, accountability, transparency and quality of service has not supplied desirably (Fryer et al., 2009). Referring to the lack of research, Fryer et al. emphasize on the need for more study in this area. It should be noted that some measurements carried out recently in some countries and companies indicated that is still a lot of unused capacity in human resources organizations, which they can be activated and used through the performance management. In a survey by the Institute's Prestigious Gallup it is shown that an expenditure more than 382 billion dollars is imposed on the economy of the U.S annually. Lack of optimal performance for a significant percentage of employees leads to reduce productivity and quality, loss market share, rework, waste resources and dissatisfy the customers and other stakeholders (Abol alaei, 2010).One of the shortcomings in the content of performance management is the lack of integration and coherence between the components of the system at different levels of organization and the problem is especially clear in making coherence between performance evaluation systems in the organizational level and the employees' performance evaluation (Ranaei Kordshuli and Sghapur, 2011). Performance management is a potential factor for successful implementation of the future activities to achieve organizational and individual goals (Michel, 1995) and its main elements include: goal setting, performance appraisal, staff development and reward (Raymond, 2002).

3. RESEARCH'S OBJECTIVES

The main objectives:

- Designing a model of Employee Performance Management of the research centers. Secondary objectives:
- Identify the most important key indicators of performance management model in the conceptual design.
- Determining the logical relationships between the dimensions, components and variables of the performance management model.
- Determining and defining the main aspects and criteria for the Employees' Performance Management model in the Research Centers.

4. The research questions

1 -How are the most important aspects and criteria of employees' performance management determined?

2 - What are the most important indicators of performance evaluations of research centers?

3 - What are the most important factors of employee empowerment?

4 - What are the most important results of the performance management?

5. METHODOLOGY AND RESEARCH'S PROCESS:

The data gathering method is library and review of documents (archives and libraries) and information in books, dissertations and research papers. The goal, method, analysis, data and data gathering time of this research are practical and developmental, descriptive, comparative, qualitative, and sectional, respectively. First, different references are collected by library method and studied to achieve a general view regarding the issue and understanding the basic concepts. Secondly, studying prior literatures, it is determined how to gather the selected indices' values and the performance management's indices are identified and selected by survey of the experts. Then, the problem's aspects are defined according to the step analysis and a set of hypothesis and factors required for designing the model are considered. Using the previous model as well as incomes and outcomes, the type of model is identified and the new model is designed. This study was conducted to assess the validity of the model by taking advantage of organizational and academic experiences and experts' opinions were used and validity and indices related to the reliability of the proposed model were calculated by the Cronbach's alpha method using a questionnaire distributed at the Center of Marine Corps. The overall design of the model is as follows:

1 – The background literature is reviewed.

2 - Questions and hypotheses are designed commensurate with background researches.

3 - The necessity for designing a model and the action of people who have taken steps to improve the model are expressed.

4 – The proposed questions are answered by designing the employees' performance management model.

5 – The model provided is confirmed by the opinions of experts (case study).

6- The collected data are classified and the results obtained from the model are expressed.

6. The necessity for research

Although some of the performance management inefficiencies in the organization are related to how to implement this system, however the absence of theoretical bases is also a serious issue that cannot be ignored. Conceptual ambiguity and confusion in the literature on organizational performance in the public and private sectors as well as discordant models and the conflict between them is so that Siegel & Summer matter (Siegel, 2008) after reading and analyzing all the papers constituency claim that in general, the knowledge accumulated in this field lacks a clear opinion on the most important explanatory factors for measuring and evaluating the performance of organizations. On the other hand, performance management makes employee behavior be aligned with organizational goals.

This alignment can occur by the following reasons: 1- Responsibilities and job expectations and can lead to increased individual and group productivity 2-Better information is available for using in decisions and staff promotion (Kazemi Kofrani and Pedaran, 2012).

Thus successful and complete implementation of employee performance management process can greatly increase the success of the organization, however it involve the managers extremely in hard and painstaking activities (Abol alaei, 2010). Therefore, any organization, regardless of type, size and structure, needs a performance management model by which evaluates its own success on achieving organizational goals and ideals (Sabuni, 2005).

7. Definition of Performance Management

In management science, different definitions of performance management system are presented which some of them are expressed as sample.

- Performance management is a systematic approach to the process of setting strategic goals, evaluation, collecting and analyzing data and reviewing reported performance data and applying the results, led to improve the organization performance (Rafi-Zadeh, 2009).

- Performance management involves discussions between managers and staff, which is planned, developed and followed in relation to expectations, continuous feedback and performance (Gliddon, 2004).

8. Answers to Research questions:

Researcher has not found the research which directly studied management Employee Performance research centers. Therefore, first, the answers for the research questions are deduced by using previous studies of performance management and performance evaluation research centers and then, will be answered by a case study, specifically.

Question 1: How are the most important aspects and criteria of Employee Performance management determined?

To measure organization performance one can define a set of criteria for each of the stages. Typically, the criteria describe a set of information that can be used in the organization for evaluating the achievement of goals (Siddiqi and Malik, 2009). Performance dimensions in terms of organizational performance management scientists' point of view are shown in Table 2).

Table 2) Performance dimensions in terms of organizational performance management scientists (Yavari and Zahedi, 2013)

Pollitt, 1999, 2005	Bouckaert & Halligan,2006	Boyne, 2006, pp. 14 & 15	Poister, 2003, pp. 36-55
☐ Inputs ☐ Activities ☐ Outputs ☐ Implications ☐ Performance ☐ Effectiveness ☐ Utility and sustainability	☐ Resources ☐ Activities ☐ Outputs ☐ Impact ☐ Performance ☐ economy ☐ Effectiveness ☐ Cost	☐ Outputs ☐ Performance ☐ Effectiveness ☐ accountability ☐ democratic outcomes (Accountability, truth, Equality and Participation)	☐ Resources ☐ Activities ☐ Outputs ☐ Implications ☐ Performance ☐ Productivity ☐ Quality of Service

□ relevance □ Equality	Effectiveness □ Trust		□ Effectiveness □ Cost Effectiveness □Customer Satisfaction
Kearney & Berman,1999, p. 2	**Talbot, 2007**	**Siegel & Summermatter,2008**	**Fryer et al., 2009**
□ Performance □ Effectiveness □ Equality	□ Accountability □ user selection □ Customer Service □ Performance □ Results □ Effectiveness □ Resource Allocation □ Creating Public Value	□ Input □ Operation □ Output □ Outcome □ Performance □ Effectiveness □ Productivity □ Quality □ Equality and fairness □beneficiaries satisfaction	□ Accountability □ Transparency □ Quality of Service □ Value for money

Question 2: What are the most important indicators of research centers' employee performance evaluations?

One of the major challenges for managers of research centers is to measure the performance of their units. Several questions raises in this context that the most important one includes how to choose indicators to assess appropriate goals and their importance in evaluate the performance of the organization. The representative indices of research centers' employee performance evaluation are given in Table 3) using experts and managers' opinion (Saidi-Mehrabad, and Ehsani, 2004).

TABLE 2) INDICES OF RESEARCH CENTERS EVALUATION (SAIDI-MEHRABAD, AND EHSANI, 2004)

Row	**Evaluation Index**	**Index definition**	**Evaluatation manner**
1	Realization of projects timing	Achieved percentage of schedule	Proportion of real progress to projects program during current evaluation
2	Researcher	Proportion of Researchers to total personnel	Master's Degree or higher in the course of evaluating Total number of employees in the current evaluation period
3	Academic Press Article	Per capita domestic and forreign articles	Papers_____ Number of senior expert or higher
4	Realized income - current projects	ratio of actual earnings to program earning from organization's projects	The total cost of the projects in the current evaluation period_____ Real earnings from projects during the current assessment
5	Training Course	held Hours of	Total hours of Training Course

		training	Number of participants
6	Patent	The number of patents registered in the evaluation period	
7	Project's time diversion	Delay of projects	projects' Real-time performance during evaluation − Project's lifetime of contract duration of project in the evaluation period
8	contract per capita	contracts per Scholars	The total amount of the projects in the current evaluation period Total number of researchers in the current evaluation period
9	Investment	The total cost to buy new hardware and equipment to total costs	Investment ──────── total cost
10	income per capita	income per individual	Total receipts during the current assessment Total number of employees in the current evaluation period
11	Publication	The number of books printed per expert during assessment	Number of books published Number of the senior or higher
12	financial balance per capita	financial balance per capita (costs - income) obtained for organization per individual	balance during assessment The total number of personnel in the evaluation period
13	Longevity	Average duration of projects performance	The average lifespan of the projects during evaluation period
14	Human Resource development	Increasing the number of personnel	The number of human resources in the current evaluation period The number of Human Resource in the previous evaluation period

Based on the evaluation index of research centers, conceptual model of performance evaluation research centers is shown in Figure 2).
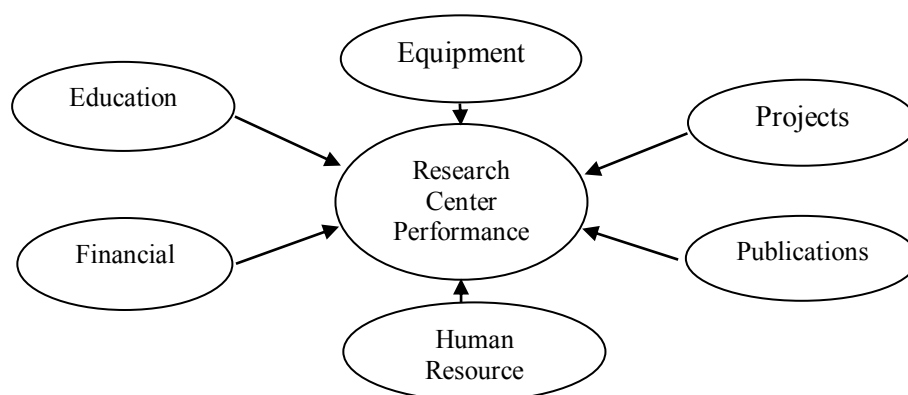
Figure 2) conceptual model to evaluate the performance of research centers (Saidi Mehrabad, and Ehsani, 2004

Mollaie et al. (2011) introduce R & D centers' evaluation criteria as in Table 4). Base of evaluation and assessment performance of these data is ratio of inputs to outputs.

TABLE 4) R & D CENTERS' EVALUATION CRITERIA (MOLLAIE AND ET AL, 2011)

Inputs	Outputs
Total manpower	Number of finished Projects
Research funding	Number of in progress projects
Monetary value of equipment	Number of inventions and patents
	Number of seminars
	Number of domestic and international books and journals

Evaluation of employee performance is a very difficult task for assessors. To do the best of this process, we must ensure that appropriate and properly measures are taken to evaluate employee performance. According to some researchers, the key indicators of performance evaluation are (Hatami Manesh and Zanjirchi, 2013):

1- Ability to decide 2- Having knowledge about your business indicator 3- Assessment Capability 4- Ability to teamwork.

Yavari and Zahedi (2013) have introduced the components of the measurement and evaluation of performance with indicators and key performance measures, data collection, data analysis, reporting and dissemination of information.

Question 3: What are the most important factors of empowerment for employees?

Empowerments are the leverages by which managers can quickly achieve future results. In fact, the results are supported by enablers. Each section that involve enablers, play significantly higher levels of role in shaping of excellence. In our model, the innovation and learning emphasize the dynamic nature of the model, it is representing (Asefi, 2009).These factors affect organization performance sometimes from inside and sometimes from outside. The factors in the models as enablers or pre-femoral determinant of the performance are collected and prioritized according to the amount of repetition in different models in Table 6). The first ten elements repeated in models are known as core concepts.

TABLE 6) PERFORMANCE MANAGEMENT ENABLERS (YAVARI AND ZAHEDI, 2012)

Row	Enablers	Models	Repeat
1	Strategy	Diamond, Hanna, Charter, Taticchi, Ten principles, EFQM, Arm, Olowu, Soluma, Broadlin, RezaGanj, Ferotley	12
2	Processes	Diamond, Hanna, Charter, Taticchi, BSC, GFP, EFQM, Soluma,Brown, RezaGanj, Ferotley	11
3	People	Diamond, Hanna, Charter, Moypandey, Soluma, BSC, GFP, EFQM,Christopher, RezaGanj	10
4	Resources	Ten principles, Marr, Poister, Christopher,	8

		Soluma, Brown, EFQM, RezaGanj	
5	Motivation (reward)	Panel, Hanna, Marr, Ferotley, Kurist, Soluma, Broadlin	7
6	Culture	Hanna, Moypandey,Ten principles, RezaGanj, Olowu, GFP	6
7	Structure	Hanna, Broadlin, RezaGanj, GFP	5
8	Leadership	Marr, Arm, RezaGanj, GFP, EFQM	5
9	Information Technology	Moypandey, Ten principles, Charter, RezaGanj	4
10	Environment	Hanna, Moypandey, Ferotley, Boulligan	4
11	Information	Hanna, RezaGanj, GFP	3
12	System	Diamond, GFP, BSC	3
13	Organizational Alignment	Ten principles, Olowu	2
14	The whole organization Partnership	Ten principles	1
15	Focus of decision-making power	Moypandey	1
16	Focus on results	Moypandey	1

Enabler criteria in EFQM Model used to evaluate performance are (Haji Jabbari and Sarabadani, 2007)

1- Leadership 2- Policy and Strategy 3- Human Resources 4- Partnerships and Resources 5- Processes. And the most important results of the performance are: 1- Customer Results 2- Human Resources Results 3- Community Results 4- key performance results.

Therefore, we can conclude that a framework designed to enable the research staff has five criteria, which are related to leadership and management research, policy and research strategies, learning and growth, human capital, partnerships, financial and information resources and finally, internal processes so that each of these criteria include corresponding sub criteria. To achieve excellence research organizations should adopt and implement approaches regarding the sub criteria tailored to their tasks and goals (Hajian et al, 2013).

Tavakoli et al (2011) argue that aspects of the research centers staff enablers include aspects of resources, uncertainty, learning and growth, internal processes and aspects of results, including financial and customer. Fulfillment of the criteria for empowerment aspects provides conditions for realization of the results in customer and financial aspects for non-financial and financial measures.

Question 4: What is the most important result of the performance management?

The most important results of the evaluation and management of staff performance include (Lewis R. Gomez Mjya, 2012)

From managers' point of view

1 - Despite the imperfect methods of evaluation, individual differences identified during these evaluations can be effective in furthering the organization's work.

2 - Recording performance evaluation and feedback is beneficial when the job is drawn to legal authorities.

3 - Evaluation provides a rationale base for bonus payments.

4 - The scope and standards of assessments can be used to conduct strategic operations and to clarify performance expectations.

5 - Giving individual feedback is a part of the performance management process.

6 - Despite the traditional emphasis on the individual, evaluation criteria can also be used for work groups and team work.

From staff's point of view

1 - Feedback on performance is both necessary and desirable.

2 - Improved performance is depended on the evaluations.

3 - Work justice requires that performance difference to be found to obtain better results.

4- Evaluation and appreciation of the performance can be a motivational factor for employees to improve their performance.

In other words, employee performance management results include (Kazemi Kofrani and Pedaran, 2012) what a person gains, the really employment output and measurable results, goals achieved, quantity, quality, cost and time.

The results obtained from performance management are used to identify measures for improving the level of commitment in the organization (Gruman and Saks, 2011).There are also a clear relations between organizational commitment and employee performance management activities (Mone et al, 2011).Other results of performance management are improving mental skills and the average ranking system (Hanisch and Hanisch, 2010). The results of performance management system are owned by the organizations participants and stakeholders (Broadbent and Laughlin, 2009).

9. Formation of the research model

The structure of this model is provided according to organization conditions, procedures and forms of current and past research and opinions of experts and authorities, as shown in Figure 3).

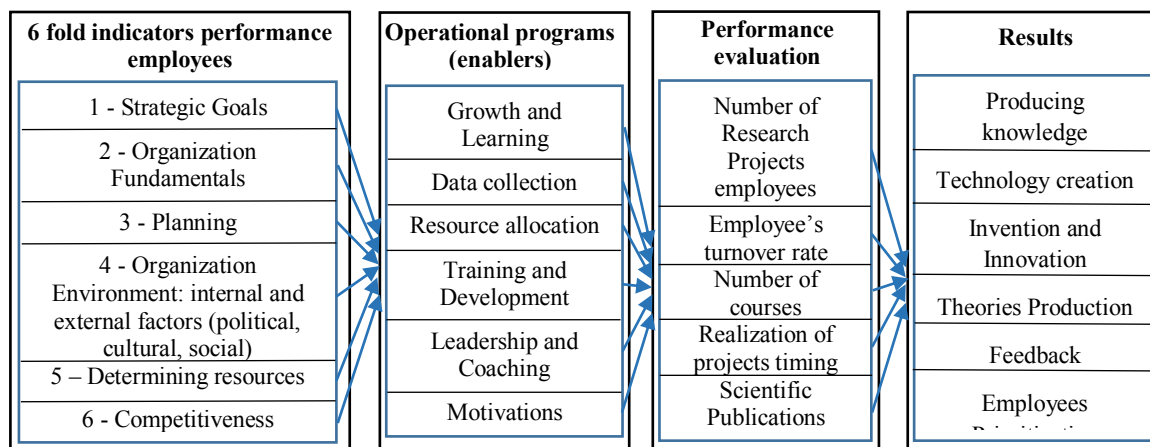| **6 fold indicators performance employees**	**Operational programs (enablers)**	**Performance evaluation**	**Results**
1 - Strategic Goals	Growth and Learning	Number of Research Projects employees	Producing knowledge
2 - Organization Fundamentals	Data collection		Technology creation
3 - Planning	Resource allocation	Employee's turnover rate	Invention and Innovation
4 - Organization Environment: internal and external factors (political, cultural, social)	Training and Development	Number of courses	Theories Production
5 – Determining resources	Leadership and Coaching	Realization of projects timing	Feedback
6 - Competitiveness	Motivations	Scientific Publications	Employees

Figure 3) conceptual model of research (research centers employees performance management)

Then, as summarized in Table 7) model components - previous researches are presented.

TABLE 7) MODEL COMPONENTS - PREVIOUS RESEARCHES

Number	Factors	Previous models
1	indicators	Fit, Poister, Kurist, Ten principles, Broadlinb, Marr, Olowu, Broadlin, Soluma, Rafi Zadeh, Tohrabnd et, Reza Ganj, Yavari and Zahedi
2	Strategic Goals (strategy)	Sintle, EFQM, Armstrong, Brown, Hanna, Pollitt, Charter, Panel, Moypandey, Diamond, Ferotley, Boulligan, Ten principles, Moynihan, Broadlinb, Olowu, Soluma, Broadlin, Taticchi, Sheikh Zadeh, Rafi Zadeh, Tohrabnd et, Reza Ganj, Yavari and Zahedi, Ghorbanzadeh
3	Organization Fundamentals	Deanne N. et al, Siddiqi, Reza Ganj,Hanna, Ferotley
4	Planning	Mcapagne, Pulakos, Kurist, Moynihan, Abolallaei, Reza Ganj, Kofrani, Yavari and Zahedi
5	Environment organization: internal and external factors (political, cultural, social)	Hanna, Pollitt, Moypandey, Deanne N. et al, Boulligan, Ten principles, GFP, Olowu, Broadlin, Tohrabnd et, Reza Ganj, Yavari and Zahedi
6	Determining resources	Fit, Moypandey, Poister, Boulligan, Christopher, Ten principles, Soluma, Sheikh Zadeh, Reza Ganj
7	Competitiveness	Fit, Moypandey
8	Operational programs (enablers)	Poister, Boulligan, Charter, Marr, Soluma, Sheikh Zadeh, Reza Ganj
9	Growth and Learning	BSC, Kurist, Ferotley, Ten principles, Marr, Sheikh Zadeh, Kofrani, Yavari and Zahedi, Tohrabnd et al.
10	Data collection	Hanna, Moypandey, Poister, Ferotley, Ten principles, Moynihan, Marr, Rafi Zadeh, Reza Ganj, Yavari and Zahedi
11	Resource allocation	Fit, Moypandey, Poister, Boulligan, Christopher, Ten principles, Marr, Sheikh Zadeh, Reza Ganj
12	Training and Development	Pulakos, Siddiqi, Sheikh Zadeh, Reza Ganj, Ghorbanzadeh
13	Leadership and Coaching	EFQM, Armstrong, GFP, Marr, Sheikh Zadeh, Reza Ganj, Abolallaei
14	Motivations	Panel, Hanna, Marr, Pulakos, Ferotley, Deanne N. et al, Kurist, Soluma, Broadlin, Siddiqi, Broadlinb, Rafi Zadeh, Kofrani
15	Performance evaluation	Sintle, Armstrong, Pulakos, Kurist, Poister, Christopher, Ferotley, Moynihan, Simmons, Broadlinb, Soluma, Broadlin, Tohrabnd et, Abolallaei, Rafi Zadeh, Kofrani, Reza Ganj, Ghorbanzadeh, Yavari and Zahedi
16	Number of Research Projects employees	Tohrabnd et, Hajian et al, Saidi Mehrabad and Ehsani, Abasi and Ashrafi

17	Employee's turnover rate	Fit, BSC, Broadlin, Christopher, Chen and Chen, Reza Ganj, Ghazi nuri et al
18	Number of courses	Chen and Chen, Saidi Mehrabad and Ehsani, Ghazi nuri et al, Roghani et al, Hatami manesh and Zanjirchi
19	Realization of projects timing	Ten principles, Saidi Mehrabad and Ehsani, Ghazi nuri et al, Kofrani
20	Scientific Publications	Hajian et al, Saidi Mehrabad and Ehsani, Abasi and Ashrafi, Gisler
21	Results	EFQM, Fit, Hanna, Pollitt, Moypandey, Kurist, Sheikh Zadeh, Reza Ganj
22	Producing knowledge	Kurist, Reza Ganj, Hajian et al, Saidi Mehrabad and Ehsani, Ghazi nuri et al
23	Technology creation	Charter, Reza Ganj, Hajian et al, Abasi and Ashrafi, Vas R. Candula
24	Invention and Innovation	Fit, Christopher, Sheikh Zadeh, EFQM, Gisler, Chen and Chen, Kofrani, Malaei et al
25	Theories Production	Hajian et al
26	Feedback	Armstrong, Kurist, Panel, Marr, Sintle, Ferotley, Simmons, Yavari and Zahedi, Reza Ganj, Tohrabnd et, Abolallaei, Ghorbanzadeh
27	employees Prioritization	Pulakos, Deanne N. et al, Siddiqi

10. The relationship between the models principal component

Focusing on performance management models, it can be seen that the components of the model directly or indirectly consists of a subset of principal components, criteria, operational plans (enablers), performance assessment and evaluation and results. For example, a number of models which have mentioned direct or indirect connections between principal components are briefly explained and analyzed:

Model of employee performance management process begins with setting performance indicators and then, monitoring programs, behavior and performance control, training and development are introduced as action plans. In this model, the evaluation and employees ranking, and evaluation of performance and reward are presented as the assessment step and the final result, respectively (Pulakos, 2004).

The same basic components are viewed in a simple model of employee performance management. It means definition of strategic goals, annual goals, job description as specified index and performance standards, monitoring, control and feedback as operational plans and evaluation practice as a performance evaluation factor and finally, improvement of practice as a result of the model are introduced (Qorbanzadeh, 2013).

Conceptual model of organizational performance management for public and nonprofit organizations is a comprehensive model, covering most components and subset of the proposed model. Determinants (indicators), operational plans (enablers), performance evaluation and results are directly shown in this model and relations and sequences between them are determined (Yavari and Zahedi, 2013).

By determining the independent, confounder and dependent variables, the conceptual model of the impact of performance management system on the employee performance and organization

has actually identified the subset of determinants (index). Adding staff development programs, action plans (enablers) have been considered. Then, increased job satisfaction and organizational commitment and organizational performance have been referred to as the output which is the subset of the proposed model results (Siddiqi, 2009).

The performance management model in mission-driven organizations based on the model of BSC and EFQM (Sheikh Zadeh, 2009) is also complete model, which directly covers much components and subsets of the proposed model .This model is a combination of EFQM model and indicators of performance management that sequence of the components is in accordance with the proposed conceptual model except that the performance measurement and evaluation factors are presented at the end.

Referring to the demands and requirements of performance management, the model of the organization systematic feature and elements of performance management system (Bayazi Tohrabnd et al, 2009) has pointed out to determinants (index). Then, it discusses operational programs (enablers) by referring to some of the operational performance management processes. Also, the performance measurement and evaluation components are considered by showing the step of control and performance processes feedback. Continuingly, consistent outputs with the demands of stakeholder are introduced as the results of model.

The model of performance management framework and management compliance in the high-level processes (Caporuscio et al, 2007) consists of three cycles, each of which indirectly are a subset of the principal components including determinants (Indexes), operational plans (enablers), performance and results assessment and evaluation.

The model of performance management and strategy begins with determinants (index),by utilyzing BSC and EFQM at the University (Bayazi Tohrabnd et al, 2009) then quality home is introduced to the operational plans (enablers) and finally, set of criteria and sub-criteria associated with vision and strategic objectives for continuous performance improvement is obtained as their model results. Although this model does not refer to the performance measurement and evaluation components, but the sequence of the main component of the proposed conceptual model has been adhered.

The Mobarakeh Steel employee performance management model (Kazemi Kofrani and Pedaran, 2012) has introduced a subset of the principal components including: Determinants (indicators), operational plans (enablers), performance evaluation and results, however, it does not specify their sequence.

Performance management systems: Considering the rationality model, a conceptual model (Broadbenta and Laughlinb, 2009) has sequentialy used the main elements of the conceptual model, however, it did not specify the sequence for them in the model.

Therefore, it was clear that the sequence used and relation between main conceptual components of the model is logical and directly or indirectly is in accordance with many components of former performance management models.

11. The validity and reliability of the proposed model and analysis of questionnaires

This research has been conducted for the IRGC Navy Community Research Center employee and officials and selected samples consist of 31 members of the center to complete the questionnaire. To estimate reliability coefficient and calculate internal consistency of the

elements of the questionnaire, first Cronbach's alpha was calculated for each variable and the overall reliability coefficient was obtained. Appendix A) provides Cronbach's alpha and the number of questions or variables. Since Cronbach's alpha is 0.09 and larger than 0.07, the test of reliability is very good.

Appendix B) provides descriptive statistics related to hypothesis testing and the calculated values indicates the number of the data, mean, standard deviation and standard error of the mean, respectively. Results of descriptive statistics show that the sample means is 4.1942, which is greater than 3. This reflects the impact of the variable in the model is proved. It was also approved through inferential statistics (hypothesis test or confidence interval).

As can be seen in the data analysis if the lower limit and top of the test is positive, this indicates that the mean is greater than the value of the test and the variable is approved.

To stabilize the model we examine the hypothesis whether the variables in the conceptual model of performance management research centers are influenced. Thus the t-test can be defined as follows.

T test Results

H_0: $\rho \leq 0.6$ (No influential variable in the model)

H_1: $\rho > 0.6$ (Variable influence on the model)

Likert spectrum is a sequential scale, numbers range from 1 to 5 codes. Thus, we use the binomial test for testing hypothesis. Given that the number of samples is greater than 30 we use a normal distribution. T-test can be used for all variables in this mode and if all variables were established, the entire model can be approved. It should be noted that the ratio is compared with 0.6 because the ratio of 3 options to 5 options is equal to 0.6.

Appendix C) shows groups, the definition of groups, number of each group data, test ratio and sig from the left, respectively. Since all variables sig is less than 0.05, thus the hypothesis H_0 is rejected and hypothesis H_1 is accepted. Thus, according to t-test of all variables of the conceptual model the research have positive impact on employee performance management research centers and should be considered.

This research used content validity to examine the components of the questionnaire and to ensure the representativeness of the necessary features that the researcher aims to determine. Regarding to validity of the questionnaire, according to content validity method, the questionnaire was confirmed by the following:

- ✓   University Professors
- ✓   Performers of Research Center
- ✓   Organizational experts

12. DISCUSSION AND CONCLUSION

Organizations believe that the performance management is a process by which a common understanding and single language can be obtained about what the organization should achieve and how to achieve it. Performance management assists organization's success in achieving strategic goals and enhancing the effectiveness of business processes through continuously improving individuals and groups' performance as well as focusing on weaknesses. Therefore, it is necessary to examine the models designed and implemented in

different organizations for identifying the key indicators of performance management so that these indicators cover all strategic objectives of the Center and maintain the balance between long-term and short-term goals. Thereby, in addition to assist evaluating and ranking the centre's staff, the necessary field should be determined for development and promotion of personnel and individual and organizational development should be eased.

Thus, employee performance management model are designed for this purpose for research institutes. It is also suggested to increase the efficiency and effectiveness of employees, organizations and different centers to be examined and according to their structure and features, key indicators of employee performance management to be identified and appropriate and needed models to be designed.

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S o u t h   A s i a n   J o u r n a l   o f   M a r k e t i n g & M a n a g e m e n t   R e s e a r c h   (S A J M M R)

(Double Blind Refereed & Reviewed International Journal)

IMPRESSION OF WORKING WOMEN RECEIVING NEGATIVE FEED BACK IN WORKPLACE

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ABSTRACT

Generally, people use to say womenfolk are multi takers. They use to be concentrating simultaneously on their work as well as their personal commitments such as in the work place or in their own business they have to be updated and keep some follow up on their work based on their job description. It is observed that most of the respondents (42.4 per cent) are in the age group of 31-40 years which shows that they have been involved in receiving negative feedback in a work place rather than the other age groups. Some women may face the problems in any situation never mind by whom it has been arisen. Some working ladies use to be brave enough to face any problem when it arises by the same gender but not with the other gender. Primary data are collected from the 125 working women from various fields and very few women entrepreneurs are also comprised through questionnaire in Coimbatore city, Tamil Nadu. Secondary data is collected through books, journals, internet, etc. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .671' there exists no significant association between age and reaction on criticism faced by the respondent from other women co-worker. Hence the hypothesis is accepted.

KEYWORDS: *Questionnaire, Concentrating*

INTRODUCTION

In recent decades women employees are facing lots of problems such as sexual harassment, male domination and to certain extend women are hesitated to get promotion from their current designation. Majority of the women are highly filled up with personal and family commitment which leads to high stress, mental pressure and sometimes they lack in concentration which results in low performance. Some women may face the problems in any situation never mind by whom it has been arisen. Some working ladies use to be brave enough to face any problem when it arises by the same gender but not with the other gender. Some female employee may go as how other expect which is one of the strategies to avoid facing the problem. Some may always go against the practice and practice to face the problems at all time.

Most of these emotions arise when they receive feedback negatively from other colleagues in the work place or even gossiping about them in their absence. In this study negative feedback implies that commenting about the one which is not the actual happening or sometimes not acceptable by the one who receives the feedback or giving the blank statement about them without knowingly.

Working Women and Women Entrepreneur

Generally, people use to say womenfolk are multi taskers. They use to be concentrating simultaneously on their work as well as their personal commitments such as in the work place or in their own business they have to be updated and keep some follow up on their work based on their job description. In family their presence is most important in certain special occasion and also in most critical situation. In that circumstance they use to be in high dilemma where to give priority. Many women feel they misconstrue feedback when they receive it from other women.

Even in twenty first centaury women have been considered as a very sensitive being, beyond that a women entrepreneur has to face lots of challenging situations such as crises from outsiders namely competitors, dealers, customers and consumers etc and maintain the better quality of the various resources of the business in a better manner which means retaining the quality and experience employees by giving appropriate benefits and so on.

LITERATURE REVIEW

The Influence of Negative Feedback on Employees by *Lisa Mooney (March 2019)emphasize that* Open-handed undesirable response to an member of staff is unique technique of speaking an problem but this approach does not reassure the worker to substitute the unwanted behaviour with a new positive behaviour.[1]

"Examples of Constructive Feedback in the Workplace."**By McQuarrie, Lisa (April 2019)** implies that the constructive feedback is a optimistic concern that helps employees make the most of their capabilities, leads helpful transformation and reassures a high level of recital.[2]

MATERIALS AND METHODS

As mentioned above women are multifaceted and in spite of the above said obstacles, they are facing some controversial feedback about their performance. In such circumstances   the reaction will be quite different from each individual woman. The way they manage the critics also will be in different aspects. Beyond this they will survive continually. This article is to analyse the mentality of the respondent while receiving negative feedback from various kinds of people and the strategy they follow to overcome such anger. The purpose of the study is to find the

psychological impact of women employee and the level of will power of the working women who receives the criticism from different kind of co-workers in their work place

RESEARCH METHODOLOGY

Research methodology is a science of studying of how research is done scientifically and the various steps that are generally adopted by a research in studying the research problem. The study aims at analysing the psychological impact when they receive negative reaction from various types of colleagues and the way they manage with the criticism. The data for the project includes both primary and secondary data has been collected. Primary data are collected from the 125 working women from various fields and very few women entrepreneurs are also comprised through questionnaire in Coimbatore city, Tamil Nadu. Secondary data is collected through books, journals, internet, etc.

Analysis

The collected data have been categorized and processed manually as well as through statistical package with the help of computer. The important statistical tools used in this analysis are Simple Percentage Analysis, ANOVA, t-Test , Correlation and Friedman's Ranking analysis

LIMITATIONS OF THE STUDY

As the study reveals about their mental strength, most of the respondents cautious to disclose the fact. The article deals with psychological aspects which comprises of huge reactions for criticism but it is limited to very few numbers of retorts.

Analysis and interpretation

Simple percentage analysis

It describes about the demographic profiles of the respondents by means of percentage analysis.

Source: primary data

Interpretation:

It is observed that most of the respondents (42.4 per cent) are in the age group of 31-40 years which shows that they have been involved in receiving negative feedback in a work place rather than the other age groups. Most of the respondents belong (44.8 per cent) are engaged less than 5 years. As they are less experienced so they are receiving negative feedback rather than others. Majority of the respondents are married (77.6 per cent) which shows that married people have been receiving more negative feedback than unmarried. Most of the respondents are in the graduate level (56 per cent) which shows that they have been receiving feedback in a work place. It is observed that (71.2 per cent) of the respondents are employed as due to employment they have been receiving negative feedback in workplace.

Age and impact of negative feedback from male worker-anova

Table represents the ANOVA which upshots the mean and standard deviation and also test the significance of respondents age and impact of negative feedback from male worker.

H_0: "There is no significant difference between age and impact of negative feedback of the respondents from male worker"

TABLE: 1ANOVA SHOWING DIFFERENCE BETWEEN AGE AND IMPACT OF NEGATIVE FEEDBACK FROM MALE WORKER.

S.NO.	AGE(in years)	MEAN	SD	SIG.	F
1	20 to 30	3.0560	.69990		
2	31 to 40	3.1283	.74534		
3	41 to 50	3.4400	.96865	0.334	1.144
4	51 & Above	3.3429	.82231		

Source: Primary data

The mean values of the different age groups vary between 3.05 to 3.44. The highest mean score of 3.4400 is found among the respondents who are in the age group of 41 to 50 years. The lowest mean score of 3.05 is found among the respondents who are in age group of 20 to 30 years. The highest standard deviation of .96865 is found among the respondents who are in age group of 41 to 50 years. The lowest standard deviation of .69990 is found among the respondents who are in the age group 20 to 30 years. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .334' there exists no significant association between age and impact of negative feedback frommale worker. Hence the hypothesis is accepted.

Experience and impact of negative feedback from male worker

Table represents the ANOVA which upshots the mean and standard deviation and also test the significance of respondents' experience and impact of negative feedback from male worker.

H$_0$: "There is no significant difference between experience and impact of negative feedback from male workers of the respondents".

TABLE: 2 ANOVA SHOWING DIFFERENCE BETWEEN THE EXPERIENCE AND IMPACT OF NEGATIVE FEEDBACK FROM MALE WORKER.

S.NO.	EXPERIENCE	MEAN	SD	SIG.	F
1	Less than 5 years	3.1179	.69048		
2	6 to 10 years	3.1143	.78708		
3	11 to 15 years	3.2133	.87562	.850	.266
4	16 years &Above	3.4000	.83267		

Source: Primary data

The mean values of the different experience vary between 3.1143 to 3.4000.The highest mean score of 3.4000 is found among the respondents who are experienced 16 and above years .The lowest mean score of 3.1143 is found among the respondents who are experienced 6 to 10 years. The highest standard deviation of .87562 is found among the respondents who are experienced 11 to 15 years. The lowest standard deviation of .69048 is found among the respondents who are experienced less than 5 years. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .850' there exists no significant association between experiences and impact of negative feedback from male worker of the respondents. Hence the hypothesis is accepted.

Educational qualification and impact of negative feedback from male worker

Table represents the ANOVA which upshots the mean and standard deviation and also test the significance of respondents' educational qualification and impact of negative feedback from male worker.

H_0: "There is no significant association between educational qualification and impact of negative feedback from male worker"

TABLE:3 ANOVA SHOWING DIFFERENCE BETWEEN EDUCATIONAL QUALIFICATION AND IMPACT OF NEGATIVE FEEDBACK FROM MALE WORKER

S.NO.	EDUCATIONAL QUALIFICATION	MEAN	SD	SIG.	F
1	School passed out	3.0000	.89443		
2	Graduation	3.2114	.77414		
3	Post-Graduation	3.2118	.74985	.168	1.713
4	Others	2.6909	.45045		

Source: Primary data

The mean values of the different educational qualification vary between 2.6909 to 3.2118.The highest mean score of 3.2118 is found among the respondents who are graduated. The lowest mean score of 2.6909 is found among the respondents whose educational qualification based on others. The highest standard deviation of .89443 is found among the respondents whose educational qualification based on school level. The lowest standard deviation of .45045 is found among the respondents who are based on others. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .168' there exists no significant association between educational qualification and impact of negative feedback from male worker. Hence the hypothesis is accepted.

Occupation and impact of receiving negative feedbackfrom male worker

Table represents the ANOVA which upshots the mean and standard deviation and also test the significance of respondents' occupation and impact of negative feedbackfrom male worker.

H_0: "There is no significant association between occupation and impact of negative feedback from other male worker"

TABLE:4 ANOVA SHOWING DIFFERENCE BETWEEN THE OCCUPATIONAL STATUS AND IMPACT OF NEGATIVE FEEDBACK FROM OTHER MALE WORKER.

S.NO.	OCCUPATION	MEAN	SD	SIG.	F
1	Employee	3.0202	.75681		
2	Self-employed	3.5040	.71442	.010	4.766
3	Professionals	3.3818	.64779		

Source: Primary data

The mean values of the different occupation vary between 3.0202 to 3. 5040.The highest mean score of 3.5040 is found among the respondents who are self-employed. The lowest mean score of 3.0202 is found among the respondents who are employed. The highest standard deviation of .75681 is found among the respondents who are employed. The lowest standard deviation of .64779 is found among the respondents who are professional. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .010' there exists a significant association between occupation and impact of negative feedback from other male worker. Hence the hypothesis is rejected.

T-Test

T-test is the most commonly used to evaluate the differences in means of two groups.

Difference between marital status and impacts of negative feedback from male worker

Table represents the t-Test which upshots the mean and standard deviation and also test the significance of respondents' marital status and impacts of receiving negative feedback from male workers.

H_0: "There is no significant association between marital status and impacts of negative feedback from male worker"

TABLE:5 (A) SHOWING A DIFFERENCE BETWEEN MARITAL STATUS AND IMPACT OF NEGATIVE FEEDBACK FROM OTHER GENDER

Marital status	Impact of negative feedback			
	Mean	S.D.	SIG.	T
Married	3.1299	.77891	.608	
Unmarried	3.2143	.71166		.514

Source: primary data

From the above table, the highest mean value is found among unmarried (3.2143), hence it is clear that the respondents who are unmarried have higher level of impacts on negative feedback when compared to married respondents. The lowest mean value of 3.1299 is found among the married respondents. The highest standard deviation of .77891 is found among the married respondents. The lowest standard deviation of .71166 is found among unmarried respondents. The t-test result shows that at 5 percent level of significance, with the 'significant value of .608' there exists no significant association between marital status and impact of negative feedback from male worker. Hence the hypothesis is accepted.

Age and reaction on criticism faced by the respondent received from other women co-workers-anova

Table represents the ANOVA which upshots the mean and standard deviation and also test the significance of respondents age and reaction on criticism faced by the respondent received from other women co-worker.

H_0: "There is no significant difference between age and reaction on criticism faced by the respondent from other women co-worker"

TABLE:6 ANOVAS OWING DIFFERENCE BETWEEN THE AGE AND REACTION ON CRITICISM FACED BY THE RESPONDENT FROM OTHER WOMEN CO-WORKER

S.NO.	AGE (in years)	MEAN	SD	SIG.	F
1	20 to 30	3.4400	.47294	.671	.517
2	31 to 40	3.3925	.59738		
3	41 to 50	3.5600	.78631		
4	51 & Above	3.6000	.56569		

Source: Primary data

The mean values of the different age groups vary between 3.3925 to 3.6000.The highest mean score of 3.6000 is found among the respondents who are in the age group of 51 and above years.

The lowest mean score of 3.3925 is found among the respondents who are in age group of 31 to 40 years. The highest standard deviation of .78631 is found among the respondents who are in age group of 41 to 50 years. The lowest standard deviation of .56569 is found among the respondents who are in the age group of 51 and above years. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .671' there exists no significant association between age and reaction on criticism faced by the respondent from other women co-worker. Hence the hypothesis is accepted.

Experience and reaction on criticism faced by the respondent received from other women co-workers-anova

Table represents the ANOVA which upshots the mean and standard deviation and also test the significance of respondent's experience and reaction on criticism faced by the respondent from other women co-worker.

H_0: "There is no significant difference between experience and reaction on criticism faced by the respondents from other women co-workers"

TABLE: 7 ANOVA SHOWING DIFFERENCE BETWEEN EXPERIENCE AND REACTION ON CRITICISM FACED BY THE RESPONDENT FROM OTHER WOMEN CO-WORKER.

S.NO.	EXPERIENCE	MEAN	SD	SIG.	F
1	Less than 5 years	3.4250	.49736		
2	6 to 10 years	3.3829	.56019		
3	11 to 15 years	3.5533	.70600	.669	.520
4	16 & above years	3.4000	.67330		

Source: Primary data

The mean values of the different experience groups vary between 3.3829 to 3.5533.The highest mean score of 3.5533 is found among the respondents who are experienced 11 to 15 years. The lowest mean score of 3.3829 is found among the respondents whose experience is about 6 to 10 years. The highest standard deviation of .70600 is found among the respondents whose experience ranges from 11 to 15 years. The lowest standard deviation of .49736 is found among the respondents who experienced less than 5 years. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .669' there exists no significant association between experience and reaction on criticism faced by the respondent from other women co-worker. Hence the hypothesis is accepted.

Educational qualification and reaction on criticism faced by the respondent from other women co-workers-anova

Table represents the ANOVA which upshots the mean and standard deviation and also test the significance of respondents' educational qualification and reaction on criticism faced by respondents from other womenco-workers.

H_0: "There is no significant association between educational qualification and reaction on criticism faced by the respondent from other women co-workers"

TABLE: 8 ANOVA SHOWING DIFFERENCE BETWEEN THE EDUCATIONAL QUALIFICATION AND REACTION ON CRITICISM FACED BY THE RESPONDENTS FROM OTHER WOMEN CO-WORKERS.

S.NO.	EDUCATIONAL QUALIFICATION	MEAN	SD	SIG.	F
1	School passed out	3.0800	.72541		
2	Graduation	3.4629	.54750	.175	1.681
3	Post Graduation	3.4588	.57108		
4	Others	3.6000	.52915		

Source: Primary data

The mean values of the different educational qualification groups vary between 3.0800 to 3. 6000.The highest mean score of 3.6000 is found among the respondents who are based on other types of educational qualification. The lowest mean score of 3.0800 is found among the respondents whose educational qualification is about school level. The highest standard deviation of .72541 is found among the respondents whose qualified school level. The lowest standard deviation of .52915 is found among the respondents based on other types of educational qualification. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .175' there exists no significant association between educational qualification and reaction on criticism faced by the respondents from women co-workers. Hence the hypothesis is accepted.

Occupational status and reaction on criticism faced by the respondent received from other women co-workers-anova

Table represents the ANOVA which upshots the mean and standard deviation and also test the significance of respondent's occupation and reaction on criticism faced by the respondent from other women co-workers.

H_0: "There is no significant association between occupation and reaction on criticism faced by the respondents from other women co-workers"

TABLE: 9 ANOVA SHOWING DIFFERENCE BETWEEN OCCUPATION AND REACTION ON CRITICISM FACED BY THE RESPONDENTS FROM OTHER WOMEN CO-WORKERS.

S.NO.	OCCUPATION	MEAN	SD	SIG.	F
1	Employee	3.4697	.51354		
2	Self-employed	3.3600	.72111	.694	.366
3	Professionals	3.4182	.68384		

Source: Primary data

The mean values of the different occupation groups vary between 3.3600 to 3.4697. The highest mean score of 3.4697 is found among the respondents who are employed. The lowest mean score of 3.3600 is found among the respondents who are self employed. The highest standard deviation of .72111 is found among the respondents whose occupation is self-employed. The lowest standard deviation of .51354 is found among the respondents who are employed. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .694' there exists no significant association between occupation and reaction on criticism faced by the respondent from other women co-workers. Hence the hypothesis is accepted.

T-Test

T-test is the most commonly used to evaluate the differences in means of two groups

Difference between marital status and reaction on criticism faced by the respondent from other women co-workers

Table represents the t-Test which upshots the mean and standard deviation and also test the significance of respondents' marital status and reaction on criticism faced by the respondents from other womenco-workers.

H_0: "There is no significant association between marital status and reaction on criticism faced by the respondents from other women co-workers".

TABLE: 10(A) SHOWING A DIFFERENCE BETWEEN MARITAL STATUS AND REACTION ON CRITICISM FROM OTHER WOMEN EMPLOYEE

Marital status	Reaction on criticism			
	Mean	S.D.	SIG.	T
Married	3.4454	.57046	.938	.078
Unmarried	3.4357	.58892		

Source: primary data

From the above table, the highest mean value is found among married (3.4454), hence it is clear that the respondents who are married have higher level of reaction for criticism when compared to unmarried respondents. The lowest mean value of 3.4357 is found among the unmarried respondents. The highest standard deviation of .58892 is found among the unmarried respondents. The lowest standard deviation of .57046 is found among married respondents. The t-test result shows that at 5 percent level of significance, with the 'significant value of .938' there exists no significant association between marital status and reaction on criticism faced by the respondents from womenco-workers. Hence the hypothesis is accepted.

Age and mind set of the respondent when negative feedback expressed by junior colleagues-anova

Table represents the ANOVA which upshots the mean and standard deviation and also test the significance of respondents age and mind set ofthe respondent when negative feedback expressed by junior colleagues.

H_0: "There is no significant difference between age and mind set of the respondent when negative feedback expressed by junior colleagues"

TABLE: 11 SHOWING DIFFERENCE BETWEEN AGE AND MIND SET OF THE RESPONDENT WHEN NEGATIVE FEEDBACK EXPRESSED BY JUNIOR COLLEAGUES

S.NO.	AGE(in years)	MEAN	SD	SIG.	F
1	20 to 30	3.3240	.56841	.056	2.586
2	31 to 40	3.5509	.52901		
3	41 to 50	3.6267	.51750		
4	51 & Above	3.7429	.51270		

Source: Primary data

The mean values of the different age groups vary between 3.3240 to 3.7429.The highest mean score of 3.7429 is found among the respondents who are in the age group of 51 and above years. The lowest mean score of 3.3240 is found among the respondents who are in age group of 20 to 30 years. The highest standard deviation of .56841 is found among the respondents who are in age group of 20 to 30 years. The lowest standard deviation of .51270 is found among the respondents who are in the age group of 51 and above years. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .056' there exists no significant association between age and mind set of the respondent when negative feedback expressed by junior colleagues. Hence the hypothesis is accepted.

Experience and mind set of the respondent when negative feedback expressed by junior colleagues

Table represents the ANOVA which upshots the mean and standard deviation and also test the significance of respondents 'experience and mind set of the respondent when negative feedback expressed by junior colleagues.

H_0: "There is no significant difference between experience and mind set of the respondent when negative feedback expressed by junior colleagues"

TABLE: 12 SHOWING DIFFERENCE BETWEEN EXPERIENCE AND MIND SET OF THE RESPONDENT WHEN NEGATIVE FEEDBACK EXPRESSED BY JUNIOR COLLEAGUES

S.NO.	EXPERIENCE	MEAN	SD	SIG.	F
1	Less than 5 years	3.3679	.59791		
2	6 to 10 years	3.5486	.53653	.201	1.568
3	11 to 15 years	3.5733	.45100		
4	16 years & above	3.7500	.64031		

Source: Primary data

The mean values of the different experience groups vary between 3.3679 to 3.7500.The highest mean score of 3.7500 is found among the respondents who are experienced 16 and above years. The lowest mean score of 3.3679 is found among the respondents who are experienced less than 5 years. The highest standard deviation of .64031 is found among the respondents who are experienced 16 and above years. The lowest standard deviation of .45100 is found among the respondents who are experienced 11 to 15 years. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .201' there exists no significant association between experience and mind set of the respondent when negative feedback expressed by junior colleagues. Hence the hypothesis is accepted.

Educational qualification and mind set of the respondent when negative feedback expressed by junior colleagues

Table represents the ANOVA which upshots the mean and standard deviation and also test the significance of respondents 'educational qualification and mind set of the respondent when negative feedback expressed by junior colleagues.

H_0: "There is no significant difference between educational qualification and mind set of the respondent when negative feedback expressed by junior colleagues"

TABLE: 13 SHOWING DIFFERENCE BETWEEN EDUCATIONAL QUALIFICATIONS AND MIND OF NEGATIVE FEEDBACK EXPRESSED BY JUNIOR COLLEAGUES

S.NO.	EDUCATIONAL QUALIFICATION	MEAN	SD	SIG.	F
1	School passed out	3.3800	.49396		
2	Graduation	3.5086	.53588		
3	Post-Graduation	3.5353	.52274	.349	1.107
4	Others	3.2182	.77177		

Source: Primary data

The mean values of the different educational qualification groups vary between 3.2182 to 3. 5353.The highest mean score of 3.5353 is found among the respondents whose educational qualification is post graduate. The lowest mean score of 3.2182 is found among the respondents who are based on the others. The highest standard deviation of .77177 is found among the respondents who are based on others. The lowest standard deviation of .49396 is found among the respondents whose educational qualification is school level. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .349' there exists no significant association between educational qualification and mind set of the respondent when negative feedback expressed by junior colleagues. Hence the hypothesis is accepted.

Occupation and mind set of the respondent when negative feedback expressed by junior colleagues

Table represents the ANOVA which upshots the mean and standard deviation and also test the significance of respondent's occupation and mind set of the respondent when negative feedback expressed by junior colleagues.

H_0: "There is no significant difference between occupation and mind set of respondent when negative feedback expressed by junior colleagues"

TABLE: 15 SHOWING DIFFERENCE BETWEEN OCCUPATION AND MIND OF NEGATIVE FEEDBACK EXPRESSED BY JUNIOR COLLEAGUES

S.NO.	OCCUPATION	MEAN	SD	SIG.	F
1	Employee	3.4135	.57588		
2	Self-Employed	3.6320	.46790	.105	2.299
3	Professional	3.6727	.46710		

Source: Primary data

The mean values of the different occupation groups vary between 3.4135 to 3.6727.The highest mean score of 3.6727 is found among the respondents who are professional. The lowest mean score of 3.4135 is found among the respondents who are employed. The highest standard deviation of .57588 is found among the respondents who are employed. The lowest standard deviation of .46710 is found among the respondents who are professional. The ANOVA result shows that at 5 percent level of significance, with the 'Significant value of .105' there exists no significant association between occupation and mind set of the respondent when negative feedback expressed by junior colleagues. Hence the hypothesis is accepted.

T-Test

T-Test is the most commonly used to evaluate the differences in means of two groups.

Difference between marital status and mind set ofthe respondents at the time of negative feedback expressed by junior colleagues

Table represents the t-Test which upshots the mean and standard deviation and also test the significance of respondents' marital status and mind set ofthe respondent at the time of negative feedback expressed by junior colleagues.

H₀: "There is no significant difference between marital status and mind set of the respondent at the time of negative feedback expressed by junior colleagues".

TABLE: 16 (A) SHOWING A DIFFERENCE BETWEEN MARITAL STATUS AND MIND SET OF RESPONDENTS AT THE TIME OF NEGATIVE FEEDBACK EXPRESSED BY JUNIOR COLLEAGUES

Marital status	Respondents mind set when negative feedback expressed by junior colleagues			
	Mean	S.D.	SIG.	T
Married	3.4928	.56867	.633	
Unmarried	3.4357	.5495		.479

Source: primary data

From the above table, the highest mean value is found among married (3.4928), hence it is clear that the respondents who are married have high level mind set when compared to unmarried respondents. The lowest mean value of 3.4357 is found among the unmarried respondents. The highest standard deviation of .56867 is found among the married respondents. The lowest standard deviation of .5495 is found among unmarried respondents. The t-test result shows that at 5 percent level of significance, with the 'significant value of .633' there exists no significant association between marital status and mind set of respondents at the time of negative feedback expressed by junior colleagues. Hence the hypothesis is accepted.

Friedman's ranking analysis

Ranking refers to the data transformation in which numerical or ordinal values are replaced by their rank when data are sorted. Ranks are assigned to the values in ascending order (in some other cases, descending ranks are used). Ranks are related to the indexed list of order statistics, which consist of the original data set rearranged into ascending order.

Factors	Rank	Mean
I agree but never express	4	3.09
Will cry alone	5	3.64
I take it as fun	2	2.74
Indirectly expect the closed one should be supportive	3	3.00
React based on the way he/she present	1	2.54

Friedman's ranking analysis

Source: primary data

Test Statistics	
N	125
Chi-Square	34.400
Df	4
Asymp. Sig.	.000
a. Friedman Test	

From the above table, it is clearly shown that the respondent react based on the way others express the negative feedback has the highest mean value of 2.54 and it is ranked higher by the respondents, followed by accepting the critics as a fun with mean value of 2.74, subsequently Indirectly expecting the closed one should be supportive while receiving negative feedback with a mean value of 3.00, after that accepting the criticism but never express it out with a mean value of 3.09, finally prompting the negative feedback by cry alone with a mean value of 3.64 is ranked the least by the respondents.

4. DISCUSSION

Demographic profile does not affect the employees when they receive the negative feedback from anybody else but position of the employee in the organisation has high impact by accepting according to the hierarchy. From the above study, the respondents don't bother who gives the negative feedback but they expect the better modulation to convey the condemnation.

5. CONCLUSION

In the existing research, women are strong enough to face the critics. A womanhood whether they are married or a spinster who enter into a workplace they turn as a learner and they are ready to accept their criticism from anybody in the organisation but they highly give importance to the position of the colleague who provide negative feedback. Hence, they expect their higher official to start with the positive notes or by giving some indirect hints about the mistake done by them which helps them to improve the work outline and give good self-assurance.

LIMITATION OF THE STUDY

As the research embraces of psychological queries, the respondents are hesitating to give a true reply for the same to express them shelves as they are bold enough to face the situation when they receive negative feedback.

Scope of Further research

This paper covers very a smaller number of respondents in future the researchers shall have large numbers of samples to have better result and shall extern the emotional factors to give a profound sagacity to the topic.

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REGIONAL SPREAD OF HUMAN DEVELOPMENT IN ORISSA: AN INTER-DISTRICT ANALYSIS

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ABSTRACT

The above trend in IMR in different districts vis-à-vis other demographic parameters suggest that IMR of different districts are either not computed properly or there is some problem in data collection related to birth and mortality data of infants. The Government of Orissa published the Human Development Report of Orissa in 2005. In this Report, Human Development indices of 30 districts are computed. Different components of Human Development Index are computed in Orissa Human Development Report (HDR Orissa). The National Human Development Report prepared by the Planning commission has taken life expectancy at age one, and infant mortality rate , with the weight 0.65 and 0.35 respectively to arrive at the health indices of different states of India. In the case of Orissa HDR the health indices are computed taking Infant Mortality Rate of different districts. One important and genuine contribution of Orissa HDR is the Reproductive Health Index (RHI). For all the districts RHI have been computed taking six reproductive health parameter of the women as discussed in the beginning of the essay. Further empirically it has also been verified the strong influence of female literacy on IMR. If we look into the relationship in the table below for many of the district's the established relationship between the variables is not there. The basic purpose of preparation of Human Development Report is to know whether the benefit of economic progress is getting translated in to better quality of life or not. In the second category of the districts female literacy is more than 50 percent. Here CBR ranges in between 18.8 (Jagatsingpur) and 24.8 (Bhadrak), and TFR in between 2.3 (Jagatsingpur) and 2.9 (Bhadrak and Angul). In eight districts IMR is more than 90.

KEYWORDS: *Respectively, Preparation, Influence*

INTRODUCTION:

The basic aim of Human Development approach to the theory of Development is to enhance human capability. The three basic components of Human Development Index are, (i) Income Index, (ii) Education Index and (iii) Health Index. United Nation Development Programme (UNDP) has been publishing Human Development Report every year since 1990 and constructing Human Development Index (HDI) of all the countries. Following UNDP, Planning Commission published the Human Development Index of all the states in India in 2002.There after almost all the states in India published their Human Development Report and constructed their district level HDI.

The Government of Orissa published the Human Development Report of Orissa in 2005. In this Report, Human Development indices of 30 districts are computed. Different components of Human Development Index are computed in Orissa Human Development Report (HDR Orissa). Education index is computed from literacy rate and gross enrolment ratio of children in the age group 6-14. Income index is computed taking the per capita District Domestic product and Health index, from Infant Mortality Rate. The Reproductive Health Index, which is a completely new index from UNDP's framework, is computed taking six health related issues of women's, like (i) percentage of women married below 18 years of age, (ii) percentage of women having third or higher order birth,(iii) percentage of women having Reproductive Tract infection,(iv) percentage of women having delivery and/or post delivery complications,(v) percentage of women receiving non medical attention at Birth and (vi) percentage of women having contraceptive side effects. Gender Development Index is computed taking the traditional measure of UNDP.

On the basis of the Human Development Indices, the six backward districts (where the HDI is less than 0.5) are Malkangiri, Kandhamal, Gajapati, Koraput, Nabarangpur and Rayagada, and the advanced districts (where the HDI is greater than 0.6) are Kalahandi, Kendrapara, Mayurbhanj, Bhadrak,Puri, Angul, Deogarh, Sundergarh, Cuttack, Jharsuguda, and Khurdha.

While reading the report the paradox which strikes the readers is that-in 13 districts, relatively lower per-capita District Domestic product (DDP) is associated with relatively high HDI values and in case of 12 districts, relatively high per-capita DDP is associate with lower HDI values (HDR Orissa 2004,p.197). On the basis of this paradox, Kalahandi and Mayurbhanj are placed in the group of high human developed districts with HDI values of 0.606 and 0.639 respectively. The health, education and income indices of Kalahandi are 0.763, 0.583, and 0.724, and that of Mayurbhanj are 0.782, 0.489 and 0.467 respectively, whereas in the top most human developed district Khurdha, the indices are 0.724, 0.639, and 0.845. Here the paradox lies – Are the districts of Kalahandi and Mayurbhanj so developed in terms of their health status? Not only Kalahandi and Mayurbhanj are better placed than Khurdha in terms of ranking in health indices, but also the HDI of the districts like Deogarh and Nuapara are pushed up, only because of their better Health indices.

The basic purpose of preparation of Human Development Report is to know whether the benefit of economic progress is getting translated in to better quality of life or not. Further there are two purposes behind the preparation of State HDR. Firstly to map the level of Human Development at a more decentralized level and secondly to assist the planners in shaping the future Human Development policies of the state governments[1].Perhaps this is the basic purpose, why United Nation Development Programme with collaboration with Planning Commission has spent a huge

sum of money in the preparation of State HDRs. If at all the future Human Development policies of Government of Orissa is to be guided by this Report, then in terms of health expenditure a lesser amount is to be spent in the districts of Kalahandi and Mayurbhanj as compared to the districts like Khurdha,Cuttack,Ganjam,and Sambalpur where the health infrastructure is quite developed. Therefore, it is germane to understand the basis on which the health indices of Orissa HDR are based on.

Basis of Health Index of Orissa HDR

The Human Development movement pioneered by UNDP emphasises the potentials of long and healthy lives, the acquiring of knowledge and education, and the resources needed for a decent level of living. UNDP has used Life Expectancy at birth (LEB) as a proxy measure to quantify the meaning of the terms "long and healthy lives" in its different Human Development Reports. The National Human Development Report prepared by the Planning commission has taken life expectancy at age one, and infant mortality rate , with the weight 0.65 and 0.35 respectively to arrive at the health indices of different states of India. In the case of Orissa HDR the health indices are computed taking Infant Mortality Rate of different districts. Here it is worthwhile to mention that LEB is an overall measure of Health condition of the population, where as IMR reflects the health condition of a subset of the population. This is the reason why the National HDR has assigned a higher weight to LEB as compared to IMR in the computation of Health indices of the different states. The Orissa HDR has stated two conflicting statements on the availability of data on LEB at the districts level. In page 233 it is stated that LEB figures for each district are not available and the page 195 in the note of the table 8.1, the report has accepted the availability of data on LEB for all the districts, from where it has taken the IMR figures for computation of health indices. The argument for choosing IMR instead of LEB for the purpose of computing health indices by the Orissa HDR is given as –"there occurs a strong positive correlation between IMR and LEB" and to compute male and female health indices separately. Here the Orissa HDR has committed a fundamental flaw in not taking the LEB while computing the health indices of the districts.

One important and genuine contribution of Orissa HDR is the Reproductive Health Index (RHI). For all the districts RHI have been computed taking six reproductive health parameter of the women as discussed in the beginning of the essay. RHI bear a positive correlation with Income Index (0.522) and Education Index (0.409). Common sense of Demography postulates that reproductive health condition of the women should be strongly negatively correlated with IMR. Surprisingly RHI and IMR in Orissa HDR are feebly correlated (-0.15). Therefore IMR statistics in the districts of Orissa as reported in Orissa HDR does not reflect the true health status of the people.

Pattern of Demographic Indicators in Orissa

Empirical demography argues the existence of a positive correlation between Infant Mortality Rate, and Total Fertility Rate (TFR) and Crude Birth Rate (CBR). Further empirically it has also been verified the strong influence of female literacy on IMR. If we look into the relationship in the table below for many of the districts the established relationship between the variables is not there. The table below has classified the districts into two groups. In Group-I districts the female literacy is less than 50 percent and in group-II the female literacy is more than 50 percent.

TABLE-1

Group-I Districts				Group-II Districts				
	CBR	FLIT	TFR	IMR		CBR	FLIT	TFR	IMR
Ganjam	24	47.7	2.9	107	Khurda	20.3	71.06	2.4	57
Deogarh	25.5	47.56	3.1	49	Jagatsingpur	18.8	69.94	2.3	125
Sonepur	22.7	47.28	2.8	96	Puri	20.2	67.8	2.4	73
Keonjhar	25.3	46.71	3	117	Kendrapara	21.8	67.29	2.6	77
Boudh	27.4	39.78	3.2	104	Cuttack	19.6	66.16	2.4	63
Balangir	22.9	39.27	2.8	97	Bhadrak	24.8	63.62	2.9	65
Mayurbhanj	26	38.28	3	48	Jajpur	21.8	61.45	2.6	118
Kandhamal	30.8	36.19	3.6	169	Balesore	25.2	59.57	2.9	101
Kalahandi	26.8	29.56	3.2	51	Jharsuguda	21.1	59.23	2.6	71
Gajpati	27.6	28.91	3.3	143	Dhenkanal	21.8	58.55	2.7	97
Nuapada	25.9	26.01	3	62	Nayagarh	20.9	58.1	2.5	98
Koraput	27.3	24.81	3.1	136	Angul	23.4	56.05	2.9	95
Rayagada	28.5	24.31	3.3	131	Sambalpur	21.2	54.79	2.6	102
Malknangiri	28.8	21.28	3.3	151	Sundergarh	22.8	54.25	2.7	62
Nabarangapur	30	21.02	3.4	117	Bargarh	20.6	50.03	2.5	100

Definations- CBR is Crude Birth Rate, FLIT is female Literacy Rate, TFR is Total Fertility Rate,IMR is Infant Mortality Rate.

Sourse:1) IMR and FLIT refers to the period 1999 and 2001 respectively and are taken from Orissa HDR 2004

2) CBR and TFR refers to the period 2001 and are taken from Guilmoto,C.Z and S Irudaya Rajan.(2002)

A bird's eye view on the table reveals that in the Group-I districts the female literacy ranges in between 21.02 (Nabarangpur) and 47.47 (Ganjam), CBR in between 22.7 (Sonepur) and 30 (Nabarangpur), and TFR in between 2.8 (Sonepur) and 3.6 (Kandhamal).The districts like Nabarangpur, Malkangiri, Rayagada Koraput, Gajapati, Kandhamal occupy lower ranks in terms of female literacy and also exhibit high IMR, CBR and TFR. The districts, Ganjam, Keonjhar, Boudh, Sonepur and Bolangir have a relatively high female literacy and a relatively low CBR, TFR and IMR. Unexpectedly three districts namely Deogarh, Kalahandi and Mayurbhanj display a very low IMR with high CBR and TFR, and low female literacy, as compared to other low female literate districts and high female literate districts like Khurdha, Jagatsingpur, Puri, Kendrapara, Cuttack. This is one paradox which is not explained in the Orissa HDR.

In the second category of the districts female literacy is more than 50 percent. Here CBR ranges in between 18.8 (Jagatsingpur) and 24.8 (Bhadrak), and TFR in between 2.3 (Jagatsingpur) and 2.9 (Bhadrak and Angul). In eight districts IMR is more than 90. Surprisingly the district Jagatsingpur which has the lowest level of CBR and TFR and second highest level of female literacy, and has an IMR value of 125 which is much more than that of Mayurbhanj and Kalahandi. A similar trend is also observed in the districts of Balesore and Jajpur, where a high

value of IMR (more than 100) is associated with a high value of female literacy and considerably lower value of CBR and TFR. This is the second paradox in the HDR of Orissa.

CONCLUSION

The above trend in IMR in different districts *vis-à-vis* other demographic parameters suggest that IMR of different districts are either not computed properly or there is some problem in data collection related to birth and mortality data of infants. The evidences given above suggest that for many districts the health indices do not reflect the true health condition of the population. For the Human Development Index, the health indices play a crucial role with a weight of 0.33. Ranking of the districts on the basis of biased health indices biases the HDI of the districts. Therefore, the planners must enter deep into the matter before taking any decision on Human Development policies of Orissa.

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A STUDY ON CONSUMER BEHAVIOUR TOWARDS GREEN PRODUCTS WITH REFERENCE TO MALAPPURAM DISTRICT

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ABSTRACT:

Environmentalism is a social movement regarding concerns for environmental protection and improvement of health of the environment. In recent years a common word is popular as eco-friendly. Everyone seems to love the nature. In this 21ˢᵗ century, world is facing a lot of environmental problems related to harmful products. Our mother earth is suffering from many environmental issues and globally the governments are also thinking about various programmes of environmental protection. Companies are wilfully or legally forced to adopt the policies to safeguard the environment and serve the society. Well educated customers are emerging as a new force to create an environmental sustainable world. This situation developed the importance of green product and green marketing. Green marketing is the marketing of environmentally friendly products and services. . In this context this study seeks to know attitude of consumers towards green products and find out the factors influencing the consumer behaviour.

KEYWORDS: Environmentalism, Eco-Friendly, Green Marketing, Green Product, Consumer Behaviour.

1. INTRODUCTION

Over the past few years, the demand for green products in Indian has been growing significantly due to the increased interest in the environment. Today, Consumers are increasingly "thinking green" and are willing to pay more for environmentally friendly products. Consumers buying behaviours are continuously changing as a result of the availability of best alternatives. Products are chosen for numerous reasons. Overall, the buying process is extremely fast-paced today. Hence, the present study is conducted to explore the extent of the impact of consumers' buying behaviour towards the marketing of green products in malappuram district.

Due to the increased importance of green marketing, firms continue to launch various kinds of green packaging programs through the introduction of recyclable and reusable packages. Green marketing is considered as one of the major trends in modern businesses. Today, environmental or green marketing is a strategic marketing approach of business organisations. Consumers are therefore, becoming more sensitive in their environmental attitudes, preferences, and purchases. The desire of consumers to purchase eco-friendly products and services are increasing. Customers are more aware about environmental issues and consequently choose products that do not damage the environment over less environmentally friendly products, even if they cost more. Business firms today are faced with consumers who are environmentally conscious when making a purchase.

Eco-friendly products are sometimes more expensive to purchase than other alternative products. Green consumers have been shown to be willing to pay a higher price for environmentally friendly products, which is a best opportunity for companies as well as governments looking to make eco-friendly policy changes. Thus, the increasing number of consumers who choose and are willing to buy environmental friendly products are creating opportunity for businesses that are using "eco-friendly "or "environmentally friendly "as a component of their value proposition. Businesses that offer products which are manufactured and designed with an environmental marketing mix have a long term competitive advantage. A better understanding of consumers' buying behaviour will increase the market opportunities. Behaviour has a strong impact on consumer purchases. Behaviour is the main factor in the consumer purchasing process and also influences the perception of a consumer. Understanding of consumer behaviour enables businesses to attract new consumers and adapt their products or services according to their needs and wants. There are various factors that affect the purchase decision process of consumers. It has become very essential to know the factors that create the desire of consumers to purchase a product. Hence, the present study contributes to the field by investigating and exploring the extent of the impact of consumers buying behaviour towards the marketing of green products.

2. STATEMENT OF THE PROBLEM

Nowadays, we all facing a lot of environment problems related to harmful products. Our mother earth is suffering from many environmental issues and globally the governments are also thinking about environmental protection at their priority level. The companies are willfully or legally forced to adopt the policies to safeguard the environment and serve the society. These situations lead us to think about working on green marketing.

Green marketing is one of the major areas of interest for marketers as it may provide competitive advantage. It is an important competitive strategy used by most of the companies. While designing the products or services, the marketer not only considers the needs, taste and preference of the consumers but also identify the other factors influencing their purchase decision like environmental knowledge, environmental concerns and credibility of environmental advertising etc. Customers are more interested to create an environmentally sustainable world. Green marketing will be successful only if the marketer understands the consumer behaviour properly. In this context it is essential to study the consumer behaviour towards green products and find out the factors influencing the consumer behaviour.

3. OBJECTIVES

- To assess the awareness of consumers regarding green products.
- To know the important factors influencing consumer behaviour towards green products.

- To identify obstacles that respondents perceive to come in the way of adopting green lifestyle.

4. HYPOTHESES

- Education level of a consumer does not affect his buying of green products.
- Price is the most restricting factor for the purchase of green products.

5. RESEARCH METHODOLOGY:

RESEARCH DESIGN: The study was conducted based on the responses of sample respondents. Through this research, researcher describes the online buying behaviour among internet users in Malappuram district. Therefore, this study is Descriptive in nature.

SAMPLING DESIGN: Convenient sampling is adopted .The data will be collected from a sample of 95 respondents from Malappuram district.

SOURCES OF DATA: Primary data were collected from users of online shopping by using structured questionnaire. Secondary data were collected from published sources like textbooks, journals, articles, research report, internet, etc.

TOOLS FOR ANAYSIS:

- Mean Score
- Factor Analysis
- Percentage analysis
- Chi-square

6. LIMITATIONS:

The researcher had the following limitations while conducting the study.

➢ Sampling technique used in a selection of sample is convenience sampling .The study suffers from all limitations associated within this sampling plan.
➢ Sample size was restricted to 95 due to time constrains.
➢ This study was carried out only among the peoples of malappuram district.

7. REVIEW OF LITERATURE

▶ **Faizans Zafar Sheikh, Ashfaq Ahmed Mirza, Bilal Asghar (2014)** This paper tells about the customer of our market how they will buy green products and how they will make decision while purchasing a green product. Eco-friendly good are more welcomed by customers who are environmentally responsible. It tells what factor are affecting green behaviour and decision making of customers. The basic objective of this paper was to see how consumer will make its green purchase decision and behaviour toward green products. Approach: Questionnaire was used for this paper. The sample was of 200 respondents male and female both within the age range of 18-55. Data was collected from businessmen, jobholder and students with the family minimum income RS. 10000. And maximum is more than RS. 50000. Findings: Findings shows that there is strong positive relationship between consumer green behaviour and price, quality and green marketing while brand and gender difference has very weak relationship with consumer green behaviour. Practical implications: These results will be helping for the managerial implications. Industries can use this for

future strategies and get know how about the customer intention to buy green products. And it will also tell that what is more important near to customer about green products.

▶ **Goswami(2013)**This paper is an attempt to understand awareness of consumers' towards green marketing and green branding along with exploring the concept of green marketing. Green marketing is a tool for protecting the environment for the future generation it has a positive impact on environmental safety. Because of the growing concern of environmental protection, there is an emergence of a new market which is the green market. For companies to survive in this market, they need to go green in all aspect of their business. Consumers want to identify themselves with companies that are green compliant and are willing to pay a premium for a greener life style. As such, green marketing is not just an environmental protection tool but also, a marketing strategy.

▶ **korlekar(2012),** there is a scope for in-depth studies on green marketing to be conducted in developing countries like India, not only on understanding consumers' perception but to study the detailed profile of such consumers who have a more positive attitude towards green marketing and green products.

▶ **Sourabh Bhattacharya (2011)** Study states that the green marketers in India should carry out heavy promotional campaigns, because majority of the Indian consumers are price-sensitive and are not sure about the quality of green products.

▶ **The study by B. S. Bodla (2011)** observed that it is not a smooth sailing of the ship carrying green products and services in the sea of intense competition. The boat can encounter an iceberg of increased cost and prices and inflated claims of greenness‖.

▶ **Dileep Kumar (2010)** analysed that how far the hotel business organizations in the tourism sector meet the customer's needs through green marketing effort and how they influence the consumer behaviour and their satisfaction by inducing environmentally responsible behaviour

▶ **Vijay Jain et al (2010**) summarized the three C's process for green marketing implementation as Consumer Value Positioning, Calibration of Consumer Knowledge and Credibility of product.

▶ **ArteeAggrawal et al (2010)** outlined that Eco-responsible (Green) organizations have a tough task to optimise their product offering mix in such a way so that they can not only attract customer towards them but also can have their products price competitive.

▶ **Ramakishen et al (2010)** understood that the factors for going green as Goodwill, Differentiation, Competition, Pressure Groups, Government Pressure, Customer Demand, New Market Entry.

▶ **Biji P Thomas & H Nanje Gowda (2010**) highlighted that environmentally friendly buildings are also known as Green Buildings. Some of the visible ―green‖ features, such as exterior window shading, good day lighting, green (landscaped) roofs, and natural ventilation chimneys are often considered as the signals of being green.

▶ **The study by Murugesan (2008)** underlined that firms may use green marketing as an attempt to address cost or profit related issues. Disposing of environmentally harmful by-products, such as polychlorinated biphenyl contaminated oil are becoming increasingly costly and the firms that can reduce harmful wastes may incur substantial cost savings.

▶ **According to Roger AKerin et al (2007),** Green Marketing takes many forms. It comes from product development opportunities that emanate both from consumer research and its ―Pollution Prevention Pays‖ program. This program solicits employee suggestions on how to reduce pollution and recycle materials.

▶ **Charles W Lamb et al (2004)** explained that ―Green Marketing‖ has also become an important way for companies to build awareness and loyalty by promoting a popular issue. By positioning their brands as ecologically sound, marketers can convey concern for the environment and society as a whole.

8. DATA ANALYSIS AND INTERPRETATION:

PROFILE OF THE RESPONDENTS		
VARIABLE	**CATEGORY**	**PERCENTAGE**
GENDER	MALE	58
	FEMALE	42
EDUCATION	SSLC	13.684
	PLUS TWO	16.842
	GRADUATE	37.894
	POST GRADUATE	31.578
OCCUPATION	Govt Employee	16.842
	Professionals	8.421
	Private Employee	41.052
	Business	29.473
	Others	4.210
AGE	20-25	20
	25-35	46
	35-45	20
	Above 45	14
INCOME	5000-10000	7.368
	10000-15000	23.157
	15000-25000	25.263
	Above 25000	44.210

INTERPRETATION: The above table shows that 58%of the total respondents are male and 42% are females. Most of the respondents are under graduate i.e., 38%. Classification based on occupation shows, 17% of the respondents coming under the Govt employee category, 8% in professionals, 41% percentage in private employee, 30% in business and 4% of respondents belong to other category. Classification based on age shows that, Majority of respondent (46%) comes under the age class of 25 to 35 and only 14 percentages comes under the class of above 45. While interpreting income level of respondent, it is clear 44% of the respondents are having an income of Rs. 25000 and more but the number of respondents with income 5000-10000 is only 8%.

VARIABLE	CATEGORY	PERCENTAGE
AWARENESS LEVEL OF ENVIRONMENT FRIENDLY PRODUCT	Yes	77.894
	No	22.105
RESPONDENTS ON THE BASIS OF PURCHASE OF ENVIRONMENT FRIENDLY PRODUCT	**Purchase**	**72.631**
	Not purchase	**27.368**
DURATION OF USAGE OF GREEN PRODUCTS	5-7 times in a week	22.105
	1-2 times in a week	35.789
	2-3 times in a week	9.473
	Once in a month	12.631
	Less than once in a week	20
RESPONDENTS ON THE BASIS OF FIRST GREEN PRODUCT PURCHASE	More than 5 years	32.631
	3-5 years	6.315
	1-3 years	10.526
	Last year	9.473
	Last 6 months	41.052
WHOM THE PURCHASE OF GREEN PRODUCT WILL AFFECT	You	13.684
	To Environment	33.684
	To Society	8.421
	All of the Above	38.947
	Not Sure	5.263

INTERPRETATION: The above table shows that 78% of respondents are aware about the green product and 22% are not aware about the same and 73% of the respondents are purchasing green products and 27% of the respondents are not purchasing the green products. It is also clear that the most of the respondents are using green products for 1-2 times in a week.i.e, 36 percentages. Only 9 percentages are using green products for 2-3 times in a month. The majority of respondents are using green products for about last 6 months i.e., 41%. Only 9 % are using green products for about 3-5 years. 39% of the respondents are purchasing green products for protecting themselves, to protect environment and to protect society.

TABLE SPECIFYING THE SOURCE OF INFORMATION ABOUT GREEN PRODUCTS

Sources	Percentage
Television	17
Magazine	18
Radio	6

School/Universities/Institutions	22
Outdoor Media	4
Broacher	4
Websites	7
Public	12
Others	10

INTERPRETATION: The above table shows that the respondents are getting more information about green products from schools/Universities/ Institutions and Magazines. Television is also a source to get the information about green product.

TABLE SPECIFYING THE OPINION OF RESPONDENTS THAT THERE IS ENOUGH INFORMATION AVAILABLE BEFORE PURCHASING GREEN PRODUCTS

Basis	Percentage
Yes	52
No	48
Total	100

INTERPRETATION: The above table shows that 52% of the respondents are agreeing that there is enough information about "green" features are available when buying the green products and 48% of the respondents are not agreeing about the same.

TABLE SPECIFYING THE OPINION REGARDING THE GREEN PRODUCTS

Basis	Frequency	Percentage
Non- Toxic	30	31.578
Organic/ Locally Grown	53	55.789
Biodegradable	34	35.789
Recycled	34	35.789
Energy efficient	25	26.315
Low Carbon	15	15.789

INTERPRETATION: The above table shows that 55% of respondents are most familiar with the term Organic/Locally grown which is signify that the product is green and only 15% of respondents are familiar with the term low carbon produced by green product.

TABLE SPECIFYING MOST INFLUENCING MARKETING ELEMENT ON BUYING BEHAVIOUR OF GREEN PRODUCTS

Basis	Percentage
Price	14.736
Package	15.789
Place	18.947
Promotion	2.105
All of the Above	48.421
Total	100

INTERPRETATION: It shows that most of the respondents are strongly believe that all 4 P's of marketing element (Price, Package, Place & Promotion) will equally influencing the buying behaviour of green product.

CONSUMERS ATTITUDE TOWARDS PAYING MORE MONEY ON GREEN PRODUCTS

Basis	Percentage
Enhance a quality of life	33.684
Environment protection responsibility	17.894
Potential increase of product value	4.210
Getting high level of satisfaction	44.210
Total	100

INTERPRETATION: Majority of respondents are willing to pay more for the green products as they are getting high level of satisfaction.

OPINION OF RESPONDENTS REGARDING THE OVERPRICING ON GREEN PRODUCTS

	GREEN PRODUCTS ARE OVER PRICED	GREEN PRODUCTS ARE REAL ECOLOGICAL NEED OTHER THAN MARKETING STRATEGY	UNAVAILABILITY OF GREEN PRODUCTS IS THE REASON OF LOW DEMAND&POPULARITY IN GREEN PRODUCTS
Strongly Agree	5.263	1.052	4.210
Agree	3.157	5.263	16.842
Neutral	23.157	25.263	11.578
Disagree	42.105	48.421	24.210
Strongly Disagree	26.315	20	43.157

INTERPRETATION: Most of the respondents are disagree with the statement that the green products are always overpriced.ie,42% and only 3% of respondents are agree with this statement.49% of the respondents are disagreeing with the statement that the green products are real ecological need and not just another marketing strategy. Majority (43.157%) of respondents are strongly disagreeing with the statement that lack of availability is major reason for low popularity and demand of green products.

PREFERENCE OVER VARIOUS KINDS OF GREEN PRODUCT

Items	Frequency
Personal Hygiene Products	57
Food Products	60
Clothing	26
Kitchen Utilities	23
Electronics	15
Travel Related	13
Home Products	46
Fashion Accessories	18

INTERPRETATION: From the above chart it can be interpret that most of the respondents preferred food products (60%) where as only few respondents preferred travel related products and also 57% of respondents preferred personal Hygiene Product.

OPINION REGARDING GREEN PRODUCTS :In this study opinion of respondents regarding the factors affecting green product is measured by choosing 16 variables, in order to measure the opinion of respondents 5 point likert scale is used. The values 5, 4, 3, 2 and 1 are assigned to strongly agree, agree, neutral, disagree and strongly disagree respectively.

Factors	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean Score
Healthy	54	30	4	5	2	4.35
Safety	32	36	14	10	3	3.88
Less Polluted	19	56	11	5	4	3.85
Good Taste	18	51	14	8	4	3.74
Freshness	15	45	24	8	3	3.64
Quality	21	47	16	9	2	3.8
Support Local Farmers	18	29	32	7	9	3.42
Support Eco-friendly movement	22	40	23	9	1	3.76
Not willing to support MNC	8	26	43	15	3	3.22
Saving Resources	17	43	21	11	3	3.63
Positive Image	23	31	25	15	1	3.63
Fashion	13	26	33	16	7	3.23
Save Nature	16	37	21	15	6	3.44
High Satisfaction	26	37	22	6	4	3.78
Well promoted	11	15	43	25	1	3.10
Accessibility	15	20	35	17	8	3.17
Total Mean Score						57.64
Average Mean Score						**3.6025**

INTERPRETATION: The averages mean score value is 3.6025.healthy, safety, pollution free, taste, quality, support eco-friendly movements, saving natural resource and positive image are the most powerful factors effecting green product purchase.

PERCENTAGE OF WILLINGNESSTO PAY MORE FOR GREEN PRODUCTS

Basis	Percentage
Less than 5%	20
5-10%	47.368
10-15%	15.789
More than 15%	16.842

INTERPRETATION: Majority (47%) of respondents are willing to pay 5-10% more than the conventional product, and 16% of respondents are ready to pay 10-15%.

THE EFFECT OF ECO – LABEL ON BUYING DECISION OF GREEN PRODUCT

Basis	Percentage
Yes, I would buy	47.368
I would Prefer	41.052
No , I would not buy	11.578

INTERPRETATION: The above table shows that 47% of respondents considered green label (eco-label/certifications) is one of the encouragement factor for buying green product.

MOST RESTRICTING FACTOR

There are many obstacles which consumer faces to purchase green products like high price, less income, lack of availability etc. This study attempts to find the most restricting factor from this using factor analysis. The table below shows this.

H_o = Price is the most restricting factor for the purchase of green products.

Communalities

	Initial	Extraction
A	1.000	.593
B	1.000	.597
C	1.000	.747
D	1.000	.699
E	1.000	.658
F	1.000	.837
G	1.000	.617
H	1.000	.560
I	1.000	.614
J	1.000	.707
K	1.000	.784
L	1.000	.532
M	1.000	.628
N	1.000	.729
O	1.000	.767

P	1.000	.830

Extraction Method: Principal Component Analysis.

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.153	19.705	19.705	3.153	19.705	19.705
2	2.329	14.555	34.259	2.329	14.555	34.259
3	1.647	10.296	44.555	1.647	10.296	44.555
4	1.447	9.043	53.599	1.447	9.043	53.599
5	1.234	7.712	61.311	1.234	7.712	61.311
6	1.089	6.803	68.114	1.089	6.803	68.114
7	.967	6.043	74.157			
8	.892	5.575	79.731			
9	.703	4.392	84.123			
10	.563	3.518	87.641			
11	.468	2.924	90.565			
12	.410	2.561	93.126			
13	.365	2.283	95.409			
14	.321	2.009	97.418			
15	.270	1.688	99.106			
16	.143	.894	100.000			

Component Matrix

	Component					
	1	2	3	4	5	6
High Price	0.11	-0.352	-0.107	-0.543	0.172	0.347
Less Income	0.403	-0.349	-0.097	-0.231	0.243	-0.437
Less Accessibility	0.614	-0.491	0.163	-0.106	-0.132	-0.27
Less Availability	0.625	-0.446	-0.1	-0.168	-0.25	0.094
Bad Appearance	0.331	-0.354	0.347	0.17	0.508	0.128
Less Time to look	0.417	-0.439	0.159	0.154	-0.3	0.576
Less Recognisable Label	0.439	-0.142	0.518	0.357	0.038	-0.083
Less Taste	0.459	0.24	0.404	0.068	-0.336	-0.1
Less Offer	0.182	0.308	0.578	0.05	0.366	-0.125
Less Trust to Origin	0.512	0.492	0.042	-0.407	-0.076	0.17
Less Variety Products	0.413	0.629	0.099	-0.402	0.213	0.024
Less Product from Local region	0.561	0.131	-0.387	-0.169	0.126	0.079
Shorter Shelf life	0.488	0.591	-0.07	0.055	-0.18	-0.019
Less attractive packaging	0.295	0.375	-0.192	0.567	0.087	0.367
Less Information in the media	0.491	0.013	-0.46	0.31	-0.272	-0.378
Lack of instant cooking condition	0.418	-0.084	-0.514	0.307	0.537	0.031

Extraction Method: Principal Component Analysis. 6 components extracted.

INTERPRETATION: Factor analysis shows that less access is the most restrictive factor for purchasing eco-friendly product, where as in the second restrictive factor is less variety product in the market and high price is the least restrictive factor of the consumer while purchasing green products. Therefore the null hypothesis (H_o) is rejected and alternative hypothesis (H_1) is accepted.

EFFECT OF EDUCATION ON BUYING BEHAVIOUR OF GREEN PRODUCT

H_o =Educational level of a consumer doesn't affect his buying of eco-friendly product.

H_1 = Educational level of a consumer will affect his buying of eco-friendly product.

Qualification * tried Cross tabulation

Count		tried		
		Yes	No	Total
Qualification	SSLC	9	4	13
	+Two	9	7	16
	Degree	25	8	33
	PG	26	7	33
Total		69	26	95

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.027[a]	3	.387
Likelihood Ratio	2.870	3	.412
Linear-by-Linear Association	1.524	1	.217
N of Valid Cases	95		

INTERPRETATION: Here calculated value of Chi Square (0.384) is greater than 0.05. Hence we accepted the null hypothesis i.e., Educational level of a consumer doesn't affect the purchasing of eco-friendly product. Here the variables are independent.

9. FINDINGS
1. Most of the respondents coming under the survey are in the male category.
2. Most of the respondents coming under the survey are in the category of 25-35 years.

3. Most of the respondents are having degree qualification.
4. 41% of respondents are working in private company.
5. 44% of respondents having an income of Rs.25000 and more.
6. Majority of the respondents are aware about green product i.e. 78%.
7. 73% of the respondents are purchasing green products.
8. The majority of respondents are using green products for 1-2 times in a week i.e. 36%.
9. The majority of the respondents bought their first green product from last 6 months.
10. Respondents are purchasing green products for protecting themselves, to protect environment and to protect society.
11. In the opinion of respondents they are getting more information about green products from schools/universities/institutions and from magazines.
12. 52% of the respondents are agreeing that there is enough information about "green" features is available when buying the green products.
13. 55% of respondents are most familiar with the term organic or locally grown which is signifying that the product is green.
14. The most of the respondents are strongly believed that all 4 P's of marketing element will equally influencing the buying behaviour of green products.
15. 44% of the respondents are willing to pay more for the green products as they are getting high level of satisfaction.
16. Most of the respondent are disagree with the statement that the green products are always overpriced.
17. 49% of the respondents are disagree with the statement that the green products are real ecological need and not just another marketing strategy.
18. 43% of respondents are strongly disagreeing with the statement that lack of availability is major reason for low popularity and demand of green product.
19. Most of the respondents preferred food product.
20. The obtained mean score value is 3.6025 which mean that, the respondents are satisfied with the use of green product.
21. Above half of the total respondents are willing to pay 5-10% more than the conventional product.
22. Educational level of a consumer does not affect his buying of eco- friendly products.
23. 47% of respondents preferred eco- label or certification as one of the encouragement factor for buying green product.
24. High price not a restrictive factor for purchasing green products. Unavailability is the most restricting factor for purchasing green product.

10. SUGGESTIONS

➢ The government should take remedial measures for easy access of ecofriendly products from the near market.
➢ Proper awareness should be provided by Government to encourage public to purchase green products.
➢ Price for the green products should be reduced to an extent which is affordable to all.
➢ Consumer should give awareness regarding the negative impact of non green products.
➢ Consumer should ready to buy green product by considering the environment.
➢ Seminars and awareness programmes should be conducted by authorities to enhance the knowledge of consumers on green products.

> To be included in the syllabus of students regarding importance and benefits of green products for making environmental sustainability.

11. CONCLUSION

Today's customer is well aware of social, economic and environmental responsibilities. Customer of today wants product which have good quality and safe to use for them and their families. And companies also want to increase sales and get some new and innovative product that will facilitate customer's life. Green products are such items which are environmental friendly and safe for customers to use.

One thing is being reiterated is that the current consumption levels are too high and are unsustainable. Hence there is a need for green marketing for shift in the consumer's behaviour and attitude towards more environmental friendly life styles. Public are beginning to realize their role and responsibilities towards the environment.

The study shows that educational background has no significant influence on purchasing decision of green products and less access of green product is the main restricting factor for purchasing eco-friendly products. So the marketer should make available these products in near locality. It will definitely lead to increase the demand for the products. The government should also take measures for promotions of green products. Consumers are willing to pay extra price towards green products, organizations are taking notice of the demand and behaviour and attitude of the consumers.

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RURAL ENTREPRENEURS AND KNOWLEDGE MANAGEMENT IN INDIA

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ABSTRACT

Knowledge is not restricted to formal classroom of learning & education; it is a resource of human mind, which if utilized can generate value addition to the organization and to the society as a whole. Knowledge relates to all the capital owned by the people: knowhow & expertise, competencies, market experience which if managed properly can turn human capital into an intellectual capital. Migration of people from rural sector to urban sector has posed a serious threat in front of government for last many years, but those who stayed back to their native place has not only succeeded in creating sustainable development among them but also succeeded in generating jobs among themselves. This present paper tries to explore that for managing knowledge attaining formal level of education is not required, rather it is the daily experience which forced the people from rural areas to emerge out as a successful entrepreneur, made them capable enough to invent innovative cost effective techniques to solve their daily problems. This

present paper tries to establish a link between entrepreneurship and their knowledge management of daily life. The purpose of this paper is to explore the process of entrepreneurship by rural people which are acquisition, creation, packaging, and application or reuse of their knowledge.

KEYWORDS: *Explicit, Implicit and Tacit Knowledge, Rural Entrepreneur, Jugaad Mechanism.*

INTRODUCTION

"Need is the mother of inventions" as the proverb goes is the lesson which every individual learns in life. We human being is surrounded with knowledge which is generally experiences from daily life. Life is a summation of hurdles and rewards, there can never be a great teacher in life other than problem/hurdles. We face problems and every time we try to find out the solution /way out from it. The need of managing the experience from past events comes in order to solve the present hurdles. The migration of people from rural areas to urban areas is one of the major problems that affect the geographical and other realted aspect of india. India has been divided into two segment rural bharat and urban India. This flow of people from rural to urban has always been a major cause/reason for unemployment and underemployment in India. But those who stayed back tried to solve their daily problem by properly channelizing their everyday experience into an output. Problem faced by the people of rural India is immeasurable, but due to the trouble taken by the people they have naturally found out some technique/solution to their problem. Before proceeding into our core area, we must understand what knowledge management is all about.

Meaning of Knowledge Management

Different authors define the term knowledge differently like: Knowledge comprised of truth, belief, perspective, judgements, expectation and methodologies **(**Nonaka, 1994**).** Davenport and Prusak (2000) define knowledge as:

…a fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experience and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories, but also in organizational routines, processes, practices and norms (knowledge section, para. 3). Knowledge is a capital if managed properly can give huge return. Management means synchronizing things /events systematically into a smooth outcome. Let us take into consideration the definition given by Henri Fayol "To manage is to forecast and to plan, to organize, to command to coordinate and to control" Now, how can knowledge be managed?. Knowledge relates to all the capital owned by the people: know-how & expertise, competencies, market experiences etc. managing knowledge properly can turn human capital into an intellectual capital. Knowledge management enables people's collaboration and connects them to expertise**(**Nonaka and Nishiguchi, 2001**).** The ability to quickly find a subject matter expert and get the answer to a question or assistance in solving a problem is a priority in knowledge management. In Knowledge Management literature, knowledge is mainly categorized as either explicit or tacit(Polyani, 1958).

Explicit: - Information or knowledge that is set out in tangible form.

Implicit: - Information or knowledge that is not set out in tangible form but could be made explicit.

Tacit: - Information or knowledge that one would have extreme difficulty operationally setting out in tangible form.

The main concern of knowledge management is value addition based on the experience, expertise know-how and uncompressing attitude to change the daily problems. Now as explained earlier that there can never be a great teacher other than problems in daily life. People in Rural India face problem and new challenges every day. Unemployment and poverty among the people of rural India is the main concern for the Govt. of India. There has never been equal distribution of income and wealth between rural and urban sector. The fear of unemployment and underemployment has become a prevailing and everlasting problem among the rural youths. This motivates a majority chunk of population from rural youth to move from rural to urban in search of jobs and earning opportunities but those who remained back and made an impact on the development of Rural India and self sustainability and in turn to the economy is the man theme of this paper. Innovation and inventions are the result of creative ideas, but giving it a marketable shape has many hurdles to overcome. The main and the most important ones are the lack of finance, lack of technical know-how and poverty. Knowledge management can be explained as the combination of market & strategy, structure & process, knowledge & system where people & motivation is the main fulcrum to all these (Pan & Scarbrough,1999).

Knowledge management can be divided into two parts that is-(i) strategic knowledge management and (ii) operational knowledge management. Strategic knowledge management is an area where people & motivation links with market & strategy and structure ad process. Operational knowledge management is where people& motivation links knowledge& system(Pfeffer & Sutton, 1999; Keogh and Rodney, 2006). But the people of rural India has found out a different concept which is nowhere related to these the new concept is the problem management through managing the experience of daily life utilizing common sense. People of rural India lack formal knowledge base but they have become competent enough to solve this life problem synchronizing the knowledge earned from daily life. People of rural India have not only succeeded in creating sustainable development among them but also succeeded in generating jobs among themselves.

Meaning of Rural entrepreneurship

Defining entrepreneurship is not an easy task. To some, entrepreneurship means primarily innovation, to others it means risk-taking? To others a market stabilizing force and to others still it means starting, owning and managing a small business. An entrepreneur is a person who either creates new combinations of production factors such as new methods of production, new products, new markets, finds new sources of supply and new organizational forms or as a person who is willing to take risks or a person who by exploiting market opportunities, eliminates disequilibrium between aggregate supply and aggregate demand or as one who owns and operates a business(Patel & Chavda, 2013).Rural entrepreneurship is that entrepreneurship which ensure value addition to rural area engaging largely rural human resource creating sustainable development as well as sustainable means of income was the major challenge in front of rural entrepreneurs. Though Govt. have tried out various schemes for generating income in the rural area such initiative from the Government has not stopped people from moving out of villages to towns and cities. This is because such initiative is not on their own capable of enabling people to

earn adequately and changes their condition. There has to be some committed enterprising individual or a group of people who should be capable of making use of the Government policies and schemes for the betterment of rural people. Entrepreneurship purposefully is utmost for the development of the rural areas. Innovation is the product of new ideas, some give shape to it but there is many link between giving innovation a structure and applying the same into market, this is where the importance of an entrepreneur comes, who can manage knowledge into innovation(Singh and Singh, 2012).

The basic principles of entrepreneur which apply to rural development:

- Optimum utilization of local resources in an entrepreneurial venture by rural population –
- Better distributions of the farm produce results in the rural prosperity.
- Entrepreneurial occupation rural population to reduce discrimination and providing alternative occupations as against the rural migration.
- To activate such system to provide basic '6 m'- manpower, money , material, machinery, management and market to the rural population.

Innovations in Rural India

Innovation and competitiveness have a dynamic, mutual relationship. Innovation thrives in a competitive environment and in turn, plays a key role in the achievement of such anenvironment. Innovation generates economic value, new jobs in the economy and cultures of entrepreneurship. Any kind of innovation either large or small starts with small attempts of solving the problems in the different ways. In our country, plenty of innovations exist in the rural segment as more than one third of its population resides in villages and people over there face a new challenges everyday so they have their own mindset to resolve the problems. Innovation is the alternate way to do the task differently or we can say that it is the unconventional ways to solve problems(Patel & Chavda, 2013).

An effort has been made to study such kind of innovations and main objective is to spread the spirit of Indian innovation worldwide. Also in our country there is a massive problem of unemployment in rural as well in urban areas, a study has been made on their implementation to solve the problems and to find the way out. The popular attention towards rural invention couldn't come at a better time for a nation that increasingly values creativity but is still given to rote learning at schools and colleges. Even our roadside mechanics are more pragmatic and practical than those who have obtained Engineering degrees from premier institutions. At present many foreign companies are approaching India for some new ideas (Singh and Singh, 2012). It is a matter of pride that Indians have inborn capability of scientific thinking3. Nandanwar Kalpana P. (2011), Role of Rural Entrepreneurship in Rural Development, International Referred Research. In short this is the art of holistic thinking, an unbound, resilient creativity and of improvisation and rapid prototyping under severe constraints. Inadequate distribution and service networks prevent necessary goods and services from being readily available to those who most need them, owing to that lack, creativeness steps in. The idea of innovation has become encrusted by many myths. One myth is that it is all about new products Dilip Ch-Das (2014).

That is not necessarily so. New products are, of course, important but not the entire picture. When innovation is the basic way of doing things, it finds ways to innovate not just in products, but also in functions, logistics, business models, and processes. It basically manages to seep itself into all aspects of life and one tends to view life in a different way. Another myth is that

innovation is only for geniuses. In a country like India you can view a different innovation almost the same distance as the dialect changes. In India the term is "necessity is the mother of all innovations" (instead of inventions). True innovation matters for the present, not for centuries hence. Innovation is an ever changing exercise.

Innovation in rural India: Genesis of Jugaad

In India more than 70 percent of its population resides in villages. In rural India people face a new challenge everyday so they have their own mindset to resolve the problems; hence they have precious resource of innovation. They are habitual to face new obstacles in day-to-day life; every impediment thus became an opportunity to create something new. Further the necessity to use their competitive advantage and their ability to struggle for survival also makes them innovators. People in rural India have an ability to utilize almost all the things which any one can throw away easily and this concept of optimum utilization of the available resources is very well known as Jugaad Dilip Ch-Das (2014). This Jugaad can almost make anything possible. Also Jugaad is for everyone without regard to race creed or color; it does not know any geographical boundaries. The mindset of individuals in rural India is that —where there is Jugaad there is a way‖ every time they have an alternate wayto do the things anyhow. Individuals in rural India would like to do in their own way as per according to their customized application requirement for a particular task and this diversification leads towards the innovation. Moreover a Jugaad technology is the suitable word for such kind of innovations in rural India(prof.Rishikesha Krishnan 2010).

Some examples around are as follows

Dabbawala: Residents of Mumbai are very well familiar with Dabbawalas. It is an example of excellent supply chain management without any paperwork. It is an example of Alternative arrangement process of food delivery.

Dial a Motor: This system enables the user to switch ON or OFF an electrical motor with the use of Mobile phones. This mobile operated motor control system is very common in rural India to operate the motor pump from any distant location for irrigation purpose.

Lassi Maker Jugaad: In Punjab and Haryana the people in villages often use the top loading washing machines for churning curd and hence making Lassi (Butter-milk) and Butter form curd. And the Alternative arrangement is called LASSI-P.

Head-Load Reducer: Khimjibhai Kanadia, a retired schoolteacher has created an innovative device that has two extended supporting rods from a circular disk that is put on the head to hold the vessel. The mechanism shifts part of the head load to shoulders and thus saves the neck from stress injury.

LPG Operated Iron (Press): The unavailability of power to major area has given rise to many innovations and Gas (LPG) Operated Iron (Press). An automatic lighter is fitted to the device for ignition and the inlet of the gas is through the copper pipe. The flow of the gas can be automatically regulated through the knob. It is useful in power cuts for tailors and washer men in rural areas.

Motor Bike Powered Irrigation System: This Innovative Irrigation system is powered by a functional motor bike that is on the spot converted to the prime-mover for a pump. This pump is often in used open channels and ponds to deliver water for irrigation or other purposes.

Scooter-Powered Flour Mill: This scooter powered flour mill is designed by Jehangir Painter from Jalgaon, Maharashtra; now made famous by the film '3 Idiots'. It is a perfect example of Alternative arrangement.

Jugaad for Espresso Coffee: Pressure cooker turned into an espresso coffee machine with Alternative arrangement modifications in an innovative way. This is a low cost solution with same results. Alternative arrangement Boat for Rescue Operations: This is the best utilization of waste bottles by assembling a Alternative arrangement boat. This Alternative arrangement boat can be utilized in flood areas for rescue operations etc. Let us consider the case of Rural shores. Rural shores mission was to establish one BPO center in each of the 500 rural districts in India providing livelihood to 10000 rural youth. Despite its social mission Rural shores was well on its way towards achieving financial self-sufficiency. Rural Shores is an initiative for inclusive growth it wanted the world to know that with a little bit of hand holding it was possible for youth from rural India to match the service excellence of theirurban counterpart and they were very much successful in their objectives though they faced initial hiccups later on they emerged as one of the great BPO units.

The Well Pulley with a Brake Drawing water from a well is an essential part of a person's life in the village. Although it seems easy, it can be a rather tedious task, especially for the women, who have other jobs to do throughout the day as well. So, Agrawat came up with three different types of pulleys – each of which can be used according to the type of well in question. This allows the women to rest amidst the hard labour, and the "stopper" helps make the task way easier.

What Rural Indian entrepreneurs can teach to CEO's of different firms

One, seek opportunity in adversity. Never look at a glass as half empty, but as half full. Reframe every challenge. Two, do more with less. That's about both reducing costs and raw materials, also adding more value. It's not just about cheaper products, but also adding tremendous value. It's not about poor quality. Three, think and act flexibly. Do not be attached to any business model. Think like IBM, which redid its values. Four, keep it simple. Sometimes, companies lose touch with this idea, and tend to over engineer products. Simplicity also applies to customer interactions, and of course product and organizational goals. Five, include the margin. Often times, in the West, companies look at marginal segments as low income and not profitable. Think of Wal-Mart, now innovating by setting up money centers in stores, several households are under banked. Six, follow your heart. This is where you'll find empathy, passion, intuition, all important qualities. Yes, they're less about ―knowledge. But now we're entering into a correction era after the Great Recession. By following your heart, you'll find a larger purpose for your company and products, more employee engagement, more loyalty to your brand. Some important question

Innovation can play important role to develop India

Innovation is the only way to sustain India's growth. There are about 200 trouble-torn districts in India. Instead of declaring a war on them, their capabilities should be channelized in the right direction. The youth of these places can be mentored to choose the right track and build a great society. India cannot take pride on a growth rate which is just benefiting 20 per cent of the total population. There should be an inclusive growth accommodating the entire society. Many of these rural innovations can have a profound impact on our society.

How can we popularize for rural innovation and create awareness?

Do the national media, All India Radio and Doordarshan; have any program to showcase India's innovative people? How many media organizations come forward to spread the message that there is an awaken India that can take on the world with the assistance of the government and private players? There should be a combined and sustained effort. How many school text books have a chapter on innovations by any one of our innovators? Instead of teaching about preIndependence heroes, we should revise our textbooks to teach relevant and intelligent ideas that can fuel innovation at a young age. We should stop imitating and mimicking the West. Our techpedia initiative has a database of over 350,000 projects from college students which could be developed into products and useful services. We have made an attempt to map the minds of the young and brilliant technologists(Singh, SSSingh and Rajni(2016).

What should the government do?

The government has neglected innovation. We spend crores (millions) on the National Rural Employment Guarantee Act (NREGA) to offer 250 million people employment for 100 days. This is a national shame as these poor people are forced to do menial jobs like digging the earth and breaking stones. Besides this, the scheme is being run in the most developed states. Many among these workers are very creative -- there are artists, mechanics and sculptors among them. Should this be the right approach? They should be trained and promoted to exhibit their talent. This great human resource should be made to work intelligently. About 99 per cent of them are very talented people Dilip Ch-Das (2014). They should be given the freedom to develop their skills or take part in activities helping other entrepreneurs. There are so many talented singers, dancer and actors who know the traditional art and dance forms. These can be aggregated into a rich database of art and culture and showcased online. This will not only preserve our rich cultural heritage but also help them financially. There are several ways of promoting our talent(Singh and Singh, 2012).

Some examples where people from rural India have given shape to their innovations

Mathews K Mathew(The Solar Mosquito Destroyer)Kerala

Developed in Kerala, this one-of-its-kind device could be a roaring success in the cities as well as far as we're concerned. Using the septic tank smell as an attracting device for the mosquitoes, heat builds up inside it due to direct exposure to sunlight. Once the mosquitoes are trapped inside, they eventually die due to the accumulated heat. This device is a one-time investment, as it requires nothing but the sun's rays for its working and although it is ineffective at night, the device has seen enough success to prompt Matthews into making a house-fly version of it too.

Abdul Rahim Khan(The Cotton De-seeder)

Once you pick the cotton, it is followed by another problem – de-seeding it. Most cotton de-seeding machines are very expensive but not if you use this one. One of Khan's many inventions, this device is just as effective as any other de-seeding machine but made with different materials (mostly wood). Costing just Rs. 220 to make, it saves as much as 10 times the amount, making it an incredibly effective solution to the poorest of farmers out there.

The Farmers of Madhya Pradesh(The Water Tires)

Ploughing the hard fields is difficult if your tractor is light. It's even more difficult if your tractor salesmen sell you expensive "weights" so that your tractor becomes heavier. So what do you do?

You get together and brainstorm, and that's exactly what the farmers of Madhya Pradesh did. The result was something so beautiful and simple that you can only marvel and applaud. They decided to fill the tires with water. Yes; plain, good old, water. This meant that the tractors got heavier, at absolutely no cost, making ploughing easier. The idea has been a huge hit since, and has benefitted millions of farmers across the country.

Daramveer Kamboj The Multipurpose Herbs Processor

Crazy about herbs since childhood, Kamboj developed the obsession from his mother, who was an herbalist. What peeved Kamboj is that there were no cost-effective machines to make the process of converting herbs into gel a lot easier. After a years of unsuccessful prototypes, he finally came up with the processor, which can easily pulverise and extract oil or gel from any kind of herbs. The machine, Kamboj's childhood dream, can cheaply produce gel from leaves and twigs as well which has proved to be highly beneficial to many living in the rural areas as well both for production purposes as well as self-medication in many cases.

N. Sakthimainthan(Hand operated water lifting pump) Tamil Nadu

Sakthimainthan built his hand operated water pump in response to a dearth of available pumps that could be afforded by small farmers. He built five prototypes over a period of fifteen years before finally perfecting his design. The resulting water-lifting device is operated by the continuously rotating a handle. It is simple in design and has a high discharge at low cost compared to the motorized pumps and conventional hand pumps. The pump has discharge of 20,000 lph at 0.75 m head. The unit has also been tested by TNAU, Coimbatore and improved by CMERI Durgapur. It is useful device for drainage as well.

Radhey Shyam Sharma (Bullock operated sprayer)Madhya Pradesh, Bhanjibhai Mathukia, Gujarat

The bullock operated sprayer is pulled by a pair of bullocks and gets the drive from the ground through a gear box and belt pulley system. When the operator shifts the lever to a higher

gear, the frequency of strokes of the pump increases as a result of which more pressure develops in the container. The spray fluid, thus, atomizes into fine droplets with a wider swath. This sprayer considerably reduces time requirement as compared to manual spraying and also the drudgery and health hazards involved in manual spraying. It has 18 nozzles, spaced at a distance of 35 cm and can cover 3.5 acre/h.

M. Nagarajan (Lemoncutter) Tamil Nadu

A small workshop owner from Uslampathy village in Tamilnadu, M Nagarajan has developed an innovative technology for cutting lime into small pieces in bulk quantity. This technology offers a great value proposition for the pickle manufacturing companies. The pickle industry suffers with a big problem of inefficiency in its operations due to low degree of atomization e.g. cutting of fruits is done manually. The second big problem, the industry faces is short-supply of labour during peak seasons, which limits the capacity. It is a novel machine in terms of its cost effectiveness, efficiency, drudgery reduction for women, safety considerations and transmission system.

Gopal Bhise (Bicycle Weeder) Maharashtra

Bhise has fixed a rod with a blade at the end, to an assembly consisting of only the front wheel and the handle of a bicycle. He has named the assembly as 'Krishiraja', and claims it to be extremely efficient in removing weeds from hard land. It is very useful device for ploughing intercultural operation in very small farm plots, gardens and kitchen gardens. One can cover 0.08 hectare in one hour

Swayambhoo Sharma, Madanlal Kumawat, Chandan Agarwal

(Modified hand pump with tap and attachment for filling animal trough) Rajasthan /Delhi

Lack of surface water sources and falling water table has made availability of clean drinking water a major problem in Rajasthan. For human beings, the need gets addressed to some extent but for animals this need is much less appreciated. Swayambhoo Sharma came up with an interesting solution to address the drinking water needs of animals. He developed an arrangement such that every time people pump water for their use, 20 per cent of pumped water will directly go to fill animal water trough. Since most people feel lazy in filling drinking water trough for stray animals, this innovations solves this problem by a kind of tax at source. Another problem faced in hand pumps is that a single person finds it very difficult to pump and at the same drink water (without a vessel with him/her). Chandan, then a first year student at IIMA came out with an idea of storing water in the body of the hand pump so that having pumped, one could use a tap and drink water like any other tap. Yusuf Khan and MadanLalKumawat, two other innovators combined the idea of Chandan and Swayambhoo Sharma and developed a hybrid model.

ImliToshi (Bamboolathemachine)Nagaland

Bamboo needs to be stripped off its outer covering for developing smooth surface to make interior decoration itemsand utility articles like cups, pen stands, etc. Doing the job manually is time consuming and laborious. The machine developed by Toshi can do all the operations like removing the outer knots, smoothening the surface, internal/external carving and finishing. The machine has soft touch joystick controlled operating system, which facilitates precision in operation. The finished bamboo can be used to make bamboo pet bottles. This bottle has the potential to replace the plastics and tin bottles and cans. The bamboo pet bottles can be made with a capacity of 1 lit, lit, 200 ml etc

Biren Singh (Improved Mechanized Loom)Manipur

This innovative mechanized shuttle looms simulates the working principles of traditional Manipuri shuttle loom, except that the new machine runs fully automatic with the help of a half-horse power motor. The output of the machine is 2550 times more than the traditional shuttle loom, and almost any other power loom. The innovative machine can weave 3-4 fabric per hour whereas the traditional could hardly make 1-2 fabric in a day. Except for the change of bobbin, the machine doesn't require any manpower.

Dwarka Prasad Chaurasia(The Water Walking Shoes)Uttar Pradesh

What do you do when your village gets flooded, or when the only bridge to the other side of the river breaks down? Chaurasia simply solved the problem by inventing the water shoes. Developed over three decades ago in Uttar Pradesh, the shoes are made of thermocol, which is bonded with a rexine sheet. Using metal straps for back support, one can easily "walk" or skate

over a lake while also using a pair of oars for maintaining balance. The shoes are so effective that they are widely used in flood-hit areas for the purpose of rescue operations even today.

Deepak Bharali (Extra-Weft Insertion for Handloom Design)Assam

Conventionally, the task of the insertion of weft threads needed to make a variety of designs is done manually by tying knots, which is cumbersome and time consuming. The thread is also wasted in connecting one motif to another. Deepak's innovative device makes designs in one third of the time required by the traditional way of making designs. The device consists of three components; base frame, magnet bearing shaft and a specially designed bobbin. These components can be fitted to any handloom Jacquard machine. The attachment facilitates the Jacquard loom to perform automatic selection and lifting of warp threads for design making

CONCLUSION

There can be numerous theories and practices given by researchers regarding Knowledge management, but in practical scenario it is bit different. It is found that the maximum number of innovations in Gujarat. Kerala, Bihar and Karnataka also have a good number of innovators. A good number of innovations have come from artisans, farmers, mechanics...and women. Women have been very innovative. Since they have been traditionally not allowed to experiment, they have built products and solutions in food processing, childcare, etc. Despite the constraints, women have excelled. Women are very creative and talented but there are no opportunities to support their ideas. A simple traditional medicine is rubbing nutmeg powder on the navel of babies. Many of the traditional ideas are easy to implement, and have no ill effects. But has our healthcare policy ever looked at these aspects? Our children are losing out on traditional knowledge(Singh and Singh, 2012). There is no importance to values today. One of the reasons is a total disconnect between the grandparents and children. Even people who actually lack formal education had succeeded in managing their knowledge to earn their living. The people of rural India have built their own strong concepts and theories channelizing their bitter experience of facing daily problem. But if they are supported with formal education along with strong backup from Government, the people of rural India can come up as the most innovative section of population of India.

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