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It has become evident that major social forces of a global nature - such as demographic trends, migration patterns and the globalization of the economy - are reshaping social welfare policies and social work practices the world over. There is much to be learned from the careful analysis of experiences in the various countries that are struggling with the emerging challenges to social welfare in the post-modern world. **The Journal of Social Welfare and Management (ISSN – 0975 – 0231)** seek to encourage debate about the global implications of the most pressing social welfare issues of the day. Its interdisciplinary approach will promote examination of these issues from the various branches of the applied social sciences and integrate analyses of policy and practice.

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Contents

Editorial: A Rejuvenation of Primary Health Care	65
Gupta SN, Gupta Naveen, Gupta Shivani	
Employee Attrition-Causes and Remedies	69
Mitushi Jain	
Progression towards Greener World through Various Strategies	75
Pritika Sood, Swati Gupta	
Renewable Energy and Environment Management	83
Arjun Jaideep Bhatnagar	
An Exploratory Study for Implementing and Understanding Total Productive Maintenance in Manufacturing Sector, Vadodara	89
Shivani Mishra, Punam Singh	
Religious Values and Management Ethics	95
Lalitha Parameshwari	
SHG: Micro-finance as a New Tool to Combat Poverty: An Empirical Study	101
R. Neelaiah, Chaganti Rami Reddy	
Guidelines for Authors	106

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Editorial

A Rejuvenation of Primary Health Care

GuptaSN*, Gupta Naveen**, Gupta Shivani***

Abstract

Primary health care refers to the essential health care provided as the basic level of effective contact between the individual and the health care system. Globally, we have built a strong health care system, and have achieved a level of health of which we are all proud. A majority of prevailing health problems can be satisfactorily prevented and managed, with approaches to a spectrum of services beyond the traditional health care system that play a part in health, including income, housing, education, and environment. This approach represents a philosophy of health care and a model for providing health services.

Keywords: Primary health care; Infant mortality rate; Holistic approach; Alma Ata.

At Alma Ata in Kazakhstan in 1978, experts from 180 countries participated in international conference on **Health for all through primary health care (HFA through PHC)**. At this conference medical, public health and global policy experts proclaimed: *that health is a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity.*[1]" In its boldness, the Declaration, asserts the **Director-General of the WHO Dr. Margaret Chan**, "articulated primary health care as a set of guiding values for health development, a set of principles for the organization of health services and a range of approaches for a addressing priority needs and the fundamental determinants of health.[2]" It also means that the whole person is treated, *not just the disease-a holistic approach*. Among the contributors to this groundbreaking document was **Dr. Carl Taylor**[3,4]. Now I will discuss about the **three**

specific actions/challenges as examples that need to be undertaken that I am going to undertake while working for accomplishment of HFA through PHC.

(A) Action One: Presently, I am working as a medical faculty in government medical training and research institute in Himachal Pradesh. National Rural Health Mission (NRHM) was launched in India in 2005 and it covers the entire country with special focus on 18 States including Himachal Pradesh. Despite best health indicators, Himachal Pradesh has been included in NRHM because of High Infant Mortality Rate (IMR) (51/1000 Live births) and High Maternal Mortality Rate (MMR) (200/100,000 Live births) while as per NRHM goal, IMR needs to be 30/1000 live births and MMR as 100/100,000 live births. In order to slash down IMR and Neonatal Mortality Rate (NMR) in the state, we studied the **SEARCH MODEL- Neonates in Gadchiroli-Field Trial in Home based New Born Care (HBNC) by Bhang et al published in Lancet**. In Himachal Pradesh, out of 45 deaths 36 are neonates; hence if we want to bring down IMR we will have to bring down NMR. A neonate is 59 times at higher risk of death compared to a child (under five). The main causes of the neonatal

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mortality are pre-term babies, birth asphyxia, sepsis and hypothermia. 35% deliveries are home based and women are discharged within 48 hours. Not only there is scarcity of pediatricians but also non availability of neonatal services at village level also exists. Therefore, we, 45 national trainees got ourselves along with our two streams of senior health educators and supervisors trained at SEARCH-Gadchiroli in the marginalized communities. One stream of trainees was from health department and second one from Integrated Child Development System (ICDS) for two months in two different spells in a year. So in HBNC, 4 persons are most important from Community and our health system: *Mother, TBA, Link worker and Supervisor*. The link workers would be trained for examination of new born, high risk assessment, wrapping, weighing the neonate in blanket and correct method of breast feeding. Besides these, she would also manage pre-term baby, low birth weight baby, hand washing, handling of baby, counseling of mother for breast feeding, nutrition and family planning. (Bangladesh Rehabilitation Assistance Committee) **BRAC-Manoshi Project_CBIO** (Census-Based, Impact Oriented Methodology) **in Bangladesh** is also successful example. We will train 12 batches of twelve officers of all the 12 districts of the state including chief medical officer (one from each district), district health officers (one from each district and block medical officers (6) and senior medical officers (7) on fortnightly basis. In return, they train medical officers/paramedics at block level and downwards with **film shows on pediatric care for the community**. His concept-**“Think locally and act globally”** will generate results.

- (B) **Challenges/Obstacles:** Since the workers have been taken from the two different departments, problems of **unity of commands** from the higher officers

and submission of compliance report are getting worsened. Monitoring and supportive supervision is becoming causality in the whole exercise. To settle it out, joint nodal officers are being suggested in the areas after multiple rounds of secretarial level meeting of the two departments.

- (C) **Action Two:** Again to reduce the IMR, MMR and Total Fertility Rate (TFR) in a highly populous country like India. It is exceedingly important to tap energy of the vibrant adolescents-**demographic bonus**-30% of the total 1.21 billion populations. That is why; we need to invest heavily (i) to reduce morbidity and mortality in adolescents; (ii) to impact National indicators like high TFR (19%), MMR (13%) IMR and arrest HIV epidemic (50%) (iii) A healthy adolescent grows into a healthy adult, physically, emotionally and mentally-maximize potential and productivity (iv) Economic benefits: Increased productivity, averting future health costs of treating AIDS, tobacco related illness, life-style related illness. Adolescent Friendly Reproductive and Sexual Health Services (ARSH) is the right adolescent specific option for **empathizing** the community as well as the serving personnel to deal with their teenager patients. The *principle objectives* of this training would be to **(a)** equip the health providers with knowledge and problems of adolescence like growth spurt, menstruation, night emissions, masturbation etc; and **(b)** to sensitize as well as empower the health providers to impart the adolescent friendly health services and teen clinics. We would arrange 60 trainings for this year; 30 batches of teachers and senior class students and NGOs; 20 batches of paramedics and 10 batches of medical officers (20 participants each batch). There would be five sets of evaluation team in the last quarter of the year to actually observe the changes in the community through **teen clinics**.

- (D) Challenges/Obstacles:** Our experiences highlight that reproductive and sexual health concerns in the adolescents are still very sensitive issues in the community. Even educated people like teachers still shy away discussing the details with their students despite being trained. Rural elders in the community feel offended on this subject. The issues need to be addressed **emphatically** and most of the times, in **privacy and confidentiality**.
- (E) Action Three:** Routine Immunization is one of the most cost effective public health interventions and was first introduced in India in 1978 at Alma Ata Conference as Expanded Program of Immunization after successful eradication of smallpox. Initially, BCG, DPT, OPV, Typhoid were introduced and limited to mainly urban areas. In 1985, Universal Immunization Program was introduced and subsequently, expanded to entire country. Measles was added. There was close monitoring of <1 yr age group. The National Family Health Survey (2005- 06) reported that only 43.5% of children in India are fully immunized. While Routine Immunization has played a significant role in preventing childhood deaths and disability, thousands of children in India continue to die from vaccine-preventable diseases each year. Three days refresher courses in immunization for health care workers (50 batches with 20 participants in each course) were planned every week for six months with film shows for community.
- (F) Challenges/Obstacles:** Improper cold chain maintenance at the peripheral levels, especially in remote mountainous areas. Many outbreaks of VPDs like measles/mumps measles have been observed in many districts. Safe injection practices coupled with inadequate disposal of biomedical waste products are challenging fields. Refresher trainings will address the issues.

These above noted examples have only highlighted as to how we can plan and implement HFA_PHC in our places and communities slowly and gradually. Rome was not built in a day. It was a gradual process. Similarly, in line to what action plans have displayed and in Watershed conference, It was conclusively deduced that the “top-down, medical model of **curative care** was not relevant for **80% of the world’s population**” and therefore, the healthcare net ought to be widened to incorporate preventive, promotive and rehabilitative services. Alma Ata label for PHC meant comprehensive (Horizontal) care but it became selective (Vertical) in 1984 due to the changing perception of donors, for example, the Bill Gates Foundation opted to focus on one global health issue at one time-eradication of Polio. Second well-known example of the selective PHC approach is the child survival revolution, championed by Jim Grant. But now PHC is shifting towards combining the strengths of both approaches in health systems.

In terms of the history of PHC, Ding Xian project in China that later formed the basis of Chairman Mao’s “**Barefoot doctors**” concept. The foundational projects like **Kark et al in Pholela, South Africa** and the Narangwal project in India aimed at improving the health of the communities and populations using approaches that sort to “engage communities as *partners and promotes community empowerment* by linking a ‘top-down’ with a ‘bottom-up’ approach. These were followed up with insights on modern PHC practices and principles shared by Dr. Henry Perry. Besides, there were proofs of several success stories of PHC projects embarked on in different parts of the world as demonstrated by *Tiyatien Health in Liberia by Raja Panjabi; SEARCH_CBIO by Bhang; Jamkhed_Arole-CRHP in India; Gambia Case Study in West Africa; BRAC-CHW self financed model by Bangladesh Vs Brazil government model for South Africa. John B. Grant, father of PHC, summarized selected papers in the 1963*

book "*Health Care for the Community*," called "*Bible*" of Primary Health Care. Feeling extremely concerned for qualified doctors to actually visit the villages in the developing countries, Carl has rightly said, "**There is no universal solution, but there is a universal process to find an appropriate local solution**"?[5]

Conclusion

In brief, to achieve the goal we need to revitalize the original revolutionary tenets of the Alma-Ata Declaration, sticking consistently to the core values of universal access for care, equity, community participation, intersectoral collaboration and blended use of both approaches. The success stories of various PHC models used as illustrations should give very good hopes for several developing countries and hence should be replicated in several of these countries. Like the first primary health-care revolution, this will take champions—as **Mahler** said at the 2008 World Health Assembly "*unless we all become partisans in renewed local and global battles for...equity...we shall indeed betray the future of our children and grandchildren.*" Similarly, **Mary Chan** in her editorial in the Lancet of 2008 corroborates "*a renaissance in primary health care*".

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Employee Attrition-Causes and Remedies

Mitushi Jain

Abstract

High employee attrition is unfortunately part of almost every industry. Yet, understanding what is driving it can mitigate with the amount of turnover that is experienced by an organization.

There are two types of reasons for employees to seek other employment, controllable and non-controllable reasons:

Reasons within the control of the company are work stress, insufficient pay, lack of advancement possibilities, and lack of support or reward on the job. These are all issues that can be and should be addressed. Otherwise, the organization must be prepared to pay a high price for neglecting to correct the situation. Hiring costs alone make the correction effort a worthy endeavor.

Reasons outside the control of the company include employee retirement, advancement to other parts of the organizations, promotions within the same group, illness, and changes in the employee's personal circumstances. While it is not possible to control all the reasons why employees may leave the organization, knowing the incidence of various issues can help in planning a sustainable and cost effective workforce.

In present scenario, attrition is one of the main problem for any organization struggling to retain its expertise and knowledge base, an analytical approach to the same would also help in prediction and necessary remedies.

Keywords: Employee Attrition; Turnover; Switchover; Reasons and Remedies.

Introduction

Employee Attrition is the natural thing of workers due to retirement, layoffs, quitting or any other reason for leaving the job. The impact of turnover has received considerable attention by senior management, human resources professionals, and industrial psychologists. It has proven to be one of the most costly and seemingly intractable human resource challenges confronting organizations.

This paper provides a summary of information, abstracted from published research, on the costs of turnover, factors

contributing to its magnitude in organizations, and proposed remedies.

Analyses of the costs associated with turnover yield surprisingly high estimates. The high cost of losing key employees has long been recognized. However, it is important for organizations to understand that general turnover rates in the workforce can also have a serious impact on an organization's profitability, and even survival.

There are a number of costs incurred as a result of employee turnover. These costs are derived from a number of different sources, a few of which are listed below.

1. Recruitment of replacements, including administrative expenses, advertising, screening and interviewing, and services associated with selection, such as security checks, processing of references, and, possibly, psychological testing.
2. Administrative hiring costs.
3. Lost productivity associated with the

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interim period before a replacement can be placed on the job.

4. Lost productivity due to the time required for a new worker to get up to speed on the job.
5. Lost productivity associated with the time that coworkers must spend away from their work to help a new worker.
6. Costs of training, including supervisory and coworker time spent in formal training, as well as the time that the worker in training must spend off the job.
7. Costs associated with the period prior to voluntary termination when workers tend to be less productive.
8. In some cases costs associated with the communication of proprietary trade secrets, procedures, and skills to competitive organizations.
9. Public relations costs associated with having a large number of voluntary or involuntary terminations in the community spreading gossip about the organization.
10. Increased unemployment insurance costs.

Using an example from the health care industry, Cascio (2000) calculated that the cost of replacing 288 employees per year (in a hospital with 200 beds employing 1200 persons with a turnover rate of 2% per month) was \$2,888,295.52 when all sources of costs were analyzed.

Moreover, a recent Business Week (1998) study estimated that the replacement costs alone, are over \$10,000 for about half of all jobs and approximately \$30,000 for all jobs. These estimates highlight the considerable costs that can be associated with turnover.

Causes of turnover

There are a number of factors that contribute to employee turnover. We explore some of these factors in more detail below:

The economy

In exit interviews one of the most common reasons given for leaving is the availability of higher paying jobs. Some minimum wage workers report leaving one job for another that pays only 50 cents an hour more.

Obviously, in a better economy the availability of alternative jobs plays a role in turnover, but this tends to be overstated in exit interviews.

The performance of the organization:

An organization perceived to be in economic difficulty will also raise the specter of impending layoffs. Workers believe that it is rational to seek other employment.

The organizational culture:

Much has been written about organizational culture. It is sufficient to note here that the reward system, the strength of leadership, the ability of the organizations to elicit a sense of commitment on the part of workers, and its development of a sense of shared goals, among other factors, will influence such indices of job satisfaction as turnover intentions and turnover rate.

The characteristics of the job:

Some jobs are intrinsically more attractive than others. A job's attractiveness will be affected by many characteristics, including its repetitiveness, challenge, danger, perceived importance, and capacity to elicit a sense of accomplishment. A job's status is also important, as are many other factors.

Unrealistic expectations:

Another factor is the unrealistic expectations and general lack of knowledge that many job applicants has about the job at the time that they receive an offer. When these unrealistic expectations are not realized, the worker becomes disillusioned and decides to quit.

Demographics:

Empirical studies have demonstrated that turnover is associated in particular situations with demographic and biographical characteristics of workers. But to use life-style factors (e.g. smoking) or past employment history (e.g. many job changes) as an explicit basis for screening applicants, it is important for legality and fairness to job applicants to verify such bio data empirically.

The person:

In addition to the factors listed above, there are also factors specific to the individual that can influence turnover rates. These include both personal and trait-based factors. Personal factors include things such as changes in family situation, a desire to learn a new skill or trade, or an unsolicited job offer. In addition to these personal factors, there are also trait-based or personality features that are associated with turnover.

These traits are some of the same characteristics that predict job performance and counterproductive behaviors such as loafing, absenteeism, theft, substance abuse on the job, and sabotage of employer's equipment or production.

These traits can be measured and used in employee screening to identify individuals showing lower probability of turnover.

It is important to note that the factors we've listed above can be classified as being within or beyond the control of the employing organization. In order to actively participate in reducing costs associated with turnover, organizations need to identify those factors over which they do have some control and initiate necessary changes to reduce turnover attributable to these "controllable" factors.

Adopting an effective applicant screening procedures is an efficient and cost effective method of identifying employees who possess the necessary traits and behaviors to succeed on the job and are, therefore, less likely to leave.

SIGMA's Employee Screening

Questionnaire 2 (ESQ2) measures both productive and counterproductive job behaviors and, as such, provides employers with a tool for reducing involuntary turnover resulting from poor selection decisions.

In addition to reducing involuntary turnover, the ESQ2 also has the ability to reduce voluntary turnover by identifying those applicants who are likely to be satisfied and committed to their jobs.

There is a large body of academic research supporting the intuitive contention that people who are satisfied with their jobs and committed to their employing organization are more likely to stay than those who are not (e.g. Griffeth, Hom, & Gaertner, 2000; Maertz & Campion, 1998; Meyer, Stanley, Topolnytsky, & Herscovitch, 2001).

In summary, the ESQ2 offers employers an effective and practical method for dealing with turnover and reducing its associated costs.

How to prevent turnover

1. Employees are important in any running of a business; without them the business would be unsuccessful. However, more and more employers today are finding that employees remain for approximately 23 to 24 months, according to the 2006 Bureau of Labor Statistics.
2. The Employment Policy Foundation states it costs a company an average of \$15,000 per employee, including separation costs, paperwork, unemployment; vacancy costs, including overtime or temporary employees and replacement costs including advertisement, interview time, relocation, training and decreased productivity when colleagues depart.
3. Providing a stimulating workplace environment, which fosters happy, motivated and empowered individuals, lowers employee turnover and absentee rates.
4. Promoting a work environment that fosters personal and professional growth

promotes harmony and encouragement on all levels, so the effects are felt company wide.

5. Continual training and reinforcement develops a work force that is competent, consistent, competitive, effective and efficient.
6. Beginning on the first day of work, providing the individual with the necessary skills to perform their job is important.
7. Before the first day, it is important the interview and hiring process expose new hires to an explanation of the company, so individuals know whether the job is their best choice.
8. Networking and strategizing within the company provides ongoing performance management and helps build relationships among co-workers.
9. It is also important to motivate employees to focus on customer success, profitable growth and the company well-being .
10. Employers can keep their employees informed and involved by including them in future plans, new purchases, policy changes, as well as introducing new employees to the employees who have gone above and beyond in meetings.
11. Early engagement and engagement along the way, shows employees they are valuable through information or recognition rewards, making them feel included.
12. When companies hire the best people, new talent hired and veterans are enabled to reach company goals, maximizing the investment of each employee.
13. Taking the time to listen to employees and making them feel involved will create loyalty, in turn reducing turnover allowing for growth.

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Progression towards Greener World through Various Strategies

Pritika Sood*, Swati Gupta**

Abstract

The United Nations has designated the period 2005 to 2014 as the decade of "Education for Sustainable Development". The objective is to integrate the concept of sustainable development in education processes around the World. It is an undeniable fact that human beings are having a significant impact on the natural environment. As the global population continues to rise, humans place more and more pressure on a finite number of resources. The culture of environmental valuing has not been taken seriously in India at present. This has resulted into the deteriorating state of the environment. It is an undeniable fact that human beings are having a significant impact on the natural environment. As the global population continues to rise, humans place more and more pressure on a finite number of resources. We should create widespread environmental and civic awareness by promoting community based environmental improvement efforts. The aim of the Environmental Education is to reach out to general masses with the messages and services, build-up grass-root movement, and influence need based policy formulation. Public education and awareness are the key factors in any attempt to maintain a proper balance and ensure sustainable development. Recognizing the potential of Environmental Education as an effective instrument in preventing environmental crises and as an essential element of sustainable development, we have to engage in spearheading environmental education and awareness from the very beginning. It has been found that to make development sustainable, it is better to mobilize the society rather than leading it; because once the self-confidence in the people germinates it will not take a long time for the flowers of development to blossom. And for community participation and mobilization, training and demonstration are the key factors. On the above-said lines, some projects should be run based on training and demonstration to enhance the community participation in some sectors of the Society. For establishing a sustainable society that realizes sound economic development with reduced the environmental loads while maintaining a healthy and productive environment, providing a basic principle on environmental conservation activities, encouragement of willingness for environmental conservation and environmental education, clarifying the responsibilities of citizens and private bodies etc., use of various media and technology, promote research activities, maintain eco-clubs, and organize co-curricular activities. There is a need to develop sensitivity in population. Because, most of us have knowledge and awareness but, we are not sensitive. So finally it can be said that we all (NGOs, schools, and other community groups) must all work together to ensure the future success of environmental education campaigns ranging from the global to the grass root level.

Keywords: Environment Education; Sustainable Development; Media and Technology; Community Participation.

Environmental education (EE) is a learning process that increases people's knowledge and awareness about the environment and

associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action. We consider that environmental education should urgently bring about change in the quality of life and a greater consciousness of personal conduct, as well as harmony among human beings. We consider that inherent in the crisis are an erosion of basic values and the alienation and non-participation of almost all individuals in the

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building of their own future. It is of fundamental importance that the world's communities design and work out their own alternatives to existing policies. Such alternatives include the abolition of those programs of development, adjustment and economic reform which maintain the existing growth model with its devastating effects on the environment and its diverse species, including the human one.

The environmental damage already inflicted due to alarming on-going population explosion, rapid movement towards urbanization and industrialization, increasing needs of energy and fast scientific and technological advancement cannot be reversed unless there is collective thinking, will and effort. These call for public awareness and participation for bringing about an attitudinal change and finally restricting further damage to the environment (National Portal Content Management Team, 2010). There is a need to develop sensitivity in population. Because, most of us have knowledge and awareness but, we are not sensitive. And sensitivity can be developed by using following measures:

Use of Various Media and Technology

EE's programs aim to use appropriate technology and media to meet the objectives of EE in any particular situation. The importance of using latest technological developments to leapfrog and achieve a wide reach is recognized. Various media and technology comprises of:

Puppet Shows

These puppets, which can be made from all kinds of materials, to convey simple messages. Puppet shows combine sound, color and human figures. They provide entertainment and so attract large crowds, especially in rural areas.

Magazines

Environmental /comic magazines can

present various environmental topics through a variety of methods, e.g. games, cross-word puzzles, activities, stories, cartoons, and so are very effective teaching tools. In addition, these magazines supplement the limited reading materials for children in places, such as schools, rural libraries and literacy centers.

Newsletters

This technique has the advantage of being able to provide information about current events that have environmental implications. They can be used to inform readers about ongoing studies and projects.

Bulletin boards

A bulletin board that is regularly updated with newsletters, posters and leaflets and placed in a strategic area in school, village, training college, and the like, is a good source of information for the general population. The bulletin board is cost effective in the sense that it provides access to information for a large audience from a single copy.

Posters

Posters can convey messages with only drawings and a few words, but the product should be pre-tested before large-scale production and distribution.

Flannel board

The flannel board helps the participants to build the statement of their environment (past and present). By having it visually in front of them, they are able to discover the inter-relationships among the problems and to find solutions by themselves. It has the advantage of being easy to replicate and update, and it is relatively inexpensive as it can be constructed with local materials.

Slide Presentations

A good series of high quality slides, arranged

in a carefully planned sequence, is an effective teaching medium. Learners' understanding is enhanced by the combination of sound and sight stimuli, and production cost is relatively low compared to films. Slide presentations afford the presenter the flexibility of adapting the presentation for different levels of audiences by varying the number of slides and the commentary. The slides can also easily be updated as needed.

Videos/Films/Television

These can be telecasted by our National Television (Door Darshan) Channels. There are slots in our National TV Channel especially for environment. These techniques can combine picture, sound, color and motion, and are thus the closest medium to reality. In a movie, a complete process can be shown in a short time. Environmental issues, development processes, technologies can be captured and shown to the learners at a convenient time and place. They also combine entertainment and education and so have wide appeal.

Projects and Assignments

This teaching technique in the formal education system is excellent for the integration of several subjects and activities around an environmental theme or issue. The best projects are those where the participants actually engage in an activity to protect the environment.

Use word pictures that describe the situation

A picture is 1000 times more effective than words. For example, use comparative ratios like 'three times around the earth' or 'no. of soccer fields'. That is, use measures that are familiar and can be easily visualized or shocked into realization.

Emphasize the additional features, effects, benefits, or advantages

What are the interlinkages with other issues or problems? How can communities benefit

from the action you are taking? That should be highlighted.

Don't overdo it

Present the plain facts, in a clear and simple outline. Don't assume that journalists know a lot about the topic or issue you are dealing with. Provide a 'handle' with which the story or byline can be built.

Stress the human angle

Whatever the issue you are presenting, stress on the human angle - either as the culprits or as the victims. What have humans been doing (or not doing) to result in the situation?

Use outside expertise

Bring independent experts and distinguish personalities to highlight and substantiate your point or issue.

Be persistent

Keep the media personnel informed - of breaking issues, progress made and other pertinent details in order to maintain interest.

Therefore, the media becomes an educational instrument for the preservation and conservation of natural resources presenting a plurality of views and reliable and contextualized information; and stimulate the broadcasting of programs generated by local communities.

Research

Research data is useful in helping target groups comprehend the value of a change of practice.

Environmental Visits

Through exploration of the surrounding environment, sites of special environmental significance, e.g. market place, waste dump, eroded land, forest, pond, farm, enterprise, can be identified and used for EE.

Monitoring

Encourage individuals and groups to take positions, and institutions to make policies, that constantly review the coherence between what is said and what is done, as well as the values of our cultures, traditions and history. Monitoring at the level of activities and outputs will be critical to reach the stated outcomes. Services of Centres of Excellence of NGOs will be solicited for program support and monitoring. Creation of monitoring and coordination cell at NGOs, with engagement of Centres of excellence, will strengthen the monitoring capabilities.

EE in the Curriculum

The national system of education, as defined in the National Policy on Education, 1986, visualizes a national curricular framework which contains a common core including several elements having a direct bearing on the natural and social environment of the pupils. The National Policy on Education, 1986 (NPE) states that the "protection of the environment" is a value which along with certain other values, must form an integral part of the curriculum at all stages of education. The policy states: "There is a paramount need to create a consciousness of the environment. It must permeate all ages and all sections of society, beginning with the child. Environmental consciousness should inform teaching in schools and colleges. This aspect will be integrated in the entire educational process. "There has been special emphasis on the need to give importance to environmental education, and this has been kept in view while designing curricula, framing the syllabi and developing text books. The philosophy behind the curricula is that environmental education could be infused into the curricula especially at the primary level.

Eco-clubs in Schools

A non-formal pro-active system of imparting environmental education to school children by involving them in various environmental activities through the scheme of Eco-clubs has

been evolved by the Ministry of Environment and Forests. An Eco-club may be set up in a middle/high school and should consist of a minimum of 20 members and a maximum of 50 members, particularly interested in the conservation and protection of the environment, and willing to dedicate time and effort on a regular basis towards this end. The members may be drawn from students belonging to classes from VI to X. Each Eco-club will be in charge of an active teacher in the school concerned.

Enabling Tools

Any attempt at developing uniform educational programmes and materials for a country as diverse as India is bound to run into difficulties. Therefore, adaptability to different geographic, cultural, social and economic contexts built into the basic design of EE's programmes and materials.

Organize Extra- and co-curricular activities

In addition to conventional ways of conducting theoretical and practical classes, various innovative ways are undertaken to provide opportunities for students to acquire knowledge, attitudes and skills in school as well as out of school. The opportunities include Environmental debates; nutrition gardening; clean-up campaigns; tree planting/woodlot; gully reclamation projects; wetland rehabilitation projects; environmental awareness and campaigns.

Schools Green Network

This is a network of teachers, parents and other educators who are interested in encouraging environmental education in our local schools. This network has to:

- Organize regular meetings
- Provide alerts on new resources and programs
- Sponsor grant applications and partnering with schools

- Encourage local businesses to provide environmental grants

Award groups and individuals for outstanding performance

Award schools, teachers, students, organizations, volunteers, model environmental communities, and environmental professionals for merits toward environmental protection.

In view of the growing importance of the role of environmental conservation activities, encouragement of willingness for environmental conservation and environmental education carried out by citizens and private bodies etc. with a view to constructing a sustainable society, the state shall strive to appropriately cooperate with citizens and private bodies etc. That will carry out environmental conservation activities, encouragement of willingness for environmental conservation and environmental education, when the state formulate and implement of the measures for environmental conservation. The state shall make efforts to formulate and implement basic and comprehensive measures for the encouragement of willingness for environmental conservation and the promotion of environmental education.

Develop environmental education lessons and materials

Award outstanding environmental education publications and select outstanding environmental education lesson plans. Research and develop the infusion of environmental education guidelines and modules into the Nine-Year Integrated Curriculum. Develop environmental and sustainable development curriculums and lesson plans for colleges. Any voluntary / professional organisation or academic / research institution or museum/ science centre or Government Department actively involved in the field of environmental education and awareness. The organisation / Department should have worked in the field of environment education/ awareness / extension for a

minimum period of three years and during this period, the organisation should have developed considerable expertise and should be excellent track record of working in this area. Under the scheme, grant is not provided for publication of newsletters, magazines, journals, periodicals etc. or to any publisher / business house including individuals.

"Pack the future" in vocational training

In addition to school education, the United Nations' Agenda 21 programme also mentions vocational training as one of the most important prerequisites for the development of human resources and the simplification of the transition in to a sustainable world. In order to promote high awareness among vocational trainees for environmental and development issues, and to ensure that the principles of sustainable development are applied in the world.

Strengthening Environment Education in School System and other courses at Graduate and Post-Graduate level including Professional Courses: Incorporation of environmental education at all levels and in all forms of education.

Formal Environmental Education Program:

The National Policy on Education, 1986 (NPE) states that the "protection of the environment is a value which must form an integral part of the curriculum at all stages of education". The NPE states: "There is a paramount need to create a consciousness of the environment. It must permeate all ages and all sections of society, beginning with the child. Environmental consciousness should inform teaching in schools and colleges. This aspect will be integrated in the entire educational process". The programme obliges the Ministry of Human Resource Development (MHRD), the Ministry of Environment & Forests to ensure that environmental education is imparted adequately at the school levels. It mandates that environmental components are covered in the school curriculum at various

levels.

Environmental Appreciation Course-Distance Education:

In order to provide interested persons an opportunity to learn in detail about specific environmental issues, there should be a provision of a course. For example, a module has been developed through a Indira Gandhi National Open University (IGNOU) for 'Environmental Appreciation'. Delivery of these courses is through distance education mode. The course module developed for appreciation courses is also being used by the IGNOU as compulsory component of its undergraduate courses. This is in pursuance of the directives of the Hon'ble Supreme Court of India.

Non-formal Environment Education and Awareness Project

The Ministry of Environment & forests, New Delhi should accord high priority for the promotion of non-formal environment education and creation of awareness among all sections of the society through diverse activities. The aim of the project should be intended to conserve, protect, manage and sustain the environment. The government should undertake various activities by using several traditional and modern media of communication, to create awareness among the people, such as seminars, workshops, training programs, rallies, public meetings, camps, exhibitions, puppet shows and street theatre.

Grants-in-Aid to Professional Societies and Institutions

The objective of this programme should be to facilitate optimum utilization of expertise available with professional societies and institutions for promotion of environment education and awareness. The programme aims at utilizing the existing capacity while simultaneously providing for enhancing the capacities of such institutions. The projects

such as development/extension of exhibition galleries, interpretation centres and education materials relating to ecology, wildlife and environment should be financially supported.

Conclusion

At present time Environmental education could be seen as just another of a number of pressures on already over-crowded teacher education programmes (Fien J. and D. Tilbury, 1996). So, there is a need to develop a more extensive and effective environmental education strategy to better prepare the public to understand and take action regarding current and future environmental issues. Education for the Environment is concerned with children persecutes like: Children should study aspects of their local environment which have been affected by human activity. These may include for example Farming, Industry, and Sewage disposal, Mining or Quarrying. Where even possible this should be by first-hand observation, but secondary school, curriculum has some of the significant activities related to it, where highlighted.

The environmental problems we currently face will not solve themselves. It is becoming increasingly important to meet the needs of individuals to understand these problems and potential solutions through the spread of environmental education. NGOs, schools, and other community groups must all work together to ensure the future success of environmental education campaigns ranging from the global to the local level.

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Renewable Energy and Environment Management

Arjun Jaideep Bhatnagar

Abstract

The main aim of the renewable energy and environment management is about designing, developing and promoting eco-friendly power and propulsion solutions for ships that will reduce fossil fuel consumption. These renewable energy sources could be wind, solar-electric, hybrid marine power (HMP) and solar-wind powered ship designs.

An HMP system lowers fuel consumption, reduces airborne pollution and is energy efficient. World shipping currently uses around 200 million tonnes of diesel annually. In addition to being eco-friendly the government can also cut their operating cost and lower their dependence on fossil fuels.

Solar panel technology has now reached a point where it is becoming more cost effective and practical, and in some designs wind-solar energy can be harnessed together. We can have solar panels integrated in the sails of boats to harness a combination of wind and solar energy. In small bases where a lot of people have to be transported in quick durations, solar powered ferries would be very feasible especially in the case of sea bases. Hence we look upon various methods to reduce or remove the energy consumption from non-renewable sources and use alternate sources which can work side by side with these existing ones.

Keywords: Renewable energy; Environment management; Fossil fuels; Wind-solar energy.

Introduction

Most of the marine ships and vessels are powered by fossil fuels and thus there is a need to reduce their usage by trying to harness energy which is Renewable and eco-friendly so that environment can be protected accordingly.

There has been increasing interest in the development of offshore renewable energy projects in recent years. Of the various energy generation options, wind power remains the most advance, hence many large scale projects are ongoing in various stages of planning around the world. Tidal and wave power projects are now also progressing. Tidal energy utilises the predictable twice daily ebb and flow

of the tidal cycle to generate power and barrages are already a familiar source of tidal power. More recently, tidal turbines (which resemble underwater wind Turbines) have been designed to utilise tidal races. Progress is also being made with wave energy, which is generated from the surge of passing waves, and can be deployed in deeper offshore waters where waves are more powerful.

The renewable energy industry is in some ways still in its infancy and, as such, not all of its impacts are clear or fully assessed.

This paper outlines the global development of the marine renewable energy industry and methods which can be applied so as to generate a substantial amount of energy through renewable methods which will also lead to reduction in carbon emission.

New technologies to implement

Integration of solar panels in the deck of the ships to harness solar energy

The earth receives an abundant amount of energy from the sun. All life on the planet is possible because of this clean energy source.

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Ships also can benefit from the sun. The deck of a ship is always outside in the sun. With a deck area of more than 9000 square meters for a Panamax sized ship, a lot of energy can be harvested for free. With increasing PV-panel efficiency and decreasing cost due to mass production, solar energy can be beneficial next to existing ways to produce electrical energy. There are of course some challenges to overcome before integrating solar energy on a ship, but the maritime industry is driven by innovation to come with clever solutions.

To introduce solar energy to the ship we need to convert the solar energy to electrical energy. Electrical energy we can use and transport throughout the ship. Photo-voltaic cells convert solar into electrical energy. An inverter is needed to convert the Direct Current (DC) to an Alternating Current (AC), so the 50 or 60 Hz electric grid can transport the electrical energy through the ship. These energy conversions reduce the efficiency of the whole chain. Imtech Marine, a UK based company is developing a new way to transport electrical energy through the ship, a Plug-and-play DC grid. With a DC grid in a diesel-electric propulsion system less energy conversions are needed, there is no need for bulky transformers. It is plug-and-play, if you decide PV-panels are still too expensive today, you can decide to buy them later and with no extra effort connect them to the DC grid at any time.

A ship already sailed solely on solar energy is the Planet Solar. With its 500 square meters of solar panels and large Li-ion battery, it accomplished a journey around the world. Started in 2010 from Monaco, visiting Miami, Cancun, Brisbane, Hong Kong, Shanghai, Singapore, Abu Dhabi and various other countries. The project is promoting renewable energy and solar energy around the world. Imtech Marine has contributed as technology partner for this one of a kind pioneering ship.

Marine solar panels and marine solar system batteries create a renewable or green energy that is applicable to a small pleasure boat all the way to the huge ocean liners that are really floating cities. By using marine system batteries that are powered by marine solar panels, it

has been proven that it is possible to build a floating city that is entirely dependent on solar power.

Solar Panel manufacturers are starting to state their solar panels in 'Watt Hours Per Day' written as Wh/d, you can divide this figure by the panel nominal voltage of around 16 - 19 volts to get the very approximate Amp figure for the day which is the most useful. These manufacturers figures are normally based upon a mid-summer's day as regards the number of sunlight hours the panel received. Getting all the figures into Amps makes the most sense as batteries are at the heart of your system and are all rated and stated in Amp hours as is wiring and fuses.

Solar powered ferries in sea bases

Hybrid marine propulsion or power (HMP) systems lower fuel consumption, reduces airborne pollution and is energy efficient. The main aim is to develop hybrid marine propulsion & power solutions that are suitable for a wide range of applications on rivers, bays, lakes & oceans across the world. An example of this approach can be seen in solutions like *the Tonbo Solar-Electric HMP Ferry*. This cutting edge green passenger ferry will include a Hybrid Marine Power system that will use specially designed solar module panels and the latest Lithium-Ion battery technology. A typical hybrid power system uses electric motors for propulsion and these allow the vessel to operate very quietly since they can be powered solely by the onboard batteries, depending on the size of the vessel and operating conditions.

Hybrid propulsion systems can also be used to provide power for facilities on a ship such as catering equipment, fans and lighting. For example an LED lighting system could be powered in the evenings from energy stored in the batteries collected during the day and the same batteries would also be able to provide power to electric motors and move the vessel quietly & emission free across the water. Another innovative solar ferry is the Medaka Eco Ferry. This smaller solar-electric ferry is

being developed to operate as a eco-friendly urban commuter ferry especially in cities where noise & air pollution levels are high. It is anticipated that vessels like the Medaka will play an important role in making urban water transport networks more environmentally friendly.

Additionally solar-electric commuter ferries will fulfill an important role in energy-efficient cities near harbours, bays and waterways and sea-bases.

The Aquarius Project

In mid-2010 a project was started in Japan to develop a commercial system for utilizing wind power and solar energy on-board ocean going vessels. This project and the system have been named "Aquarius" and the product development involves a number of different companies and subject matter experts in several countries.

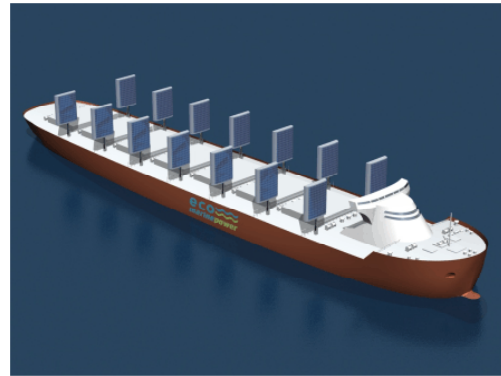
The Eco Marine Power Aquarius MRE System™ (Patent Pending) will allow ships to utilize wind power and solar energy in order to reduce fuel consumption and lower noxious gas emissions. In addition ship owners and operators will be able to reduce the carbon footprint of their fleet and employ the system on a variety of ships and vessels.

The Aquarius MRE System™ is being designed so that it will require little attention from the ships crew, will be relatively easy to install and offer an attractive ROI (Return on Investment) for shipping companies. The system will utilize solar modules, EnergySail™ technology connected and a central control and monitoring system. A prototype version of the system is planned to be ready for testing during 2012.

Aquarius Eco Ship

Aquarius Eco Ship is a revolutionary design concept which integrates EMP's Aquarius technology with other fuel saving and emission reduction technologies into an integrated solution for ships such as bulk carriers, oil tankers and cargo vessels.

Fig 1: Aquarius Eco Ship



This combination of technologies is expected to deliver annual fuel savings of 40% or more and significantly reduce the ships emission of harmful gases.

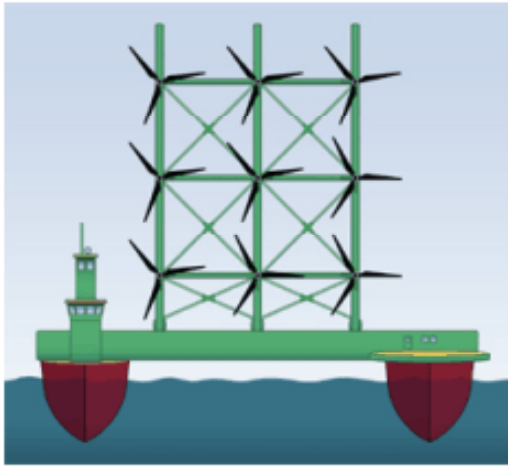
Variations of the Aquarius Eco Ship design concept may also be suitable for other vessels such as container ships and car carriers.

Aquarius Unmanned Surface Vessel

Eco Marine Power is currently working on applying its Aquarius MRE System technology to an Unmanned Surface Vessel (USV) concept. The AquariusUSV™ will utilize a range of renewable energy technologies in order to allow the vessel to stay on at sea longer or operate in stealth mode if required. Testing of a scale model prototype may commence during 2012.

Hydrogen generation at sea

The Windhunter System concept is an offshore, floating system that uses several wind turbines for power output to produce hydrogen by electrolyzing water. This continuously manned, safe and stable system will be easily maintained on-board while relocating to the best wind conditions for the wind turbines. The produced hydrogen gas may be compressed and stored as gas or liquefied and placed in insulated tanks. The compressed or liquefied hydrogen may be transferred by helicopter, surface ships or by other means.

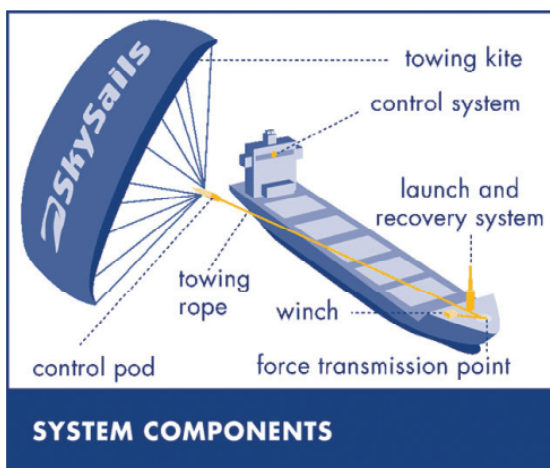
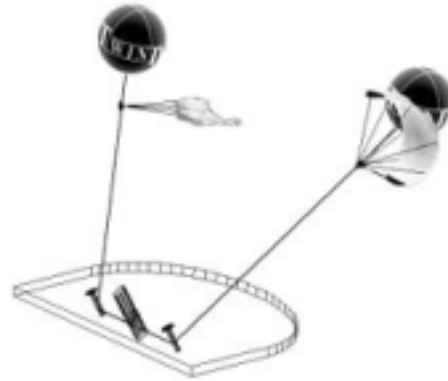
Fig 2: Windhunter System Concept

Using wind energy on ships

SkySails: attaching a kite the size of a football field to a vessel and using wind power to help save fuel costs.

The SkySails apparatus consists of a towing kite with rope, a launch and recovery system and an automatic control system. Autopilot software monitors data from the sail and makes adjustments to ensure the sail is set at its optimal position. The company also offers a weather-based routing system to help ships sail in optimal wind conditions. The kites usually fly around 1000 feet above sea level where winds can be up to 50% stronger than at deck level.

The first ship using the system, the Beluga Skysail, set off from Germany in Jan 2008. Once it was well clear of the land, it launched a 160 sq metre kite, which wind tunnel tests

**Fig 3: Concept drawing of the Twind technology**

and sea trials suggested would tug it along and save 10-15% of the oil it would normally burn. In time it was fitted with a larger kite, possibly saving 30-35% on fuel. One estimate predicts this could save around US\$10 million over the lifetime of a vessel.

The Twind Technology concept uses a pair of captive balloons at an altitude of 800 meters. The tether cables transmit force to a rotating platform on the ground. Each balloon has a sail connected to it. The two balloons move alternately, the balloon with the sail open moves downwind and draws the other balloon upwind, and then the motion reverses. The tether cable can be used to turn the shaft of a generator to produce electrical energy and since winds are strong in sea, this concept can be tried on marine vessels to drive its propellers.

Hybrid marine power

Generally speaking, the aim of a hybrid propulsion system or hybrid technologies is to provide power to a ship or vessel in a manner which will be more efficient and cleaner than traditional fossil fuel based systems.

Series Hybrid Marine Power

A series hybrid marine power system uses an electric motor to provide power to the drive shaft directly. It is possible in certain situations to power a vessel using a series hybrid marine power system without the consumption of any fossil fuel by using only solar and wind power

with a back-up biofuel generator. This type of system is very similar to an all-electric ship propulsion system.

Parallel Hybrid Marine Power

This type of system combines electric propulsion with a traditional drive (i.e diesel engine) and these are utilized together via a gearbox to move a vessel through the water. When a vessel or ship is operating at cruising speed the engines provide power to the shaft and also help charge on-board batteries, then when the vessel comes into berth or is alongside the electric motors alone can be used.

Hybrid Electric Marine Propulsion

In this type of system, generators are used to supply power to electric motors which are then used to drive propellers or other marine propulsion solutions. Solar panels can be combined with this type of system so that renewable energy can also be used and a few companies like Eco Marine Power are currently looking at ways to incorporate wind power into this type of solution in the near future.

Eco Marine Power is also currently developing a number of hybrid marine power solutions by combining it's own design concepts with technology from strategic partners. These concepts will allow for various technologies to be integrated so that a renewable energy solution can be configured to suit a wide variety of vessels including passenger ferries.

Conclusion

Hence following the above mentioned, innovative methods we can greatly reduce the dependence on fossil fuels in marine vessels which would also lead to reduction in carbon emission and other damages to the marine flora and fauna.

Also we could cut a lot of operating cost of such ships by these methods and utilize that money in a greener and cleaner atmosphere

and in conserving the precious fossil fuels which are on the brink of being depleted.

Future works

A lot of concept ideas are being worked upon throughout the world such as attaching solar panels to the SkySails mentioned before and attaching Hydro turbine systems to the base of the ships so as to generate energy while the ship is anchored. Companies could also research on attaching wind turbines on the sides of ships which would generate energy while the ship moves. If successful, all these ideas will bring about a revolution in the world where the fossil fuel reserves are getting depleted with each passing day.

Acknowledgments

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An Exploratory Study for Implementing and Understanding Total Productive Maintenance in Manufacturing Sector, Vadodara

Shivani Mishra*, Punam Singh**

Abstract

In today's global economy, the survival of companies depends on their ability to rapidly innovate and improve. As a result, an increasing search is on for methods and processes that drive improvements in quality, costs and productivity. In this backdrop Total Productive Maintenance (TPM) which is one of the key concepts of Lean Manufacturing, challenges the view that maintenance is no more than a function that operates in the background and only appears when needed. Total Productive Maintenance is often defined as "productive maintenance involving total participation". It brought an opportunity of global competition where effective and sustainable performance of the corporate became key to organizational success. In such a scenario, human resource (HR) offers competitive advantage to meet the demands of contemporary business. The present study undertaken at manufacturing sector of Vadodara city, Gujarat. The aim of the study is to know the employee perception towards Total Productive Maintenance (TPM) and provide suggestive measures for effective implementation. Sample covers 50 middle level employees in manufacturing units, Vadodara, Gujarat. The findings of the present study for TPM mentioned that in organization it is a successful pillar and helps in achieving zero breakdown, zero accident, and zero losses by involving one and all in the organization.

Keywords: Challenges of TPM; Measures of TPM; Total Productivity Maintenance.

Introduction

In today's global economy, the survival of companies depends on their ability to rapidly innovate and improve. As a result, an increasing search is on for methods and processes that drive improvements in quality, costs and productivity. In today's fast changing marketplace, slow, steady improvements in manufacturing operations will not guarantee profitability or survival. Companies must improve at a faster rate than their competition if they are to become or remain leaders in their industry. Total Productive Maintenance is a complex. Long term process which must be sold to the workforce as a legitimate

improvement methodology. Today, with competition in industry at an all time high, Total Productive Maintenance may be the only thing that stands between success and total failure for some companies. It has been proven to be a program that works. It can be adapted to work not only in industrial plants, but in construction, building maintenance, transportation, and in a variety of other situations. Employees must be educated and convinced that Total Productive Maintenance is not just another "program of the month" and that management is totally committed to the program and the extended time frame necessary for full implementation. If everyone involved in a Total Productive Maintenance program does his or her part, an unusually high rate of return compared to resources invested may be expected.

Total Productive Maintenance is often defined as "productive maintenance involving total participation". To be effective, however Total Productive Maintenance must be implemented on a company wide basis. Unfortunately, some firms abandon Total

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Productive Maintenance because they fail to support workers fully or involve management. According to Total Productive Maintenance principles, the responsibility for optimizing equipment lies not just with the maintenance department but with all plant personnel. The goal of the Total Productive Maintenance program is to markedly increase production while, at the same time, increase associate morale and job satisfaction. Total Productive Maintenance brings maintenance into focus as a necessary and vitally important part of the business. It is no longer regarded as a non-profit activity. Downtime for maintenance is scheduled as a part of the manufacturing day and, in some cases, as an integral part of the manufacturing process.

As Total Productive Maintenance activities begin to yield concrete results which is improving the working environment, minimizing breakdowns, improving quality, reducing set-up and change over times and so on, workers become motivated, involvement increases and improvement suggestions proliferate. People began to think Total Productive Maintenance as part of their day to day jobs making Total Productive Maintenance a way of life for all people. Total Productive Maintenance helps operators understand their equipment and widens the range of maintenance and other tasks they can handle. It enables them to make new discoveries, acquire fresh knowledge and enjoy new experiences. It strengthens motivation, engenders interest in their work and concern for equipment and fosters the desire to maintain equipment in top peak condition.

Objective of the study

The Following are the objective of the study:

- To understand the Effective Implementation Criteria of Total Productive Maintenance
- To study Employee's opinion towards Total Productive Maintenance.
- To suggest measure to an industries for

effective implementation of Total Productive Maintenance.

Sample

The study covers with sample of 50 middle level employees in manufacturing units of Vadodara, Gujarat., The branch managers and departmental managers constitute middle level. They are responsible to the top management for the functioning of their department. They devote more time to organizational and directional functions. In big enterprises, there may be senior and junior middle level management. Their activities include, assigning of jobs and tasks to various workers. They guide and instruct workers for day to day activities, they are responsible for the quality as well as quantity of production etc.

The scoring pattern

On the Five-Point Scale there are five choices for each statement that is 5-Strongly agree, 4-Agree, 3-Neutral, 2-Disagree and 1-Strongly disagree. There are 20 statements that comprises with eight factors and they are promotion of Total Productive Maintenance (TPM), Support & Guidance, Co-ordination, Training Programmes, Initiatives, Management of Total Productive Maintenance, Satisfaction level and Quality circles.

Data analysis and interpretation

Aim of the researchers is to know how organization promoted Total Productivity Maintenance. From the data it positively make out that employee opined that organization do promote such practice. Total Productive Maintenance is an integrated approach towards maintenance functions in organisation. The objective of Total Productive Maintenance is to create an active participation of all employees in maintenance and production functions, including operators; therefore special committees are formed at every level to promote Total Productive

Table 1.1: Promotion of Total Productive Maintenance Effective Criteria

Sr. No	Promotion of Total Productive Maintenance	Agree	Disagree	Neutral
1	Promotion by Organizations	48 (96)	-	2(4.0)
2	Integrated With Production	39 (78)	2(4.0)	9(18.0)
3	Information by organization is easily timely and available	39 (78)	3(6.0)	8(16.0)

Figure in parenthesis indicates percentage. Source Field Investigation

Maintenance.

It is needed that whenever new practice emerged it is duty of an organization to aware and aid to their employee. In this organization it is found that employee do get support and guidance for Total Productive Maintenance practice. The team gets a chance to discuss the improvements implemented, as well as discuss support needed to continue improving.

Whenever any new practices are being introduced in the organization it is needed that its objectives should be thoroughly made understood to all the employees in the hierarchy. The present table shows that organizations do coordinate with reference to policies and objectives and also coordinates with different departments.

For successful implementation of Total Productivity Maintenance (TPM) all employees should be well versed with the usage of Total Productive Maintenance systems. The table shows that organization arranges training programmes on regular basis for the all employees. Human Resources are developed to operate and maintain equipment and optimal performance. Developing internal champions for the change process, and these "change agents" will make the difference in implementation, by owning the change. Training, development, and coaching will take these employees to new personal levels and

Table 1.2: Support & Guidance One of the Criteria of Total Productive Maintenance

Sr. No	Support & Guidance	Agree	Disagree	Neutral
1.	Support & Guidance for Total Productive Maintenance practice	36 (72.0)	-	14 (28.0)

Figure in parenthesis indicates percentage. Source Field Investigation

Table 1.3: Coordination another Important Factor of Total Productive Maintenance

Sr. No	Coordination	Agree	Disagree	Neutral
1	Coordination with policy & objective	36(72.0)	2(4.0)	12(24.0)
2	Coordination with head & other units	39(78.0)	3(6.0)	8(16.0)

Figure in parenthesis indicates percentage. Source Field Investigation

take your Total Productive Maintenance process to the new heights.

Jitkar (2004) commented on Total Productive Maintenance that many tools such as employee's empowerment, benchmarking, documentation etc. are used to implement and optimize Total Productive Maintenance. Employees must be well trained to take corrective action and a long range out look must be accepted as Total Productive Maintenance may take a year or more to implement and is an on- going process.

The annual results of Total Productive Maintenance activities are considered in formulating goals, objectives, and plans for coming years. The table shows that organizations takes an initiative in formulating plans, implementing 5's, considering the suggestions arising out of meetings etc. that boosts the employees morale and satisfaction level. 5's is a great preparation activity for Total Productive Maintenance. It is fairly easy to implement and generally does not require a lot of maintenance resources. It can help show visible results and demonstrate that change is possible with in the current environment. According to Wireman (1991) one of the important requirements for the success of Total Productive Maintenance is that it requires a consistent and repeatable methodology for implementation, as there is no single correct method for implementation of Total Productive

Table 1.4: Training Programmes an important step towards Total Productive Maintenance

Sr.No	Training Programmes	Agree	Disagree	Neutral
1	Training Programmes are Organized Regularly	41(82.0)	1(2.0)	8(16.0)
2	Improve process & System	28(56.0)	10(20.0)	12(24.0)
3	Human Resource are Developed	36(72.0)	4(8.0)	10(20.0)

Figure in parenthesis indicates percentage. Source Field Investigation

Table 1.5: Initiatives an effective component of Total Productive Maintenance

Sr.No	Initiatives taken by organizations	Agree	Disagree	Neutral
1	Results are considered to formulate plans	30(60.0)	4(8.0)	16(32.0)
2	Suggestions arising out of Meetings	28(58.0)	8(16.0)	13(26.0)
3	Operators take Initiative & Interest	40(80.0)	3(6.0)	7(14.0)
4	5's is Implemented	33(66.0)	1(2.0)	16(32.0)
5	Efforts are made to Apply Total Productive Maintenance	37(74.0)	1(2.0)	12(24.0)

Figure in parenthesis indicates percentage. Source Field Investigation

Table 1.6: Management of Total Productive Maintenance one of the successful pillar

Sr. No	Management of Total Productive Maintenance	Agree	Disagree	Neutral
1	Total Productive Maintenance pillars & techniques are appropriately applied	29(58.0)	6(12.0)	15(30.0)
2	Total Productive Maintenance budgets	35(70.0)	2(4.0)	13(26.0)
3	Total Productive Maintenance is successful in achieving zero breakdowns	31(62.0)	8(16.0)	11(22.0)

Figure in parenthesis indicates percentage. Source Field Investigation

Maintenance programme *Bamber et al. (1999)*.

The success of Total Productive Maintenance depends on the effective management of Total Productive Maintenance, so for that suitable pillars / techniques are applied, Total Productive Maintenance budgets are drawn and managed meticulously and all these leads to zero breakdowns, zero accident and zero losses by involving one and all. According to Nakajima, (1989) study Total Productive Maintenance helps equipment and organization to attend zero breakdowns, zero stoppage, and increase availability and reliability as well. Through Total Productive Maintenance the resources available at all level work closely to achieve desire goal.

The table shows that employees are fully satisfied with the functioning of the Total Productive Maintenance activities in the

Table 1.7: Satisfaction Level an indicator towards effective implementation of Total Productive Maintenance

Sr. No	Satisfaction Level	Agree	Disagree	Neutral
1	Functioning of Total Productive Maintenance in the organization.	38(76.0)	6(12.0)	6(12.0)

Figure in parenthesis indicates percentage. Source Field Investigation

Table 1.8: Quality Circles outcome of Total Productive Maintenance

Sr. No	Quality	Agree	Disagree	Neutral
1	Quality circles working effectively	33(66.0)	5(10.0)	12(24.0)
2	Quality circles problem	26(52.0)	5(10.0)	19(38.0)

Figure in parenthesis indicates percentage. Source Field Investigate

organization. Folts (1988) said that equipment improvement team works on the problem arising in the functioning of the equipments. By taking the time to find out the root of the failures, rather than just fixing the symptoms, they were able to solve the problem, and in the years to come the problem was completely eliminated. That success showed a lot of people in the company that Total Productive Maintenance can make everyone's daily life easier as well as improving productivity.

The members of quality circles meet on regular basis to see the effective working of quality circles, and to discuss the problems and solve it promptly. Quantify the improvements in Total Productive Maintenance process by documenting improvements in parts cost, equipment efficiency, quality, and reduced oil consumption

Concluding remarks

The literature highlights the contributions of various Total Productive Maintenance implementation initiatives for accruing strategic benefits for meeting the challenges posed by global competition. Total Productive Maintenance has emerged as a key competitive strategy for business organizations in the global marketplace. An effective Total Productive Maintenance implementation program can focus on addressing the organization's maintenance related problems, with a view to optimize equipment performance.

In a nutshell, the organization strives hard to promote the Total Productive Maintenance tools, techniques and activities in the organization along with the help, support, guidance and information, so required, is easily and timely available. The Quality Circles are working effectively in the different

departments of this organization where they meet regularly and fruitfully to solve/ prevent the problems whereby important suggestions arising out of the meetings are noted and implemented as early as possible. Training programmes are organized regularly and all the employees are included to attend them especially, "5-S" technique forms an important consideration which is implemented in each and every area of the organization. Finally, Total Productive Maintenance is successful in achieving zero breakdowns, zero accident and zero losses by involving one and all in the organization.

Thus in order to get fruitful advantages of Total Productive Maintenance it should be made a part and parcel of the organization and should be followed at regularly. Moreover Total Productive Maintenance should be integrated to all areas and activities which are performed in the organization.

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Religious Values and Management Ethics

Lalitha Parameshwari

Abstract

The Importance of religious values though has great impact on the management ethics, has rarely being understood by the Indian business scenarios of today. We find that all religions show a positive relationship with extrinsic work values. Furthermore, we find that religions show a positive relationship with intrinsic work values. We also find that those who report no religious affiliation also view work values positively. We suggest that these results are perhaps a result of the converging effects of globalization. Management researchers are also accurately trying to define and promote these concepts based upon logic and reason. A religious person follows his code of conduct because he believes that it is proper behaviour and reaction to the varying challenges and circumstances which arise during the course of life. Since a religious person does his good deed not necessarily for its own sake, but because he has been instructed to do so by God his act is non-moral. One has to understand the underlying principles mentioned in the religious scriptures and try to make an analysis with relation to the management ethics, so that one will be able to create a relationship between the two.

Keywords: Religion; Myths; Ethics for management

The Hindu Tradition

"Hinduism, is the predominant faith of India. Taken as a whole, Hinduism is one of the oldest religious traditions in the world. But it is difficult to study, for it is also one of the most diversified religious traditions. Philosophy (*darshana*) in the Hindu tradition means "seeing the truth" and applying this truth to the problems of everyday life. Thus, for Indian thinkers, the purpose of studying philosophy is not merely to gain knowledge, but to discover and live the highest kind of life, the life that will bring permanent self-realization. People must try to establish the truth that exist in the religions and not simply or blind foldedly depend on the spiritual books or testimony of others. Apart from establishing

a relationship between spiritual values and management techniques, one should –

Myths behind hindu religion

One indication of the difficulty of setting forth the central points in Hindu thought is that there are many texts that, collectively, can be called Hindu Scripture. First, there are the Vedas (literally "knowledge" - that is, sacred knowledge). The earliest texts are the *Rig Veda*, a collection of over one thousand hymns addressed to the gods - hymns to Indra, the god of civilization, war, and storm; to Varuna, the guardian of morality; and to many others, most of them now forgotten. Included in the Vedas are the *Brahmanas*, lengthy treatises concerned with the details of the sacrificial ritual administered by the Brahmin class. Finally, in the eighth to fifth centuries B.C.E., there were added to these the most famous of the early Indian writings, the *Upanishads*, which attempted to explain the inner meaning of the reality behind the religious quest in a philosophical manner. All these writings form the essential canon of sacred scriptures in the orthodox Hindu tradition.

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In the period following the *Upanishads*, there was, within Hinduism, a great development of devotional religion. This was expressed strikingly in the most famous of Indian scriptures, the *Bhagavadgita*, or "Song of the Lord." There is some doubt as to when the *Gita* was compiled, but it was probably some time during the period 200 B.C.E. to 200 C.E. (the common era, equivalent to A.D.)

No other scripture is more widely read in India today. To read the *Gita* is to be introduced to some of the main themes of Hindu thought as well as to some of the main practices of Hindu life. It also introduces one to splendid Hindu poetry and to the god Krishna. It is convenient to name four major periods of Hindu thought: first, the early period of Vedic polytheism; second, the period of the Vedanta with its descriptions of Absolute Brahman; third, a period beginning about 200 B.C.E., with an emphasis on *bhakti* and last, the modern period, with its response to Western influence.

Brahman and the self

Central to much of Hindu philosophy is the emphasis on the one unchanging reality that transcends space, time, causality, and all particular things. This Absolute cannot be comprehended by human thought or adequately expressed in words and concepts. According to the nondualistic view (which emphasizes the oneness of existence) only Brahman is real, and the individual souls and the universe are illusory veils obscuring Brahman. Closely allied to the concept of Brahman is the concept of the self, or soul, or *atman*. The true self of each person is identical with Brahman. From the transcendental standpoint, the self is immortal, free, and identical with Brahman. The divine nature of the self is veiled, but not destroyed, by false images and ignorance, for it is ultimately without traits and beyond language. The true destiny of the self is the realization of this identity with Brahman. From the phenomenal standpoint, there are many individual selves, enmeshed in the world of

affairs and seeking deliverance from the round of births and deaths. Thus we need to distinguish between the real and the empirical self.

What are the relations among Brahman, the self, and the universe that we perceive? A Hindu scholar says: "Brahman is the sole reality, and it appears both as the objective universe and as the individual subject. The former is an illusory manifestation of Brahman, while the latter is Brahman itself appearing under the limitations which form part of that illusory universe." The objects of the empirical world, although of a certain order of worldly reality, are appearances in that they belong to the world of cause and effect, to which Brahman does not belong. The individual self, however, is not illusory in this sense. The self is Brahman appearing under limiting conditions. It is not a phenomenon of ignorance the way physical objects are. Through an intuitive, non-logical experience one realizes the identity of the eternal self and Brahman.

Central values in hinduism

All Hindu systems of thought seem to agree that there are four main values to be completed and brought to perfection in the course of rebirth. In ascending order of importance they are: (1) *Artha* (wealth) and (2) *Kama* (sensuality). These are the worldly or secular values. They are legitimate if they are kept in their places and do not stifle other values. Material prosperity, good health, and long life are desired by most Indians. However, both the life of activity and renunciation are recognized. (3) *Dharma* (social and individual duties) includes all caste roles and obligations of occupation, gender, kin, generation, and temperament, as well as other ethical responsibilities. (4) *Moksha* (release from finitude and imperfection) is the intrinsic or eternal value, and the supreme spiritual ideal. It gives liberation from the wheel of existence, and cannot be achieved without complete experience and resolution of the other three. Discipline is essential if we are to achieve

illumination, and the overcoming of selfishness is essential if we are to realize our genuine self and attain release. Unless a person achieves release in this life, which is rare indeed, she or he is destined to repeat the round of more existences.

According to Hinduism, no soul is eternally damned. The law of *karma*, the law of sowing and reaping, determines the form that will be taken in each new existence. This is the law of cause and effect in human life. Through our conduct we determine our own destiny in that good *karma* is acquired by living up to our *dharmic* duties and bad *karma* by ignoring or violating our given *dharma*. An unethical life may lead to rebirth below the station of the present life, and a life of goodness may lead to a more favored existence or to ultimate **liberation from the round of rebirths**. Thus, the doctrines of *karma* and rebirth are said to be grounded in the moral structures of the universe. They permit freedom and ethical advance in that they are under our control and are not determined by cosmic or environmental forces completely beyond our influence.

The concept of the four *ashramas*, or stages in the life of the individual, relates the goal of liberation to the needs and tasks of daily life in society. A man's duties are set by the stage of life at which he has arrived. The four stages are (1) the life of a celibate student under the mentorship of a teacher; (2) a long period of householdership, beginning with marriage, when a person assumes the responsibilities of parenthood and other social obligations and when one provides for those dedicated to the spiritual quest; (3) a period of increased religiosity, when householder duties can be passed on to the next generation, during which one retires to the forest with his wife to practice rituals and for meditation and reflection; and (4) by complete renunciation of family and caste and by practicing austerities and rigid self-control, a person seeks union with Brahman. If the person is successful in the fourth stage, struggle and strife cease and he gains peace and freedom through union with the all-embracing World Soul (Brahman). The inner spirit of humanity is the focus of

attention, and its development, illumination, and release are the highest values. These stations were primarily for men. At the time of traditional Hinduism, women were excluded from the more rigorous structures of the *ashramas* and received their spiritual merit from working to uphold the *dharmic* obligations of their husbands.

We propose that there is a positive relationship between Hinduism and both work values. Happiness can be attained through the fulfillment of the desires; that is, extrinsic values. In fact, the latter has played a crucial role in achieving business excellence (Sharma and Talwar, 2004). Hindus have traditionally viewed living the good life through four aims, namely *dharma* (fulfilling one's duties), *kama* (pleasure), *moksa* (achieving liberation), and *artha* (material prosperity). As such, *artha* or achievement of material prosperity plays an important role in the Hindu good life. It is thus likely that Hindus pursue extrinsic work values as they are expected and encouraged to accumulate wealth (Gold, 1989) as one of life's stages. However, it is also likely that Hindus look for intrinsic values, such as a job that is interesting and that contributes to society. Religions seem to view work very similarly provide important contributions both theoretically and practically. Multinationals are advised to design work environments that respect important religious differences. However, these multinationals will nevertheless face workers who favor both intrinsic and extrinsic work values.

Hinduism, Values and Management

Global corporations and governments appreciate the importance of an ethical public appearance. Thus values and ethics for business and government have become important components of management training. The movement for management values originated in the United States, it quickly spread to Europe, and India can hardly be said to lag behind. Indian initiatives in this field receive financial support from enterprises such as the Tata Group, the ONGC

(Natural Oil and Gas), and the BPCL (Bharat Petroleum).

The slipping away of public control mechanisms seems to encourage managerial misbehaviour. Promoters of business ethics in the United States and Europe have understood that the growing private sector requires clear formulations of ethically acceptable corporate behaviour. Thus 'values in business', 'values-based management', 'ethical entrepreneurship', and so forth, have entered the market of management teaching. Hindu values and business Concern for ethical corporate behaviour was first expressed in India in the early 1980s. The then Indian Prime Minister, Indira Gandhi, informally urged Swami Yuktananda, a monk and follower of the Shri Ramakrishna movement, to promote Indian values for the moral improvement of Indian management. Indian values, it was claimed, derived from the inclusivist (Hindu) Vedanta philosophy. Vedantic Hinduism (like Christianity in the Western world) in the 1980s came to be regarded as a cultural resource for Indian managers. It was thought that values awareness would prevent corruption. Less corruption in the end meant less financial loss. The target groups for values training were managers of private and public sector enterprises, high-ranking state civil servants, and executives of the Indian Administrative Service. Promoting values in Indian government, however, inevitably has political implications. In the 1990s, the Hindu conservative Bharatiya Janata Party (BJP) came to power at the national level. This boosted efforts to promote Hindu values in management. Professors working at institutes of management in Calcutta, Lucknow, and Ahmedabad began to lecture on Indian (read Hindu) ethics for management and developed special training courses for Indian managers. While the number of courses is steadily increasing, the serious scholarly literature on the subject remains small. One scholar with an international reputation has held undisputed sway over the field since the 1990s: S.K.

The promotion of religion as the

fundamental source of ethical behaviour is based on two sociological observations:

- (a) the great world religions of Christianity, Islam, Hinduism, and Buddhism have large followings, and are more universal in aim and intent than political or social ideologies;
- (b) unlike ideologies, world religions address (or claim to address) issues of ultimate human concern such as life, death, good, evil, and the hereafter. Thus, Hinduism (the religion of about 85 per cent of Indians) provides fundamental Indian values. One may question the need to turn to world religions to seek ultimate values. But so long as religions provide values to millions around the world, academics have reason to study their impact on values discourse. Indian intellectuals who regard themselves as secular and (often) leftist balk at the use of religious texts as sources for values, especially the use of Hindu texts as sources for ethics in business and politics. Their apprehension is not groundless. Hindutva and management

The most famous and influential representative of the first approach is S.K. Chakraborty. In his courses on values for managers he presents a leadership model that builds upon hierarchy, strict obedience to a boss or leader, rituals, and punishment for those who disobey this leader. In some of his courses and articles Chakraborty has argued for abolishing the present secular constitution and parliamentary democracy, and replacing them with a Hindu constitution and rule by a few wise gentlemen.

is Shri Sathya Sai Baba. Arindam Choudhury in his best-selling book *Count Your Chickens Before They Hatch* wants Indian managers to act with self-confidence and a sense of initiative. One of Choudhury's Hindu role models is Swami Vivekananda. However, the vocal supporters of egalitarianism and democracy are outnumbered by those who tacitly support hierarchy and authoritarianism. Abdul Kalam, Ex-President

of India, has outlined a dream to 'ignite' the minds of youth through widespread education with the aim to build a technologically advanced nation. In order to realize this dream, government institutions and businesses must work in a socially and economically progressive environment. This requires universal basic education fostering independence of mind, rationality, problem solving, and initiative. In short, a democratic egalitarian temperament is essential to growth in every respect. It is estimated that over 90 per cent of India's work force is barely educated and works in the informal sector. The greatest challenge for the future will be the full mobilization of this work force on a socially just and economically responsible basis. Serious debate on values is indispensable. Indian executives in government and business must reflect on the ultimate ideals that ought to guide the future of India: will the country be transformed into a more democratic and economically equitable society that enables all of its citizens.

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SHG: Micro-finance as a New Tool to Combat Poverty: An Empirical Study

R. Neelaiah*, Chaganti Rami Reddy**

Abstract

Micro finance has evolved over the past quarter century across India into various operating forms and to a varying degree of success. One such form of microfinance has been the development of the self-help movement. The major approach to deliver micro-finance form financial institutions for undertaking self-employment activities particularly among the rural poor is of two types viz. individual and group oriented. The concept of SHG serves to underline the principle of "for the poor, by the poor, of the poor. In this paper covers socio-economic, credit plus services and analyze the impact of micro credit plus services on household welfare.

Keywords: Self-help groups (SHGs); Micro-finance; Financial institutions; Banking systems.

Introduction

Micro-finance has gained a lot of significance and momentum in the last decade. India now occupies a significant place and a niche in global micro-finance through promotion of the self-help groups (SHGs) and the homegrown SHG-bank Linkage model. The Indian modal offers greater promise and potential to address poverty as it is focused on building social capital through providing access to financial services through linking with the mainstream.

Since the inception of economic planning in India, efforts have been made in successive plans to mitigate the incidence of poverty. Depending on the dominant development paradigms of the age, India has tried various strategies for addressing the issue of poverty. Some of them could be summarized as the Community Development, Trickle Down, Basic Needs, Human Resource Development,

Labour-Intensive growth with targeted programmes and empowerment and enhancing security, to name a few. Despite all these efforts, there has been no conspicuous change at the poverty front though the relative poverty has fallen marginally; the absolute poverty is still alarmingly high.

The present study assesses the impact of microfinance on the social status of SHG rural women in the pre-SHG and post-SHG scenarios. For empirical investigation and analysis, Rappthadu Mandal which is one of the backward Mandal in Anantapur district of Andhra Pradesh is taken. Since efforts were also made to find out the impact of microfinance of SHGs in ensuring empowerment, evince self-confidence, bring-out positive and proactive behavioral changes in the post-SHG period as compared to the pre-SHG period

Role of Micro-Finance

Most of the Government in developing countries are encouraging micro financing for empowerment of poor. In India also, NABARD encourages lending to women through Self Help Groups (SHGs) after achieving successful results from a pilot project of 500 SHG-Bank linkage programme in 1992. Now it is the largest micro financing programme anywhere in the world. According to NABARD, unto the

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year 2008, 44.60 lakh SHGs covering 5.8 crores of poor households are linked to banking system and over 40 million poor households have gained access to the formal banking system through the SHG Bank linkage programme.

Concept of Self-Help Group

Self Help Group is defined as “a small economically homogenous and affinity group of rural poor voluntarily formed, to save and mutually agree upon a collective decision”. The common fund, established through individual contribution by way of saving will be lent to its members as per group decision. The concept of SHG serves to underline the principle of “for the poor, by the poor, of the poor.”

Objectives of the study

The study is primarily concurred with the following objectives.

1. To study the socio economic profile of the members after joining SHGs.
2. To identify the accessibility of credit plus services by the households in pre and post micro finance intervention.
3. To analyses the impact of micro credit plus Services on household welfare.

Methodology and Collection of Data

In this section an attempt is made to prepare a methodology of the present study. It includes sample design, period of study, and collection of data and method of analysis. Primary data have been used for the present study. The details regarding income, savings and the like relating to the overall objectives of the study were collected from the sample members through the Direct Personal Interview Method.

Study and Analysis

The major aim of the SHGs is to promote savings and credit for productive and consumption purposes. This is true because many people in the study area join the SHGs for getting loans and promote their Personal savings. Some join to get status. In the sample group 75.00 Per cent members are married. Similarly in the time of survey 3.00 Percent members are unmarried.

The Table 2 presents accessibility of ‘credit plus services’ by the household’s in pre and post SHG intervention. In prior to joining the SHG programme, a large number of the households are outside the access of credit and non-credit services. There were 84.00 per cent

Table 1: Socio-economic profile of the SHG members

Age	No. of Respondents	Percentage	Caste	No. of Respondents	Percentage
Less than 20	3	3.00	SC	23	23.00
20-30	28	28.00	ST	28	28.00
30-40	36	36.00	BC	36	36.00
40-50	23	23.00	Minorities	10	10.00
Above 50	10	10.00	OC	03	3.00
Total	100	100	Total	100	100
Marital Status	No. of Respondents	Percentage	Level of Education	No. of Respondents	Percentage
Married	75	75.0	Primary	39	39.00
Unmarried	03	3.00	Secondary	20	20.00
Divorced	04	4.00	Hr. Secondary	09	9.00
Widowed	18	18.00	Degree	01	1.00
			Illiterate	31	31.00
Total	100	100	Total	100	100

Source: Primary Survey

Table 2: Access to credit plus services by the households

Particulars	Before SHG	After SHG
Savings	16 (16.00)	100 (100.00)
Credit	21 (21.00)	100 (100.00)
Insurance	19 (19.00)	54 (54.00)
Training & Awareness	0 (0)	40 (40.00)
Health Care	45 (45.00)	100 (100.00)
Social Networks	10 (10.00)	52 (52.00)
Micro Enterprises	14 (14.00)	62 (62.00)
No. of Observation	100	100

Source: Primary Survey

households prior to SHG programme were not had access formal savings services respectively. It is also obvious from the table that 79.00 per cent member households were not accessed formal credit facilities, 81.00 per cent were not insured against any kind of risk or uncertainty of life or health, in the total sample population none of the member households were availed any type of training or awareness, 55.00 per cent were not accessed the health care facilities. 90.00 per cent were not had any social networks, 86.00 per cent were not availed the benefits of micro-enterprise services respectively. However, it is evidential from the table that post-SHG has liberated the members to access credit plus services from various institutions. It is clear that the inter-institutional participation (promotion of groups, savings, credit, insurance and non-credit services linked by various institutions) in the development of SHG leads to non-access to some of the credit plus services to the SHG members.

It is obvious from the table 3 that in the

Table 3: Distribution of Household Annual Income

Per Annum Income of the Household	Before SHG	After SHG
Less than Rs.12000	44(44.00)	0 (00)
Rs. 12001 to Rs.15000	08 (8.00)	0 (00)
Rs. 15001 to Rs.22000	29(29.00)	38 (19.00)
More than Rs.22001	19(19.00)	62 (62.00)
Number of observation	100	100

Note: figures in parenthesis denote percentage to the total number of households

Source: Primary Survey

Table 4: Employment of the Member Pre and after joining SHG Programme

Categories of Employment	Before	After
Agricultural and Non-agricultural wage labour	36(36.00)	18(18.00)
Cultivation	12(12.00)	05(5.00)
Housewife	28(28.00)	06(6.00)
Unemployed	24(24.00)	0(00)
Self-employed	0(00)	71(71.00)
Number of observation	100(100.00)	100(100.00)

Note: figures in parenthesis denote percentage to the total number of households.

Source: Primary Survey

absence of SHG programme, there were 44.00 per cent of the member households had the income of less than Rs.12000 per annum. Only 19.00 per cent of the households were had the per annum income of more Rs. 22000. However, it apparent from the table that after joining the SHG programme, the member household income has increased, more than 62.00 per cent of the households were had the per annum income of more than Rs. 22000. Hence, it is evidential that micro-credit plus services played a positive role in improving the household income and thereby enhancing the welfare of the households. Thus, there is a positive change in income of the SHG beneficiaries.

It is obvious from the table 4 that 71.00 per cent are self-employed, 5.00 per cent are depends on cultivation, 18.00 per cent depends on wage labour, etc., respectively. Thus, SHG has promoted employment opportunities for the large number of unemployed and housewives. Thus, SHG services created new

Table 5: Change in Physical Assets

Types of Physical assets	Yes	No
Land	74(74.00)	26(26.00)
Livestock	68(68.00)	32(32.00)
Electronics	64(64.0)	36(36.00)
Vehicles	21(21.00)	79(79.00)
Tools and Equipments	11(11.00)	89 (89.00)
Others	61(61.00)	39(39.00)

Note: Figures in parenthesis denote percentage to the total number of households and percentage to the possessing of assets

Source: Primary Survey

Table 6: Development in Household asset Housing condition of the member prior and after joining the SHG programme

Type of dwelling	Before joining the SHGs	After joining the SHGs
Pucca	30(30.00)	61(61.00)
Semi Pucca	25(25.00)	17(17.00)
Kutcha	32(32.00)	20(20.00)
Don't own	13(13.00)	2(2.00)
Fuel used for cooking		
Gas	15(15.00)	53(53.00)
Firewood	58(58.00)	17(17.00)
Kerosine	27(27.00)	30(30.00)

Note: figures in parenthesis denote percentage to the total number of households.

Source: Primary Survey

hopes in the lives of the poor and uplifted them from the poverty though improving the employment.

Development of Household Assets

The studies showed that the participation in SHG programme lead to improvement in financial assets, household physical assets, human assets, social asset, etc. The introduction of compulsory or voluntary savings in microfinance leads to higher rates of savings.

The studies showed that the participation in SHG programme lead to improvement in financial assets, household physical assets, human assets, social asset, etc. The introduction of compulsory or voluntary savings in microfinance leads to higher rates of savings.

The table 5 presents the changes in the physical assets of the member households in the post SHG programme. In the study, 68.00 per cent members the livestock's (Animals and Poultry). Similarly, 64.00 per cent members holding the electronics goods. In the sample population, 21.00 per cent possess the vehicles, 11.00 per cent possessing tools and equipments and 61.00 per cent are purchased others respectively. It is apparent from the table that

SHG has contributed in acquiring the financial and physical assets to the poor.

Housing condition of the members has improved in the post SHG programme as compared to the before joining the programme. There were 32.00 per cent of the member households in prior to SHG programme are had the Kutcha dwellings. But, after joining the SHG's, there were only 20.00 percent of the households are living in kutcha dwellings. 15.00 per cent household used Gas for cooking before joining the SHG. But nearly 53 percent of the household used Gas for cooking after joining the SHG for the reason of the Andhra Pradesh government have been provided subsidy LPG to SHG members.

Conclusion

Microfinance is not a panacea to all problems of poverty. However, it is considered as a vital tool to break the vicious circle of poverty that characterized by low income, low savings and low investment. In order to generate higher incomes, savings and more investment, there is need to inject capital in the form of microfinance.

The empirical evidence in this study showed that credit plus service of SHG has positively correlating with the improving in household expenditure, income, assets and employment. Microfinance has contributed in improving the access to credit for consumption and productive purposes. Most institutions regarded low- income households as "too poor to save". But SHG programme nullify the argument and showed that even vulnerable poor can save if she having the accessibility and reward from it.

Self-help groups are currently being promoted as a key strategy for Eradicating Poverty. The participation of poor in SHGs has paved the way for economic empowerment. The involvement of the poor in the group significantly contributes to improvement in the quality of life and social status.

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The methods section should include only information that was available at the time the plan or protocol for the study was written such as study approach, design, type of sample, sample size, sampling technique, setting of the study, description of data collection tools and methods; all information obtained during the conduct of the study belongs in the Results section.

Reports of randomized clinical trials should be based on the CONSORT Statement (<http://www.consort-statement.org>). When reporting experiments on human subjects, indicate whether the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional or regional) and with the Helsinki Declaration of 1975, as revised in 2000 (available at http://www.wma.net/e/policy/I7-c_e.html).

Results

Present your results in logical sequence in the text, tables, and illustrations, giving the main or most important findings first. Do not repeat in the text all the data in the tables or illustrations; emphasize or summarize only important observations. Extra or supplementary materials and technical details can be placed in an appendix where it will be accessible

but will not interrupt the flow of the text; alternatively, it can be published only in the electronic version of the journal.

Discussion

Include summary of key findings (primary outcome measures, secondary outcome measures, results as they relate to a prior hypothesis); Strengths and limitations of the study (study question, study design, data collection, analysis and interpretation); Interpretation and implications in the context of the totality of evidence (is there a systematic review to refer to, if not, could one be reasonably done here and now?, what this study adds to the available evidence, effects on patient care and health policy, possible mechanisms); Controversies raised by this study; and Future research directions (for this particular research collaboration, underlying mechanisms, clinical research). Do not repeat in detail data or other material given in the Introduction or the Results section.

References

List references in alphabetical order. Each listed reference should be cited in text (not in alphabetic order), and each text citation should be listed in the References section. Identify references in text, tables, and legends by Arabic numerals in square bracket (e.g. [10]). Please refer to ICMJE Guidelines (http://www.nlm.nih.gov/bsd/uniform_requirements.html) for more examples.

Standard journal article

[1] Flink H, Tegelberg Å, Thörn M, Lagerlöf F. Effect of oral iron supplementation on unstimulated salivary flow rate: A randomized, double-blind, placebo-controlled trial. *J Oral Pathol Med* 2006;35:540-7.

[2] Twetman S, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, et al. Caries-preventive effect of fluoride toothpaste: A systematic review. *Acta Odontol Scand* 2003;61:347-55.

Article in supplement or special issue

[3] Fleischer W, Reimer K. Povidone iodine antiseptics. *State of the art. Dermatol* 1997;195 Suppl 2:3-9.

Corporate (collective) author

[4] American Academy of Periodontology. Sonic and ultrasonic scalers in periodontics. *J Periodontol* 2000;71:1792-801.

Unpublished article

[5] Garoushi S, Lassila LV, Tezvergil A, Vallittu PK. Static and fatigue compression test for particulate filler composite resin with fiber-reinforced composite substructure. *Dent Mater* 2006.

Personal author(s)

[6] Hosmer D, Lemeshow S. *Applied logistic regression*, 2nd edn. New York: Wiley-Interscience; 2000.

Chapter in book

[7] Nauntofte B, Tenovou J, Lagerlöf F. Secretion and

composition of saliva. In: Fejerskov O, Kidd EAM, editors. *Dental caries: The disease and its clinical management*. Oxford: Blackwell Munksgaard; 2003. p. 7-27.

No author given

[8] World Health Organization. *Oral health surveys - basic methods*, 4th edn. Geneva: World Health Organization; 1997.

Reference from electronic media

[9] National Statistics Online—Trends in suicide by method in England and Wales, 1979-2001. www.statistics.gov.uk/downloads/theme_health/HSQ_20.pdf (accessed Jan 24, 2005): 7-18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

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