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## About This Journal

The Research Journal of Yangon Institute of Economics has come out by the guideline of the Minister for the Ministry of Education in Myanmar. This may be one of the steps towards the globalization of our universities and institutes. The articles in this journal are written by researchers from all academic departments of our institute. We fully appreciate the contributions of the researchers. We also admire their great efforts to contribute in this journal though gradually increasing numbers of the students enrolled in Yangon Institute of Economics make them to devote most of their time on teaching.

Our guiding criterion is quality of material. We do hope that teachers and students will have an opportunity to apply the fullest academic process in next series of this research journal.

Editorial Board



# **The Rural Community Development Strategies of South Korea and Myanmar: Past and Present**

Tin Mar Soe<sup>1</sup>

## **Abstract**

The development of a country will not be feasible unless development in the rural community has been taken place. Consequently a variety of rural development programmes have been launched by the governments. Among these, some have achieved remarkable success. One of such programmes is "Saemaul Undong", which improved the scenes of rural community of South Korea in the 1970s. As the result of the Saemaul Undong, the rural sector of South Korea improved. The rural sense of Myanmar barely changed during the same period. The main rationale of this paper is to compare and contrast the rural community development of South Korea and Myanmar. The research method is mainly descriptive based on historical and current situations of both countries. Primary data are collected in Myanmar to highlight the current level of rural community development through a survey on twenty villages. The findings from the survey reveal that the economic and social wellbeing of rural villages are moderately improving at the expense of environmental sustainability. Although the economic wellbeing of the villages in the sample has been improved, the main reason for the improvement is largely external – i.e. wages of family members working abroad and at the expense of environmental deterioration. The findings from the experiences of South Korea show successful rural development remain on agricultural marketing system, presence of incentive scheme for the development, vision and commitment of national leaders, development of community leaders, cross institutional involvement, spiritual reform and finally stage by stage development with long term orientation. Some of the good practices of the rural community development model of South Korea should be studied and adopted since the two countries experienced similar political structure and socio-economic situations in the past. (Key words: rural community development, Saemaul Undong, spiritual reform)

## **I. Introduction**

### **1.1 Background of the Study**

Development of rural community is very important for the development of a poor country since majority of its population is living in the rural areas. Accordingly, governments of these countries attempt to promote their rural community by all means. Some succeed while others fail. Myanmar and South Korea are two extreme examples. There is no straightforward answer for that since many intertwining factors are playing in the different stories of these countries. Myanmar and South Korea share a number of similar characteristics in the last 50 years. Both are Asian countries and had experienced strong military dictatorship for many years. By 1960s the populations of these two countries were within about 10 percent range difference and per capita GNPs were ranging from US\$50 to US\$70. However, there is a big gap between them today in terms of the level of economic development. It may be a surprising result for a prescient observer of the Asian scene who might predict that Myanmar will be the economic leader among three countries in the future (Korea, Thailand and Myanmar) under comparison (Steinberg, 1997). Today, GNP per capita figures show South Korea enjoys about US\$ 20,000 while Myanmar has barely more than US\$ 300 in 2010.

Inevitably, the consequences of poor economic performance affect more on the population who are living in the rural areas. Since rural development and economic development of a country are largely interdependent each other, economic development cannot be obtained without rural development.

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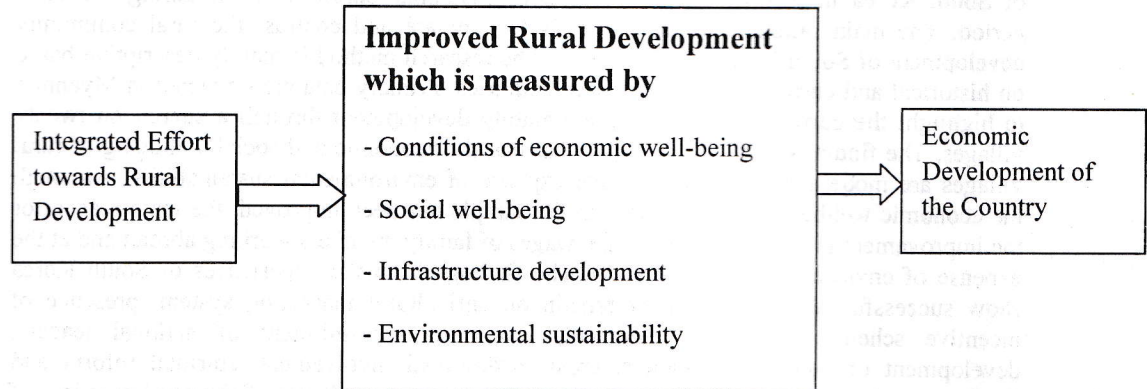
<sup>1</sup> Assistant lecture, Department of Commerce, Yangon Institute of Economics.



## 1.2 Conceptual and Analytical Framework of the Study

Conceptual framework of the study is shown in the following diagram. The indicators used to measure rural development are based on “Indicators for Rural Development and Household Income” by Economic and Social Commission for Western Asia (ESCWA) – United Nations, 2009<sup>1</sup>.

**Figure 1: Conceptual Framework of the Study**



Source: Author (2011)

The conceptual framework is based on the belief that the integrated and cross institutional involvement in the effort for rural development will lead to improve rural condition which is measured by (1) economic well being (2) social well being (3) infrastructure development and (4) environmental sustainability. These conditions ultimately lead to the economic development of the country. Based on this conceptual framework, an analytical framework for measuring the level of rural community development has been constructed as below.

Four elements of rural development shown in the conceptual framework can be measured by the indicators as follow.

### 1. Economic well-being

- a. ← Real per capita income of the villager (individual and household)
- b. ← Percentage of farmland households
- c. ← The number of houses in the village with good conditions
- d. ← The ownership of consumer durables like Motorcycle, Television, Seattleite, Mobile phone etc.

### 2. Social well-being

- a. Literacy rate of the village and number of graduates per year
- b. Percentage of the people access to safe water (suitable for drinking)
- c. Infant mortality rate

<sup>1</sup> Expert Group Meeting on Adopting the Sustainable Livelihoods Approach for Promoting Rural Development in the ESCWA Region, Beirut, 21-22 December 2009



### 3. Infrastructure

- a. Access to electricity and road condition
- b. Time taken to read newspaper and journal
- c. Time taken to read nearest town
- d. Forest area within 10 miles of the village

### 4. Environmental sustainability

- a. Pollution is measured by noise and air pollution due to the traffics and industries (because of motorcycle and machineries for transport purpose)
- b. Level of water and soil pollution
- c. Bio-diversity is measured by the number of animals (wildlife) in a square mile
- d. Access to water near the village

## 1. 3 Research Design and Methodology

This research mainly used descriptive research method based on the analysis of historical and current situation. Historical and current data of both South Korea and Myanmar gathered from all available sources including special reports, findings from previous studies, government statistics, books, periodicals, journals and Internet. Literature survey was intensively used in this study. Only secondary data were used to study the case of South Korea. Primary data was collected from villages in Myanmar in order to understanding the socio economic status of living of people in the village, present level of rural development and the level and integration of effort towards rural community development. There are more than 330 townships and 60000 villages in Myanmar. Because of cost and time factors, this study only focuses on 20 villages to get detailed information on the above factors. Because of geographical difference as well as ethnical variety in Myanmar, there may be somewhat differences in terms of rural community development among villages in the whole country. Therefore, in order to represent the situation of villages in the whole country as much as possible multistage stratified random sampling was used to obtain sample villages.

The country was stratified into four regions based on their geographic characteristics namely - Central Region, Hilly Region, Delta Region and Coastal Region. Some townships located in remote areas are discarded due to difficulty in transportation and communication.

First step – Five sample townships from each strata region are drawn with simple random sampling basis. Since there were four strata region, it got totally 20 townships after finishing this step. This step was done in order not to be two villages are located in a single township.

Second step – A sample village from each township is chosen at the second step with the simple random sampling basis. After completing this step, it got five villages in each region and totally 20 villages all over the country to collect primary data. In each sample village, the village head or senior villager is targeted approached and requested to fill predetermined questionnaires to investigate about present state of rural community development of that village.



## 1. 4 Scope and Limitation of the Study

This study has a number of limitations. First, it relies on secondary data for Korea's rural community development. Second, only literature survey can be used to gather required data from Korea and primary data concerning current state of rural villages in Korea cannot be covered in this study. Third, sample size 20 villages are too small to reflect the situation of overall villages in Myanmar. Fourth, the period covered by the study is limited from 1970 to 2010. Therefore, the development efforts toward rural sector prior to 1970 are beyond the scope of this study. Despite these limitations, this study should provide insightful information and lessons for successful rural development and unsuccessful one. As the output of the study, it can provide useful suggestions for the development of rural development model that suit the country's situation based on the experience of Korea. The finding from this study will be valuable for the later studies in the field of rural development in the developing countries like Myanmar.

## II. Rural Community Development Effort of South Korea

### 2.1 Brief Political and Economic History of South-Korea

South Korea was established as The Republic of Korea in 1948 the same year Myanmar got her independence from the British. Before that, Japan conquered and ruled Korea peninsula for 35 years. After Japanese left, the country was divided into two parts; the southern the U.S. administered part and the northern the Soviet controlled part. South Korea appeared as one of the poorest nations in the world. North Korea attacked the country in 1950, resulting in a terrible civil war which lasted for three years and many civilians were injured and killed. In 1952, Syngman Rhee was elected as the President. It was the period of economic and social hardship in the history of South Korea.

Park Chung-Hee seized power by means of military coup in 1961. General Park Chung-Hee attempted to develop the nation by adopting an export-led strategy. Park Chung-Hee was assassinated in 1979. Although he was a military dictator, he made a lot of contribution to the economic development of his country. Saemaul Undong, which emerged largely due to his vision and guidance. The years between 1961 and 1987 were characterized by increasing domestic political repression and power struggles. By the 1980s student demonstrations gained a widespread following all over the country and the government held elections in 1987. In the following election, in 1992 Kim Young-sam was become President. Since then, South Korea has experienced peaceful democratic transition. In 1997 Kim Dae-jung was elected president, followed by Roh Moo-hyun in 2002. Although South Korea had faced economic downturn in 1997, it economy was almost recovered in 2004.

### 2.2 Rural Community Development of Korea through the Saemaul Undong

Rural areas of South Korea have been going under changes for a long period of time. The rural development programs were initiated during Japanese colonial period through the introduction of scientific techniques in agricultural production. So called the Rural Revival Movement was launched during the Japanese occupation. However, it was proved to be unsuccessful. In 1958, Rhee government introduced a community development scheme. But it also was faded away during a few years. After the military coup took power in 1961, a rural oriented community development plan, known as the National Movement for Reconciliation,



was introduced. But it did not success. The National Movement for Reconciliation was replaced by Saemaul Undong movement in early 1970s. The Undong, which was officially launched in April 1970, intended to improve the physical environment of villages and to increase rural income. The term "Saemaul" was coined by combining *Sae*, which means 'progressive renewal based on past experiences,' and *Maul*, which refers to 'regional and social communities.' The main features for the success of Korea's Saemaul Undong are discussed as follows.

#### *A. Land Reform in Korea*

The program of land reform in Korea was carried out in the period from 1949 to 1952. Under the amend Land Reform Act in 1950, landlords turned over lands to the family at the low prices to the families that were actually cultivating the land which caused the number of landowners in the rural communities increased from 30% to more than 90% (Lee, 2007).

#### *B. Agricultural Marketing*

The government agencies and private expertise exerted their best efforts to create new species of rice to maximize the quantity of harvested grains. Rice prices were largely subsidized. Government adjusted the terms of trade to favor the agricultural sector by increasing the government purchase price of rice and protecting the agricultural sector from cheaper import (Reed, 2010). The prices at which government purchase rice and barley were steadily increased starting from 1968 and within a few years stood well above both international and domestic prices (Moore, 1984). As a result, the main products of Korea, rice and barley, reached sufficiency by 1975 (Choe, 2005).

#### *C. Incentive Scheme*

Incentive scheme plays an important role in Saemaul Undong. The scheme played at both levels – individual and village. Villages were classified according to the status of development as prescribed by central authority and undeveloped villages received no support until they had instituted a self-help program. As the undeveloped villages advanced to developing status, the central authorities channeled resources to them mostly in the form of cement and steel rods to be able to use in further progress. When these villages reached to a higher level of growth, government subsidies were reduced and eventually cut off when the villages became self-sustaining. At the individual level, outstanding Saemaul leaders were given an Order of Merit which was bestowed upon them by the president or by another leading official (Turner, 1993).

#### *D. Leadership*

The role of government and visionary leadership played an active role in the success of the model. President Park, who was passionate to develop rural areas of the country presided by himself over a monthly cabinet meeting held only for the report, discussion and relevant to the Movement. President, prime Minister and most ministers used to visit the rural communities or project sites without notice in advance. Several success makers to the movement were awarded with the medals and prizes by the president himself.

#### *E. Cross Institutional Involvement*

One of the factors that contribute the success of Saemaul Undong was integration of efforts and genuine cooperation among all level of government institutions. Through integration plans made at the president level, they were well communicated stage by stage down to the group level in the village. National government, local government and rural people are well cooperated and structure of interaction among them is very strong in the process of rural



community development. The Saemaul Undong was conducted so called integrated approach with the combination of top-down and bottom-up approach (Choe, 2005).

#### *F. Community Leadership*

President Park recognized the role of community heroes to be able to successful implementation of the Saemaul Undong (Turner, 1993). Korea has a strong custom of selecting village leaders through informal process who are skill in resolving disputes and negotiating with higher authorities. Saemaul Undong did not challenge this traditional practice rather it developed new cohort of younger and develop oriented leaders who served as change agents in their villages (Reed, 2010). The authorities specified the new leaders based on the personal, social, educational and performance criteria. They must be respected and trusted by the people since they are chosen by the villagers through election or at their request. The Saemaul Undong leaders were enrolled in a special program of ideological, practical and leadership training at the national Saemaul Undong Leadership Training Centre and then they became focal points of authorized for introducing government initiatives at the village level. One of the most important tasks of the Saemaul leader and village development committee was to agree on rural development projects with the villagers that were really needed for their village. The role of women in the village had also been enlarged to participate and support in village development activities.

#### *G. Spiritual Development*

Korean people have the tradition of community spirit in which people living in the community are ready and willing to help each other's affairs and for the common good. One of the aspects of Saemaul Undong was energizing villagers with "we can do" philosophy with self-help approach. Each community was responsible to develop their own village by the accumulation of own fund and need to show own initiatives only after that funding from high authorities was followed for further development. In this way, villagers acknowledge themselves successful outcomes of the development in which they take part (Lee, 2007). The movement was success in that it changed the spirit of rural people from dependence to self-reliance, from laziness to diligence and from individual to cooperation as a group (Choe, 2005).

#### *H. Infrastructure Development*

The Saemaul Undong created environment that is conducive to rural development through the improvement of rural infrastructure such as replacement of straw thatch roof of the houses with tile ones, enlargement of village roads and repairing of village wells, improvement of walls and fences, expansion of irrigation cannels, building new bridges and repairing old ones, improvement of sewages and construction of community centers. The integrated approach was taken to implement these projects through cements and steel rods were supplied by the government, lands were donated by wealthy household in the villages and labors are contributed by the villagers (Lee, 2007).

#### *I. Stage by Stage Approach with Long-term Orientation*

The Saemaul Undong project was not one-off, short time sparse and a political dressing activity. Rather it was a well-design and long-term development project with the real commitment and support for rural development from the top in every stage. The initial stage of development was largely self help approach that was designed to improve the living conditions of individual households through improvement of housing condition, sanitation and wells. In that stage, government supplied necessary materials, guidance and encouragement. The second stage focused on the development of economic infrastructure



which included the building of feeder roads, bridges, irrigation and drainage systems, community places, strengthening of embankment and the development of rural electrification. The third stage was concentrated to increased incomes of rural family through increased food production, group farming, breeding and marketing and establishing small scales industries in the villages. The villages were classified according to their level of development based on established criteria to be able to support according to their status.

Without exception, Korea experienced arbitrary, coercive and exploitative political control by authoritarian regime. However, at the same time, government's real concern to develop rural community development had been coexisted. The Saemaul Undong movement undeniably transformed the appearance of Korean villages. It was evident that at the start of Saemaul Undong in 1970, GNP per capita of Korea was 257 US \$ and it became US \$ 10,548 in 1996.

### III. Rural Community Development Effort of Myanmar

#### 3.1 Brief Political and Economic Background of Myanmar

Myanmar is a country located in the Southeast Asia. Like Korea, Myanmar gained her independence in 1948. Myanmar, during the colonial period, was the largest exporter of rice and teakwood in the world. In terms of average annual per capita export from 1936 to 1939, Myanmar was two times higher than Indonesia and Thailand, three times higher than Vietnam, six times higher than India and 25 times higher than China (Economists, 2000). Coupled with the independence Myanmar faced nation-wide insurgencies. The period between 1950s were so called parliament democracy or may be regarded as golden period of Myanmar in her history. In terms of economic development during that period from 1948 to 1962, the average annual growth of GDP of 5.3 per cent was said to be quite satisfactory compared with the South Korea's average annual growth rate of GDP of 4 per cent between 1953 and 1961 (Thein, 2004). A turning point of the country's fortune actually happened in 1958 when the ruling party at that time, namely Anti-Fascist Peoples' Freedom League (AFPFL) split into two parts. The political instability invited Myanmar army led by General Ne Win temporarily took care of the country (1958-1960). Having experience in administration with enjoying the taste of power led the Myanmar army to seize the national power again in 1962. Revolutionary Council was formed and later it transformed as Burma Socialist Program Party in 1972. Inward looking and close door economic system was adopted while disconnecting its citizens with outside world. The economic performance was rapidly deteriorated during the period between 1962 and 1988. External indebtedness rose from negligible levels to over US\$ 4 billion at the end (Economists, 2000). These results led to the all-round political unrests in 1988, which were put to an end by a new military coup namely The State Law and Order Restoration Council (SLORC) and later changed its name as State Peace and Development Council (SPDC) in 1997. It officially declared to adopt a market-oriented economic system. After a long period of holding power, SPDC conducted a state referendum for national constitution in May 2008 and based on the result of it a democratic election was held in 2010 September. The new government hands over power at



the end March 2011. At the opening page, it has brought the issue of rural development and poverty alleviation into the top of its reform agendas<sup>2</sup>.

### 3.2 Rural Community Development of Myanmar after 1960s

It can be said that economic development of Myanmar cannot be separated from rural sector development of the country since 70 percent people is living in the rural areas and most of the poor are also fallen in that sector. And again, rural development of the country cannot be divorced from agricultural sector development because this sector is major livelihood of the people in the rural areas. The followings are reform measures to develop rural areas after 1960s.

#### *A. Land Reform*

In Myanmar, all lands are owned by the state. Historically, farmers have no ownership right on the land they are cultivating but cultivators have land holding right as long as they pay taxes and are cultivating (Soe, 2005). Under the socialist regime, the agriculture sector was highly controlled and directed by the government. The land policy had created small scale, subsistence and family farming with small amount of land holding<sup>3</sup>. The government passed a Farmers Rights Protection Law (1963) that protects the land of farmers from the lenders but it also deterred the access of credit from the banks by using lands as collateral.

#### *B. Agricultural Marketing*

The State Agricultural Marketing Board (SAMB) was formed to monopolize rice trading since parliament democracy period. The government practiced a system of official procurement of paddy with the compulsory delivery system under which farmers were required to sell a part of their paddy output (set by the quota) to the state with the fixed price which was far below than the prevailing market price throughout the socialist period up to 2002. This system effectively discriminated domestic price of rice from international price, and any difference between the two prices was enjoyed by the government<sup>4</sup>. Internal transportation of rice had been strictly prohibited to avoid illegal export to neighboring countries. The first liberalization in agricultural sector was happened in 1987 by liberalizing domestic agricultural marketing and abandoning crop planning by the government (Okamoto, 2004). The SPDC government abolished public procurement system and liberalizing agriculture trading in April 2003 including major agricultural products of rice, beans and pulse. However, rice exporting was banned for the sake of domestic self-sufficiency and food security in 2004. Rice export rights were resumed in large scale in 2009 by granting export permits to some large companies that specialized in paddy.

<sup>2</sup> The speeches delivered by President U Thein Sein at the opening of National Level Workshop for Rural Development and The first meeting of Rural Development and Poverty Alleviation Central Committee on May 20, and June 20 2011 respectively.

<sup>3</sup> Over 85 percent of total farm land holdings in 1971 and 1987/88 were household-based farming of less than 10 acres (Myat Thein, 2004:89)

<sup>4</sup> This was referred to as a policy of agricultural exploitation (Fujita and Okamoto, 2006:3)



### *C. Incentive Scheme*

There were no incentive schemes for rural development since everything was dictated by the government throughout the period. Instead the disincentive had taken in place for agricultural products due to the marketing system as described above. Therefore Myanmar which was the former champion of rice export in the world can export less than 1 % of world's total rice export at present (Myint, 2011).

### *D. Leadership*

During socialist regime (1962-1988), the government had organized totally eight rounds of nationwide farmers' conferences to be able to present and discuss the difficulties and desires of farmers (Mya Han, 1993). These activities, however, were end up just the political dressings. During SLORC/SPDC regime in 2001, the Integrated Rural Development Plan was initiated to undertake the following five major tasks: 1. Construction of roads between villages in rural areas to establish a link with urban areas 2. Make water available for people as well as for cultivation 3. Improve and upgrade school buildings and furniture to improve the standard of education, to improve the quality of teachers, and to encourage school-age children to attend school 4. Uplift rural health care system and 5. Bring about economic growth for the rural populace. But in practice, the effectiveness was weakening due to lack of integrated efforts among institutions from the top to the bottom and end up the activities like its predecessor.

### *E. Cross Institutional Involvement*

Throughout the socialist period up to the SLORC/SPDC regime, majority of effort on the rural development activities have been done by the rural people themselves, by government institution, by the NGOs and INGOs especially after Nargis and international donor agencies like Japanese International Cooperation Agency (JICA) and Korea International Cooperation Agency (KOICA). However, each has done these activities with separate objectives, resources and scopes and no national wide initiative to cooperate them has been seen yet although some integration may be happened at the implementation level.

### *F. Community Leadership*

Although Myanmar rural people have a tradition of selecting informal leaders in their community throughout the socialist period up to present, leaders at the village level are directly appointed the higher authorities and their criteria of selection may be different with expectation from the people in the villages.

### *G. Spiritual Development*

Like Korean people, Myanmar has a culture of community spirit in which people in the same community are willing to help each other and cooperation for common good. But "we can do" philosophy and self help approach could not be generated due to the influence of authorities who want to behave people according to their dictates dominated up to the behavior and spirit of the people for a long period of time. Community leadership appointed with the democratic approach cannot be expected under this regime.

### *H. Infrastructure Development*

In quantitative terms, the rural economic and social infrastructure of Myanmar like road, dams, bridges, communication, schools, hospitals have been increased particularly during SLORC/SPDC regime (Ministry of Information, Myanmar, 2007). Their relative term and cost effectiveness in term of real contribution to rural economy, however, were largely questionable. Moreover, these projects have been done as parts of the country's overall



development program and they were not integrated with rural community development projects of the particular regions.

#### *1. Stage by Stage Approach with Long-term Orientation*

Unlike Korea, the rural development efforts were done with ad-hoc needed basis without long-term orientation by the authorities. The improvement had been done some extents but could not sustain for the long time and back to the origin a few years later. Therefore, even hundreds of attempts had been made, that the real situation was not much different from the past.

Concerning health, education and environmental situation of the rural areas credit should be given to the U Ne Win's government for their effort in country-wide campaign for eliminating illiterate population in 1970s, maintenance of social relation in the villages' life and environmental condition due to long been adopting of close economy. The natural beauty of rural areas was almost untouched up to 1988. This situation, however, was reversed in the regime of SLORC/SPDC government. The villages' life is not noiseless. The environmental condition of villages has been rapidly deteriorating due to heavy exploitation of natural resources including mine and forest. The percent of forest area of the country is rapidly declining from 60% in 1988 to 47 % in 2008. The water in the rivers now is largely contaminated due to increased mining and waste disposals. Soils are not fertile like before due to over use of chemical fertilizers and multiple cropping without upgrading land quality. In the regime of present government which handed over power in 2011, the rural areas are again received attention by the national leaders. After addressing ten rural development strategies by The President U Thein Sein at the national level workshop for rural development and poverty alleviation which was held in Naypyidaw on 20 May 2011, several working papers came out to discuss the idea on how to define, reduce poverty in the country and how to develop the rural economy and reduce poverty<sup>5</sup>. These initiatives produced eight action programs to be implemented by respective ministries concerned in the near future<sup>6</sup>. At present, the potential of these efforts is too early to give comment.

### **IV. Present State of Rural Community Development in Myanmar**

#### **4.1 Report on Survey Findings**

As an attempt to present current state of rural community development in Myanmar, a small survey was conducted that covers 20 villages of Myanmar during 2011 April and May. In order to represent overall situation of whole country as much as possible, the country is divided into two strata namely Upper and Lower Myanmar and they are in turn divided into four strata namely hilly and central area in upper Myanmar and delta and costal area in the Lower Myanmar. They will be named as Hill group (HG), Central group (CG), Delta group (DG) and Costal Group (SG) for analysis purpose. Five villages in each of four strata were randomly selected and collect data through questionnaires that are directed to the head of village. In line with conceptual framework of this paper, the four aspects of rural

<sup>5</sup> Discussing Papers of Dr, U Myint (Chief Economic Advisor to the President), U Set Aung (Member of Economic Advisor to the President) and of several other officials of the Ministry concerned

<sup>6</sup> Addressed by the President U Thein Sein on 20 June 2011 at the first meeting of Rural Development and Poverty Alleviation Central Committee in Naypyitaw (The New Light of Myanmar, Vol. 50, No. 259, 21 June 2011)



development mainly investigated in the survey are economic well-being, social well-being, infrastructure development, and environmental sustainability.

#### A. Economic Well-being

In the aspect of economic wellbeing, average income of village household that earns more than 5 US\$ a day is found as 67 % in SG, 54 % in HG, 45 % in CG and 40% in DG, respectively. Persons in the village who earn more than 2 US\$ a day is highest in SG with 57 %, CG 49%, HG 40% and DG 40%, respectively. In all areas under study, farm land population is greater than non-farm population and average land holding of these people are less than five acres. In DG and CG, most households of the village in these regions earn their earning mainly from farming but those in SG and HG are relying on the remittance of money sent from their family members who are working abroad. The percentage of households that own some types of transportation vehicles (from bicycle, boat to motorcar) is also highest in SG 88 %, followed by CG 68%, HG 55% and DG 47%. The percentage of household who own TV in the home are also highest in SG with 60%, CG 52%, HG 40% and DG 22%. The percentage of people who own phone (mobile and line) are also found that 12% in SG, 9 % in CG, 6% in HG and 5% in DG, respectively. Based on these findings, the conclusion can be draw that the coastal areas of Myanmar covered in the survey are more economically better off than other regions while delta areas are the least in this aspect.

#### B. Social Wellbeing

The literacy rate is highest in the village in CG group with 95%, SG 92%, DG 76% and HG 72%. Percentages of people who pass matriculation are also highest in CG 49%, SG 38%, HG 27% and DG 18 %. Percentage of people can access to the safe water is highest in HG, followed by SG and then CG and DG is the worst case. The average life expectancy of people is not much different among the regions but the highest in CG with 55 and the lowest in DG with 48. It has been found that CG is the most favourable in social wellbeing and SG is the second followed by HG and then DG. Even though the DG is closer to Yangon (the former capital), the social well being is the worst among all other groups in the survey.

#### C. Infrastructure Development

Percentage of households that access to electricity is also highest in CG 48%, SG 45 %, HG 42% and DG 22%. Condition of village roads is the best in CG and the worst in DG. Time taken to get hospital is the smallest in CG followed by SG, HG and DG, respectively. Communication as measured by time delay to reach newspaper is in CG (within a day), in SG (after a day), in DG (after a day), and in HG (after a day). Therefore, it can be concluded that the infrastructure condition is better in CG and SG than other two remaining areas.

#### D. Environmental Sustainability

Two aspects examined regarding this area are forest area and wildlife within 10 square miles of the village and level of pollution within and near the village. In the first area, villages including in HG and DG are more favorable than villages in SG and CG. Although most of rubber plantation is found in SG, they are excluded in the calculation of natural forest area. Most of the forest areas are found in HG and DG. CG is the worst case in both aspects. In environmental pollution, HG is relatively better than the rest regions in machinery usage, plastic bags, and level of water pollution and availability of water sources near the village. Environment is rapidly deteriorating within the last five years in other regions.



### *E. Effort toward Rural Development*

It was seen in the survey that effort for rural development in all villages is mainly depending on the villagers themselves and they are cooperative and willing to help each other in the house-roof repairing, harvesting, social activities like donation, wedding and dead of a villager etc. The institutions that participate and provide help in the effort of rural development are not the same in all regions and in all the areas. In DG and SG, non-government organizations (NGOs) are the major participants to develop rural areas. Private companies and individuals are also actively playing in the rural development efforts of DG after Nargis. In the CG, government and a political party play active role in rural development while NGOs again are playing actively in HG. The efforts of NGOs are mainly concentrated in the social areas in DG and SG and infrastructure development like construction of tube-wells in CG.

## **V. The Differences between Rural Community Development of Korea and Myanmar**

### **5.1 Lessons from the Past**

#### *A. The Role of the Leader*

It should be recognized that all leaders of the country would like to see their country's prosperous. The difference is the way to achieve this. Again, it depends on their vision as well as their priority. The leaders of Korea and Myanmar put effort toward rural community development since both of them recognized the development of their country would be feasible only when the people in the rural community prosper. Both of them used top-down approach i.e. the goal and strategy were determined at the top and rolled out to the lower level for implementation. But in the case of Korea, top leader of the nation knew and accepted real situation of the village since he had intimate knowledge on the situation at the rural level. In the case of Myanmar, top leader did not have intimate knowledge on what is happening at the village level.

The second thing is the choice of the leader whether he wants to maintain the power or wants to raise the welfare of the villagers. Both of the leaders were authoritarian tended to maintain their power as long as possible. But in the case of Korea, the leaders was so committed to the improving living standard of the rural people by means of subsidizing through government budget, encouraged to increase agriculture products and farm output through price incentives and ensuring government's officials were supporters for improving village situation. In the case of Myanmar, the situation was reversed. Government treated village people have to obey the instructions to implement government planned economic system. Give priority to political stability in the urban areas at the expense of the villagers by transferring wealth through compulsory paddy delivering system through quota system with the lower price and rice were in turn distributed at the subsidized prices for the urban people and freely provided to the government staff. The government officials down to the village level were not supporters but enforcers of the government policy whether they are meaningful or not in reality. Therefore, most of the rural development efforts were end up as for show activities to the top leaders.

#### *B. Macro Economic Policy and Strategy*

Korea adopted outward looking economic policy and export-driven strategy while Myanmar emphasized in implementing inward looking and import-substitution strategy at the same period. The success of these policies and strategies had impacted on the life of people rural areas by creating industrials' demand for labor located in the urban areas. It is difficult to



answer whether economic development contributes to rural community development or the reverse is true. Actually, they are mutually reinforcing each other.

#### *C. Systematic and Well Coordinated Plan with Long-term Orientation*

Korea's Saemaul Undong is not a spark for showing short-term result. It was well systematic planned, step by step development, integrated with incentive, community spirit and leadership development. It is combined both top-down and bottom-up approach with cross institutional participation, cooperation and integration of effort while Myanmar's effort for rural community development is ad-hoc and too much emphasize to show good results within a short-period of time, lack of integration and coordination among the stakeholders participated in the process.

#### *D. Involvement of Local People*

Although Korea's model was started at the top, it was end up at the through the effort of the local people. In Myanmar case, the authority could not attract to the local people involvement in the rural community development process since there were lack of communication of the true purpose, lack of ways for involvement, lack of incentive and no clear ways for development.

#### *E. Leadership at the Village Level*

In the case of Korea, community spirit and can do philosophies were nurtured through initiation and cooperation in the village's development work. Saemaul Undong leaders were carefully selected and exposed training for rural community development. In Myanmar, The village leaders could not lead the villagers to initiate and cooperate in rural community development activities like road and bridge repairing, digging drinking waters, improving social and economic activities of the village since they are preoccupied to enforce and implement government's directions and plans. The development effort and agenda stated at the top were disappeared before reaching to the village since there were too many layers at the implementation level.

## **VI. Suggested Strategy for Rural Development of Myanmar based on Korea's Experiences**

In the effort to develop rural community, Myanmar should learn successful experience of Korea in the similar area. The experience of Saemaul Undong inevitably may guide to develop its own model for Myanmar that will be tailored to its unique culture and social system. Some of the good practices may be learned from Korea's experience and then be imitated. Comparison with Korean and Myanmar past experiences in rural community development effort may help to explore the points that should be followed in practice. The following guild lines are suggested after comparing and contrasting the experiences of Korea and Myanmar.

### **6.1 Lessons Should Be Learnt from South Korea**

#### *A. Vision, Commitment and Knowledge by the Top Leader*

Both Korea and Myanmar case highlight the role of top leader on the rural community development. It should be noted that without the support of top leader throughout the process, any development efforts will be destined to failure. Not only top leader passionate on rural community development but also he has to know and accept what is happening in reality at



the rural level. In the case of Korea, President Park Chung-hee personally visited to the village level, understand the real situation of the village and what should be done to improve, constantly monitor the progress through monthly formal meeting and consultation with regional level officials and really passionate to the rural community development in which he was growing. In the case of Myanmar, top people rarely have intimate knowledge on the village level since they usually relied only on formal reports which had been filtered by a number of stages. Lack of knowledge on the real situation of the village level leads to make costly mistakes.

The historical event pointed out that the top leader should not merely satisfy upon information given to him, he should have personal and intimate on what is happening in the reality on the situation of the rural. The President should visit to the villages frequently given without notice or only a short notice. He should visit the village as far as possible up to the poorest village in the remote areas and make snap decisions based on the real situation on the requirements of the village.

#### *B. The Role of Incentives*

People tend to put effort to achieve a goal based on the incentives given to them. Without incentive scheme it will be very difficult to motivate these people to be participating in the development effort even if they are done for their community. Market incentives or government incentives should be created. In the case of Myanmar, the rapid growth of export in beans is largely due to market incentives given by SPDC government and the fall of rice output can be reasoned due to lack of incentive to produce more under the compulsory delivery with quota system during Socialist period. In the case of Korea, the government categorized the village into three groups – developed, developing and undeveloped and used government incentives to improve rural situation.

#### *C. The Role of Community Leader*

Those who are educated, well respected and have ability to organize people in the village should be selected and trained to be the community leader who will take charge and integrate the rural development effort at the village level. Community leaders should be change agent and facilitator as well as organizer for change in rural community. They are those believed by the villagers and have ability to lead and coordinate the resources of all contributors for the rural community development. Saemual Undong case highlights the potent role of community leader in the success of the project.

#### *D. Be Sure to Implement What Have Been Said a the Top Level*

Most of the development efforts are out of fuel before their effect reach to the village level. Seminar and workshops are organized, discuss the problems and explore the options, call several meeting for detail implementation, invite many parties to participate, impose the guidelines and call again the meeting at the lower level to clarify these guidelines and tired before actual implementation. This phenomena is so called paralyze by analyses. As a result nothing is happening in practice and end up as political shows. The people do activities not because they are really belief them but because of powerful people like them and ignore these after top leader's attention gradually fad out. Rural community development is long-term process and has done through integrated effort of many people. These people can be motivated to fully and actively participate in the process only when actual works are done and fruits from these can be seen at the lowest level.



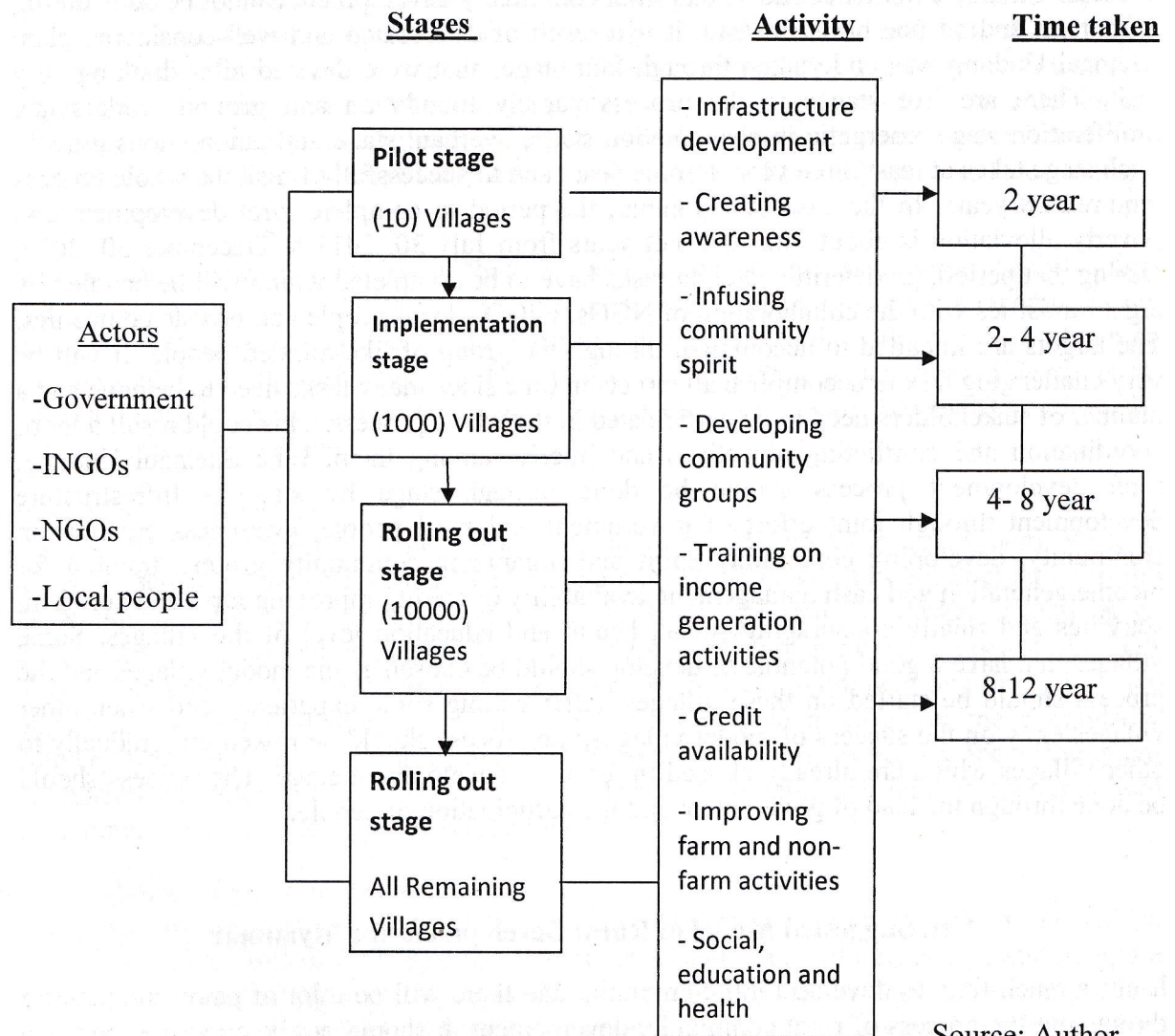
### *E. Stage by Stage Development*

Saemaul Undong experience shows that rural community development cannot be done during short term and ad hoc basis. Instead, it is a result of deliberated and well-considered plan. Saemaul Undong was undertaken through four stages that were devised after thinking very well. There are five stages in the process namely foundation and ground work stage, proliferation stage, energetic implementation stage, overhaul stage and autonomous growth. Each stage takes at least three years to nine years and to successfully finish the whole process required 28 years. In the case of Myanmar, the period to complete rural development and poverty alleviation is about four and half years from July 30, 2011 to December 30, 2015. During that period, predetermined eight tasks have to be completed which will be handled by eight ministries with the collaboration of NGOs, INGOs, local people and private companies. The targets are intended to accomplish through the group of like-minded people. It will be very challenging task to accomplish all targets in time since many tasks need to be done and a number of stakeholders need to be participated in the whole process. This could result a lot of coordination and conflicting objectives and interest among them. Like Saemaul Undong, rural development process should be done through stage by stage – Infrastructure development through joint effort of government and rural people, awareness creation on community, developing community spirit and organizing community groups, training for income generation and cash management, availability of credit, improving farm and non-farm activities and finally encouraging social, health and education level of the villages. Some villages that have a good potential to develop should be chosen as the model villages and the process should be started on these villages. After getting some experience and when other villages envy on the success of model villages, the process should be rowed out gradually to other villages which are already classed in terms of development stage. The process should be done through the lead of government and the participation of people.

## **VII. Suggested Model of Rural Development for Myanmar**

It takes much time to develop rural community and there will be a lot of pains and patients throughout the process of rural community development. It should not be one-time sparkling effort or the process that ends with dreams due to promises but nothings change at the bottom in reality or the process that diverts a lot of country's scare resources to ever support to rural people. Based on the lessons taken in the previous session, the suggested model of rural community development has been proposed as shown in Figure 2. To be effective, the whole process will take more than 12 years or may be longer than that.



**Figure 2: Suggested Model of Rural Community Development in Myanmar**

As shown in figure, the development effort of rural community should be done through efforts of the Government, INGOs, NGOs and local people. The pilot phase should be started in 10 villages and based on success the process will be rolling out to other village communities.

The major activities will be

- (1) Infrastructure development
- (2) Creating awareness on community development
- (3) Training on income generation and cash management
- (4) Developing community spirit
- (5) Improving farm and non-farm activities and
- (6) Encouraging social, education and health development of the people.

In implementing these activities, incentives for the progress should be offered to the whole village community by the government as in the case of Saemaul Undong and these will be gradually reduced after the villages have confident enough to stand by themselves. The total time taken to the whole process should be 12 year minimum as indicated in the figure.



### VIII. Findings and Conclusion

From the comparison of rural community development between South Korea and Myanmar, it can be seen that the major differences between them remain in agriculture marketing, incentive schemes for development, leadership at the top, cross institutional involvement, spiritual reform and long-term concerted effort toward rural development. The collective strength of these factors makes real difference in the level rural community development between these two countries.

In the case of Myanmar, farmers in the rural areas were transferring their wealth to urban settlers and civil workers through compulsory delivery system from early 1960s until 2002 since rice is the staple and political product for Myanmar. Every successive government preferred domestic sufficiency of rice rather than boosting export. They attempted to deliberately keep rice price far below the level of international price for political reason that created disincentive effect to produce more output and led to destroy rural economy. There was no integrated and cohesive effort towards rural development and many attempts to boost rural economy and life of people in the rural areas were ended up at the cosmetic level since there was no clear vision, commitment and support from the top. Due to lack of opportunities and disappointed for their poor living life, a significant number of people in the rural areas has been start migrating into neighbouring countries after 1990s in search of better livelihood. This situation created farm labour shortage in the rural areas and that cannot be effectively substituted with increased use of farm machineries. This problem is more severe in recent years since bad weather conditions destroy farm outputs in the harvest and there are no insurance and other buffer systems in place for those farmers who are suffering from the crop failures<sup>7</sup>. This problem gradually leads to become a nationwide problem unless no remedial action has been taken. It may largely impact on the farm output and possible to be a threat to food security of the country in the future. Currently, the new government has shown its enthusiasm to reverse rural life of the country very recently<sup>8</sup>. It should be noted, however, that without cohesive effort and guideline at the top and participation from the mass and all stakeholder at the implementation level, the effort will be in vein like its processors without achieving any material results<sup>9</sup>. A cohesive and national wide integrated model of rural community development has been required for Myanmar. In this regard, Korea's Saemaul Undong model could help as a benchmark for Myanmar for some extent.

A small but wide areas survey on Myanmar's villages finds that the life of people in the rural area of Myanmar is not very encouraging. But they are not regionally the same. The best case is found in rural area of SG where family earning mainly come from working abroad and the worst case is found in DG that was once the rice bowl of Myanmar and engine for economy during colonial period. It has been also found that economic wellbeing in most regions was better off at the expenses of environment.

The lessons from the study of rural development model of these two countries reveal that Korea model can be illustrated as proactive strategy while Myanmar's is reactive strategy. The first model place rural sector development as the country's priority while it was

<sup>7</sup> There are two crops failure in the harvest was happening due to off season rains in 2010 that severely affected farmers in rural area. A lot of farmers sell their droughts to repay borrowing money.

<sup>8</sup> Speech of president U Thein Sein at the workshop which is aimed at improving the living conditions for rural people and alleviating poverty at Naypyitaw on 20 May 2011

<sup>9</sup> Within 6 years ( from December 1962 to March 1968), revolutionary council had organized totally eight round of the whole country farmers conventions aimed at improving life of farmers in the rural area.



subordinate to the maintenance of political stability of urban area in the second. Rural community development of Korea was partly contributed by growth of economy in the urban areas through rapid industrialization that lead to increase demand and prices of farm products from rural area. Urban industrialization and rural community development are mutually reinforcing each other in Korea model while this link is not found in Myanmar's. Finally, the vision and real commitment of national leaders to develop their own country make a real difference in the past.

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# **ANALYSIS OF THE ADVERTISING EFFECTS ON CONSUMER PURCHASE DECISION PROCESS OF COFFEE MIX IN OEBO WARD OF KYEE MYIN DAING TOWNSHIP**

Moe Moe Yee<sup>1</sup> and Aye Thida<sup>2</sup>

## **Abstract**

The study was aimed to analyze the advertising effects on consumer purchase decision process on coffee mix in Oebo ward of Kyee Myin Daing Township, and to explore the most effective media type on consumers and to analyze the most attractive appeals to consumers. In order to fulfill those objectives, 151 households from the population of 958 households were randomly selected as a sample by using a simple random sampling method for data collection. It was conducted by using a means of structured questionnaires and face-to-face interview in this study. According to the study, it is found that all respondents drink coffee mix in this survey area. Among 151 respondents, 100 respondents reported that they became awareness of coffee mix from advertising. And 51 respondents reported that they know coffee mix from four other promotional mixes. By the qualitative analysis for the advertising effects on consumer purchase decision process, the results showed that the advertising effects on consumer purchase decision process of coffee mix is positive and thus television is the most effective media type on consumers and the most attractive appeals on consumers is the acting of actors, actresses or singers. Thus, the producers should fulfill the needs and wants of consumers and should advertise to persuade consumers with innovative advertisements continuously.

**Keywords:** Advertising, Consumer Purchase Decision Process, Coffee Mix

## **1. Introduction**

Before 1988, coffee production was State-owned business and it produced only one kind of ground coffee. People consumed only ground coffee at that time. Since 1998, Myanmar has practiced the market-oriented economic system. So, private companies have started the business of importing coffee mix to Myanmar.

Since the lifestyle, living standard and culture of consumers have changed along with the current of globalization, their consumer behavior and consumption patterns also changed. Nowadays, people are always struggling for their life, so they like to use the easiest ways for

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<sup>1</sup> Professor, Dr., Department of Commerce, Yangon Institute of Economics

<sup>2</sup> Candidate, M.Com (2004 intake)



eating and drinking. So, consumption of fast food such as donuts, hamburgers, hotdogs, fried chicken, and coffee mix become greatly popular. Because drinking coffee mix is time saving, easy to use, not busy and may be more tasteful than ground coffee.

To influence the purchase decision of a consumer, business firms use promotional strategies. The purpose of promotional strategies is to give information of the products and services produced and sold by the firms. The information aims to persuade the consumers to reach their buying decision. On the other hand, effective consumer research is needed to comprehend the potential needs and wants of consumers.

Every business can benefit from a better understanding of its market, customers and competitors. There are various brands in the current coffee mix market. These brands are "Super, Super One, Mikko, Java, Premier, Gold, Gold Roast, Super King, Rich", etc. After knowing about consumer satisfaction and why they choose a particular brand or not, the marketers can make the important marketing decisions in future.

Moreover, Coffee mix companies are trying to penetrate their products in the market by competing with competitors. Firms try to find out the needs and wants of consumers through advertising and promoting. This research emphasizes on the advertising effect on consumer purchase decision process on coffee mix in Oebo ward of Kyee Myin Daing Township. Then it also explores the most effective types of media and the most attractive appeals of its advertisements on consumers.

The hypotheses of the study are mentioned as follow:

1. The advertising effect on consumer purchase decision process on coffee mix is positive.
2. Television is the most effective media on consumers.
3. The most attractive appeals to consumers in TV advertisements is the presentation by acting of actors, actresses or singers.

In order to know the advertising effects on consumer purchase decision process of coffee mix, a survey of consumers was conducted in Oebo ward of Kyee Myin Daing Township in Yangon during the period from 1.2.2011 to 29.2.2011 by using simple random sampling method. The sample was randomly selected from the population of 958 households in the ward of Oebo in Kyee Myin Daing Township.



The sample size<sup>3</sup> was 151. And structured questionnaires and face-to-face interview method of data collection were used in this study. The method in this study is descriptive method of testing of statistical hypotheses based on the survey data collected.

## 2. Analysis of the Advertising Effects on Consumer Purchase Decision Process of Coffee Mix

Consumers pass through five stages in their typical buying process. These are problem recognition, information search, evaluation and selection, store choice and purchase, and post-purchase behavior. Therefore, it is analyzed that the advertising takes the effects on consumers purchase decision process as follow.

Firstly, in the *problem recognition stage*, all 151 respondents in this survey reported that they were currently drinking coffee mix. People may have different awareness of drinking coffee mix, according to the five promotional mix. The following table shows the awareness of drinking coffee mix through promotional mix.

Table (1) Awareness of Drinking Coffee Mix through Promotional Mix

Awareness of Drinking Coffee Mix by Promotional Mix	Frequency	%
Advertising	100	66.2
Direct Marketing	6	4.0
Sales Promotion	5	3.3
Publicity/Public Relations	35	23.2
Personal Selling	5	3.3
Total	151	100.0

Source: Survey Data (February, 2011)

According to table (1), among 151 respondents, 100 respondents reported that they got awareness of coffee mix from advertising. This represents 66.2% of the sample and is the

<sup>3</sup> Regarding the Determination of Sample Size (n), Since most of the variables in this research are qualitative variables, the required sample size (n) will be computed on the estimation of a population proportion (P) with a desired bound (B) of error on estimation of P. The formula for n is given,

$$n = \frac{NPQ}{(N-1)D + PQ}$$

Where N is number of households in the Oebo quarter, P is population proportion of a characteristic of interest

$$Q = (1-P) \text{ and } D = \frac{B^2}{4}$$

Where B is 95% bound on the error of estimation

Here, in this survey, N=958, and P and Q are taken to be 0.50 to allow for the maximum sampling error of the estimate. B is taken to be 0.075=7.5%. Putting the corresponding values of N, P, Q, B and D in the above formula, the required sample size (n) turned out to be n=150.42 ≈ 151 households.



highest. And 51 respondents reported that they got awareness of coffee mix from other four elements in the sorts of promotional mix. Among them, awareness of coffee mix from sales promotion and personal selling are the least. According to hypothesis (1), it is found that advertising takes the effect on consumer purchase decision process on coffee mix is positive.

Table (2) Motivated Factors for Purchase of Coffee Mix

Motivated Factors	Frequency	%
Self Interest	55	36.5
Due to the Drink of Family Member	57	37.7
Companionship	11	7.3
Attraction of Showing in Sale-Centre	10	6.6
Suitable in Price	18	11.9
Total	151	100.0

Source: Survey Data (February, 2011)

According to table (2), among 151 respondents, it is found that 57 respondents are motivated due to the drink of family members and this represents 37.7% of the sample size. It is the largest one of the motivated factors. But the attraction of it shown in sale - centers is the least. Therefore, it indicates that the main motivated factor for purchase of coffee mix is depending on their family members because Myanmar family members are friendly with each other. Thus, their consumption patterns are not much different.

Table (3) Analysis of Consumers by Brand Preference

Brand Preference Brand Name	Advertising Group		Other Group		Total	
	Frequency	%	Frequency	%	Frequency	%
Super	24	15.8	23	15.3	47	31.0
Super King	1	0.7	1	0.7	2	1.4
Super One	2	1.3	0	0.0	2	1.3
Rich	13	8.6	9	6.0	22	14.6
Mikko	1	0.7	1	0.7	2	1.4
Java	3	2.0	2	1.3	5	3.3
Premier	42	27.8	12	7.9	54	35.7
Hi-Tea	1	0.7	0	0.0	1	0.7
Gold	1	0.7	0	0.0	1	0.7
Gold Roast	8	5.2	2	1.3	10	6.5
Ben Cafe'	3	2.0	1	0.7	4	2.7
Tea Master	1	0.7	0	0.0	1	0.7
Total	100	66.2	51	33.8	151	100.0

Source: Survey Data (February, 2011)

According to table (3), among 151 respondents of both (Advertising Group and Other Group), 54 respondents answered that their most favorite brand was Premier coffee mix and it is 35.8% of the sample size. Most of the 42 respondents in advertising group answered that their



most likely brand was Premier coffee mix. The last position is Super King, Mikko, Hi-Tea, Gold, and Tea Master which is 0.7% of preference by consumers respectively. The 23 respondents in other group answered that their most preference brand was Super coffee mix. Therefore, it can be said that the most preference brand was Premier brand coffee mix in this survey area.

In the second stage of *information search* stage, consumers begin to know coffee mix brands through mass media before using coffee mix. The following table (4) shows the causes of beginning to know coffee mix brands before using them.

Table (4) Causes of Beginning to Know Coffee Mix Brand before Use

Knowing of Advertising Media Brand Name	(Advertising Group)				Total	
	TV	Magazines, Journals, Newspaper	Radio	Posters, Bill Boards, Trains and Cars	Other Group	Total
Super	22	0	0	2	23	47
Super King	1	0	0	0	1	2
Super One	2	0	0	0	0	2
Rich	10	0	1	2	9	22
Mikko	1	0	0	0	1	2
Java	2	0	0	1	2	5
Premier	40	1	0	1	12	54
Hi-Tea	1	0	0	0	0	1
Gold	1	0	0	0	0	1
Gold Roast	6	1	0	1	2	10
Ben Cafe'	3	0	0	0	1	4
Tea Master	1	0	0	0	0	1
Total	90	2	1	7	51	151

Source: Survey Data (February, 2011)

According to table (4), there are 100 respondents (Advertising group) and 51 respondents (Other group). Among 100 respondents (Advertising group), most of the respondents answer that they know the coffee mix brands through TV advertisements. And the least is only one respondent who knows the coffee mix brand through radio.



Table (5) The Most Interesting Types of Media

Types of Media	Frequency	%
Television	134	88.7
Magazines, Journals, Newspapers	4	2.6
Radio	2	1.4
Posters, Bill Boards, Trains and Cars	11	7.3
Total	151	100.0

Source: Survey Data (February, 2011)

According to table (5), among 151 respondents of both (Advertising group and Other group), it is found that 134 respondents answered that the most interesting type of media for them is television. It is the largest and this represents 88.7% of the sample size. Only 2 respondents answered that radio was the most interesting type of media. It is the least. Thus, it is found that people spend their leisure time by watching television. Most of households in Oebo ward have television sets. So, their most interesting type of media has become television. In addition, it can be said that television is the most effective media for consumers.

Table (6) The Most Attractive Appeals on Consumers

The Most Attractive Appeals on Consumers  Brand Name	(Advertising Group)					Other Group	Total
	Presentation by Lecturing so as to be Interested	Presentation by Acting of Actors, Actresses or Singers	Presentation by Interesting Designs and Posters	Presentation by Arranging Display in Stores	Presentation by Ornamented Display		
Super	7	12	4	1	0	23	47
Super King	0	1	0	0	0	1	2
Super One	0	2	0	0	0	0	2
Rich	0	11	2	0	0	9	22
Mikko	0	1	0	0	0	1	2
Java	1	2	0	0	0	2	5
Premier	12	22	2	6	0	12	54
Hi-Tea	0	1	0	0	0	0	1
Gold	0	1	0	0	0	0	1
Gold Roast	1	2	0	5	0	2	10
Ben Cafe'	0	2	0	1	0	1	4
Tea Master	0	1	0	0	0	0	1
Total	21	58	8	13	0	51	151

Source: Survey Data (February, 2011)



According to hypothesis (2), it is found that television is the most effective media type on consumers. Therefore, hypothesis (2) is accepted. There are many appeals to coffee mix advertisements. Among them, appeals that are the most attractive for the consumers are illustrated in the following table (6). Accordingly, among 100 respondents (Advertising group), it is found that 58 respondents who replied that it can be more attracted if it is advertised by popular actors, actresses or singers are the most and its sample size is 38.4%. So, it can be beneficial if it is advertised by popular actors, actresses or singers. The most consumers in Oebo are interested in the acting of actors, actresses or singers. And 51 respondents (Other group) do not know the advertising appeals because they know the taste of coffee mix through other promotional mix.

According to hypothesis (3), it can be noted that the most attractive appeals to consumers is the presentation by actors, actresses or singers. The next step of evaluation and selection can be analyzed as follows.

**At the Evaluation and Selection stage**, the table (7) illustrated the evaluation and selection of coffee mix brand. Among 100 respondents (Advertising group), 75 respondents answered that they currently evaluated and selected coffee mix brands due to the quality. It is the largest and the sample size is 49.7%. And 32 of 51 respondents (Other group) answered that they evaluated and selected the currently drink of coffee mix brands due to quality. It is the most and sample size is 21.2%. In the other group, only one respondent currently drink of coffee mix is due to famous and it is the least.

Table (7) Evaluation and Selection of Coffee Mix Brand

Evaluation and Selection of Coffee Mix Brand	Advertising Group		Other Group		Total	
	Frequency	%	Frequency	%	Frequency	%
Quality	75	49.7	32	21.2	107	70.9
Famous	2	1.3	1	0.7	3	2.0
Price	5	3.3	4	2.6	9	5.9
Brand Image	3	2.0	5	3.3	8	5.3
Easily Purchased	11	7.3	4	2.6	15	9.9
Word of Mouth	4	2.6	5	3.4	9	5.9
Total	100	66.2	51	33.8	151	100.0

Source: Survey Data (February, 2011)

Therefore, it can be concluded that the quality is the main cause of evaluation and selection of coffee mix for both (Advertising group and other group). It can be noted that quality is an important factor to succeed for coffee mix producers in the long term.



After evaluation and selection stage, consumers will continue to turn to the *store choice and purchase* stage as follow. Coffee mix is available everywhere: Bazaars, Stores, Shopping Centers, Super Markets and Residential Shops. They are also illustrated in the following table.

Table (8) The Place where Coffee Mix is Available

The Place Where Coffee Mix is Available	Advertising Group		Other Group		Total	
	Frequency	%	Frequency	%	Frequency	%
Bazaar	19	12.6	12	7.9	31	20.5
Store	27	17.9	13	8.6	40	26.5
Shopping Center	2	1.3	0	0.0	2	1.3
Super Market	13	8.6	9	6.0	22	14.6
Retail Shop	39	25.8	17	11.3	56	37.1
Total	100	66.2	51	33.8	151	100.0

Source: Survey Data (February 2011)

According to the table (8), it is found that among 100 respondents (Advertising group), 39 respondents who answered that they bought at retail shop are the most number and this represents 25.8% of the sample size. Of 51 respondents (Other group), 17 respondents who answered that they bought at retail shops are at most and this represents 11.3% of sample size. And then, there is no respondent who bought from shopping centers. Therefore, it can be concluded that consumers can easily buy at retail shop and the prices are not too different. In addition, it can be observed that any coffee mix brand can be bought everywhere. Thus, it can be said that consumers can buy the coffee mix at convenience retail shops. After consumers have made collecting and evaluating information on brands, stores, price and other promotion activities, actual purchase is made.

According to table (9), among 151 respondents of both (Advertising group and other group), most of 50 respondents who answered that they purchased the coffee mix due to good taste and smell are the most and the sample size is 33.1%. It can be observed that 18 respondents who answered that they purchased the coffee mix due to bitter taste are the least. The 20 respondents of Premier coffee mix consumers also purchased it due to good taste and smell. It is the most. It can be noted that premier coffee mix consumers like its taste and smell. It is their fundamental cause of purchasing this brand.



Table (9) Fundamental Causes of Purchasing Coffee Mix

Brand Name	Fundamental Causes of Purchasing Coffee Mix					Total
	Good Taste, and Smell	Fresh in Mind	Nourishment	Diet	Bitter Taste	
Super	5	2	3	30	7	47
Super King	1	1	0	0	0	2
Super One	0	1	0	0	1	2
Rich	10	5	1	1	5	22
Mikko	1	1	0	0	0	2
Java	2	0	2	0	1	5
Premier	20	12	10	8	4	54
Hi-Tea	0	0	1	0	0	1
Gold	0	1	0	0	0	1
Gold Roast	7	1	2	0	0	10
Ben Cafe'	3	0	1	0	0	4
Tea Master	1	0	0	0	0	1
Total	50	24	20	39	18	151

Source: Survey Data (February, 2011)

**Post purchase behavior** is the last stage of consumer purchase decision process and it can be seen as follow. The needs and wants of everybody are ever changing depending on their satisfaction or dissatisfaction. Like that, their attitude towards changing other brand after using the current coffee mix brand is illustrated in the following table (10).

Table (10) The Attitude Towards Changing Brand

Attitude Towards Changing Brand	Advertising Group		Other Group		Total	
	Frequency	%	Frequency	%	Frequency	%
Consider	28	18.5	12	7.9	40	26.5
Not Consider	72	47.7	39	25.8	111	73.5
Total	100	66.2	51	33.7	151	100.0

Source: Survey Data (February, 2011)

According to table (10), it is observed that among 100 respondents (Advertising group), most of 72 respondents who do not want to change to another brand after using the current brands and 47.7% of sample. They do not have attitude towards changing another brand after drinking it. The rest of 28 respondents answered that they had attitude towards changing another brand after drinking it. And among 51 respondents (Other group), 39 respondents who do not



want to change to another brand after using the current brands are at most and 25.8% of sample. It is the least and it represents 7.9% of sample. Therefore, it can be concluded that the most respondents in this survey do not have attitude towards changing from current brand to another and they have loyalty on their preference brand.

### **3. Statistical Analysis for the Advertising Effects on Consumer Purchase Decision Process**

In this section, tests of three hypotheses are carried out using statistical method of testing hypotheses. They are-

#### **Hypothesis: 1. Testing of the Hypotheses that the Advertising Effects on Consumer Purchase Decision Process on Coffee Mix is Positive.**

As indicated in table (1), out of 151 respondents, 100 respondents reported that they got awareness of coffee mix from advertising. 51 respondents reported that they got awareness of coffee mix from other promotional mix rather than the advertising. In order to test the hypothesis that advertising affects on consumer purchase decision process on coffee mix is positive, that is, advertising is more effective than other promotional mix of direct marketing, sales promotion, publicity/ public relations and personal selling considered in this survey, one has to carry out significance test of population proportion of the respondents who got good awareness of coffee mix due to the advertising stated above and the population proportion of respondents who got awareness of coffee mix due to four other promotional mixes. According to appendix (1a) the proportion of awareness of advertising is more than other promotional mix at one percent level of significant. Therefore advertising method is the most effective method on consumers.

#### **Hypothesis: 2. Testing of the Hypothesis that Television is the Most Effective Media Type on Consumers.**

As indicated in table (5), out of 151 respondents, 134 respondents reported that their most interesting type of media is television; other 17 respondents reported that their most interesting types of media are magazines, journals, newspapers, radio, posters, bill boards, train and cars. In order to test the above hypothesis, one has to carry out significance test of population proportion of the respondents who are mostly interested in television and the population proportion of the respondents who are mostly interested in other media types of magazines, journals, newspapers, radio, posters, bill boards, train and cars. According to



appendix (1b) the proportion of interesting television media is more than other medias at one percent level of significant. Therefore television is the most effective media type on consumers.

### **Hypothesis: 3. Testing of the Hypothesis that the Most Attractive Appeal on Consumers is Presentation by Actions of Actors, Actresses or Singers.**

As indicated in table (6), among 100 respondents (Advertising group), 58 respondents reported that the presentation by acting of actors, actresses or singers was most attracted for them; other 21 respondents reported that the presentation by lecturing so as to be interested was most attracted for them, 13 respondents reported that the presentation by interesting designs and posters was most attracted for them, 8 respondents reported that the presentation by arranging display in store was most attracted for them but presentation by ornamented display has no one responds. The rest 51 respondents are from the other group. In order to test the above hypothesis, one has to carry out significance test of population proportion of the respondents who are most attracted the presentation by acting of actors, actresses or singers and the second position of population proportion of the respondents who are most attracted the presentation by lecturing so as to be interested. According to appendix (1c) the proportion of respondents who are most attracted the presentation by acting of actors; actresses or singers is more than other presentations at ten percent level of significant. It can be conclude that the proportion of respondents who are most attracted the presentation by acting of actors, actresses or singers is more than other presentation at ten percent level of significant.

## **4. Conclusion**

### **4.1 Findings**

This research was studied to analyze the advertising effects on consumer purchase decision process on coffee mix. Therefore, 151 respondents were studied in this research by using structured questionnaire and face-to-face interview method of data collection in Oeobo ward of Kyee Myin Daing Township in Yangon. It is important to know how much consumers are satisfied with products produced as the local producers in Myanmar.

All 151 (100%) respondents in this survey reported that they were currently drinking coffee mix. There are two groups of respondents. Among 151 respondents, 100 respondents (66.2%) reported that they got awareness of coffee mix from advertising and 51 respondents (33.8%) reported that they got awareness of coffee mix from other four elements in the promotional mix.



According to appendix (1a) the proportion of awareness of advertising method is more than other methods at one percent level of significant. Therefore advertising method is the most effective method on consumers. Therefore, the hypothesis (1) that is, "advertising effect on consumer purchase decision process on coffee mix is positive" and it is accepted.

It is found that among 151 respondents, most of 57 respondents (37.7%) are motivated due to the drinks of family members. It is the largest. Therefore, it can be said that the main motivated factor for purchase of coffee mix depends on their family members because Myanmar family members are friendly with each other. Thus, their consumptions are not too different. Among 151 respondents of both (Advertising group and other group), 54 respondents (35.8%) answered that their most likely brand is Premier coffee mix and it is the largest.

It is observed that among 100 respondents (Advertising group), the 90 respondents (59.6%) who answered that they knew the coffee mix brand from TV advertisement are at most. Premier coffee mix consumers know this brand from TV advertisement is at most.

According to appendix (1b) the proportion of interesting television media is more than other medias at one percent level of significance. Therefore television is the most effective media type on consumers. Therefore, the hypothesis (2) that is, "television is the most effective media type on consumers" is accepted.

According to appendix (1c) the proportion of respondents who are most attracted by acting of actors; actresses or singers is more than other acting at ten percent level of significance. It can be conclude that the proportion of respondents who are most attracted the presentation by acting of actors, actresses or singers is more than other presentation at ten percent level of significance. Therefore the hypothesis (3) that is, "the most attractive appeal on consumers which is presentation by acting of actors, actresses or singers" is accepted.

Among 100 respondents (Advertising group), it is found that 81 respondents (53.6%) who believe in coffee mix advertisement are at most. Therefore, it can be said that the coffee mix advertisement on TV is the most effective media.

Among 100 respondents (Advertising group), 75 respondents (49.7%) evaluated and selected the currently drink of coffee mix brand due to quality. It is the largest. And 51 respondents (Other group), the 32 respondents (21.2%) evaluated and selected the drink of coffee mix brand due to the quality. It is the most. Therefore, quality is an important factor to succeed for coffee mix producers. in the long term

As indicated in store choice and purchase stage, it is found that among 100 respondents (Advertising group), 39 respondents (25.8%) who answered that they bought at retail shops are at most. In 51 respondents (Other group), 17 respondents (11.3%) who answered that they



is more bought at retail shop are at most. Therefore, it can be concluded that consumers can buy easily at the most retail shops and the prices are not very different. In addition, it can be observed that any coffee mix brand can be bought everywhere. Thus, it can be said that consumers can buy the coffee mix at convenience retail shops.

Among 151 respondents of both (Advertising group and Other group), 50 respondents (33.1%) who answered that they purchased the coffee mix due to good taste and smell are the most. The 20 respondents of Premier coffee mix consumers also purchased it due to good taste and smell. It is the most. It is their fundamental causes of purchasing this brand.

Finally, it is observed that among 100 respondents (Advertising group), 72 respondents (47.7%) who do not want to change to another brand after using the current brands are at most. They do not have attitude towards changing another brand after drinking it. Finally, as the opinion of consumers, 108 respondents (71.5%) who answered that their opinion to first position on TV advertisement is at most. Therefore, it can be assumed that if the coffee mix brand is advertised on TV, the worldwide consumers can understand how to use and where they buy the products, on the other hand, the producers can get a large market share, many potential consumers and long term survival competing with their competitors.

According to the analysis of the advertising effects on consumer purchase decision process on coffee mix, it can be known that the most respondents preference brand is Premier coffee mix. In addition, in this study, the most respondents are the government staffs so they have no more time to drink ground coffee. So that they can get a large market share and their sales will be increased. In this study, it can be observed that most of respondents believe on Premier coffee mix advertisement. It can be clearly seen that although quality of product is good specially, lack of knowledge among the public if advertising power is less. In addition, having no quality of relevant with price and advantage can take the effects on brands and images of products.

Advertising is a way of being the most effective among mass media as it is known that products are more known to users by advertising according to market oriented economic policy. In addition, selling and distributing businesses can be developed widely as it is known good quality of product by advertising.

According to the above findings, this research achieve the three objectives. Moreover, this research meet with the three hypotheses, they are hypothesis (1) advertising effects on consumer purchase decision process on coffee mix is positive, hypothesis (2) television is the most effective media type on consumers and (3) the most attractive appeals on consumers which is presentation by acting of actors, actresses or singers.



## 4.2 Recommendations and Suggestions

To be better the future prospects of coffee mix market, the producers should fulfill the needs and wants of consumers. In addition, coffee mix producers should consider that they need to spend much money on TV advertisement by presenting the acting of popular actors, actresses or singers. Advertising message should be reliable to get the belief on advertising audience for any goods and services-related advertisements and should promote the quality of advertisement to remember the viewer at once. And they should advertise on mass media. Although people have known advertisements by television according to this study, it should be made to increase the sales of their products by putting up bill boards, posters, sign boards, advertisements at the crowded places and should advertise their products to persuade consumers with innovative advertisements continuously. This research was highlighted to the producers that advertising is very important to penetrate their product for target market among many brands.

Appendix Table(1a)

Mega stats output of most effectiveness of awareness of advertising method

Type	Value
Number of awareness of advertising	100
Sample size	151
$\pi_0$	0.5
Z- test	3.98756
Level of significance	0.01
P-value	0.0000333
	P-value < 0.01
Conclusion	Reject null hypothesis (or) accept alternative hypothesis

Appendix Table (1b)

Mega stats output of most effectiveness of interesting television media

Type	Value
Number of interesting television media	134
Sample size	151
$\pi_0$	0.5
Z- test	9.52132
Level of significance	0.01
P-value	0.0000
	P-value < 0.01
Conclusion	Reject null hypothesis (or) accept alternative hypothesis



Appendix Table(1c)

Mega stats output of most effectiveness of actions of actor, actress or singer

Type	Value
Number of preference of actions of actor, actress or singer	58
Number of awareness of advertising in the sample	100
$\pi_0$	0.5
Z- test	1.62088
Level of significance	0.1
P-value	0.054799
	P-value < 0. 1
Conclusion	Reject null hypothesis (or) accept alternative hypothesis

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# **An Application of Ordinary Least Squares and Maximum Likelihood Type Estimation in Roust Diagnostic Regression Analysis**

by

Maw Maw Khin <sup>1</sup>

## **Abstract**

This study shows that the OLS method is quite sensitive to outlier whereas maximum likelihood type estimation (*M*-estimation) methods resist outliers. The iterated reweighted least squares (IRLS) method based on the Huber and the Bisquare  $\psi$ -functions clearly detect outliers that are given to less weight. The findings show that maximum likelihood type estimation based on the mean squares error (MSE) criterion can provide predicted values very close to actual values.

**Keywords:** Robust Regression, Ordinary Least Squares, Iterated Reweighted Least Squares

## **1. Introduction**

Regression analysis is an important tool for any quantitative research. It explores the relationship between dependent and explanatory variables. The ordinary least squares (OLS) method is mostly applied in regression analysis. The application of this method requires a number of assumptions. A researcher should be aware of the fact that the OLS method performs poorly if the underlying assumptions are not fulfilled.

In the last two centuries, various strategies were introduced to test whether the model assumptions are fulfilled or not. Besides, more general regression techniques are available based on less stringent conditions. Until the mid-20<sup>th</sup> century, violations of the model assumptions were treated independently from any common error source. But, in particular, outlying observations within the data set can cause violations of model assumptions and thereby it can have a huge impact on regression results.

Robust regression analyses have been developed as an improvement to OLS estimation in the presence of outliers and provide information about what a valid observation is and whether this should be thrown out. The primary purpose of robust regression analysis is to fit a model which represents the information in the majority of the data. In this context, robust regression is to employ a fitting criterion that is not as vulnerable as OLS to unusual data. One remedy is to remove influential observations before using the OLS fit.

Robust regression analysis provides an alternative to an OLS regression model when fundamental assumptions are not fulfilled by the nature of data. Sometimes, the variables can be transformed to confirm the assumptions. Often, however, a transformation will not eliminate or satisfy the leverage of influential outliers that bias the prediction and distort the significance of parameter estimates. Under these

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<sup>1</sup> Associate Professor, Dr., Department of Statistics, Yangon Institute of Economics



circumstances, to the best of the present researcher's knowledge, robust regression that is resistant to the influence of outliers may be the only reasonable remedy. This paper focuses on the (robustness-) performance of estimators if outliers occur within the data set.

## 2. Data and Methods

The cross-sectional data are used to study the effect of outlier in regression analysis. The human development indicators of 85 countries were obtained from the Human Development Report (2009) published by the UNDP. In order to assess the predicting performance of the model, the first eighty countries were used for model construction and rest of the five countries was used for validation of the predicted values. In this study, the two methods, OLS and *M*-estimation were used to analyze.

### (a) Ordinary least squares (OLS) method

The OLS method computes the parameters  $(\hat{\beta}_0, \dots, \hat{\beta}_p)$  that minimize the sum of squares of residuals. Formally, it can be written as

$$Q = \min_{(\hat{\beta}_0, \dots, \hat{\beta}_p)} \sum_{i=1}^n e_i^2. \quad (1)$$

$Q$  is the sum of the squared vertical deviations from the hyperplane  $H = \beta_0 + \beta_1 X_1 + \dots + \beta_p X_p$ . Taking the derivative of (1) with respect to  $\beta = (\beta_0, \beta_1, \dots, \beta_p)$ , obtain the normal equations

$$X^T X \hat{\beta} = X^T Y$$

and solving these equations give the least squares estimator of  $\beta$

$$\hat{\beta} = (X^T X)^{-1} X^T Y. \quad (2)$$

The vector of predicted or fitted values is  $\hat{Y} = X\hat{\beta} = HY$  where  $H = X(X^T X)^{-1} X^T$  is called the hat matrix. The  $i$ th entry of  $\hat{Y}$  is the  $i$ th fitted value (or predicted value)  $\hat{Y}_i = \hat{\beta}_0 + \hat{\beta}_1 X_{i,1} + \dots + \hat{\beta}_p X_{i,p} = x_i^T \hat{\beta}$  for observation  $Y_i$  while the  $i$ th residual is  $e_i = Y_i - \hat{Y}_i$ . The vector of residuals is  $e = (I - H)Y$ .

### (b) Maximum likelihood type estimation (*M*-estimation) method

The *M*-estimation method minimizes the objective function

$$\min \sum_{i=1}^n \rho(y_i - x_i' \hat{\beta}) = \min \sum_{i=1}^n \rho(e_i) \quad (3)$$



where the function  $\rho$  gives the contribution of each residual to the objective function. A reasonable  $\rho$  should have the following properties.

$$\rho(e) \geq 0$$

$$\rho(0) = 0$$

$$\rho(e) = \rho(-e)$$

$$\rho(e_i) \geq \rho(e_{i'}) \text{ for } |e_i| > |e_{i'}|$$

The solution obtained from Equation (3) is not scale equivariant, and thus the residuals must be standardized by a robust estimate of their scale  $\hat{\sigma}$ , which is estimated simultaneously.

$$\min \sum_{i=1}^n \rho\left(\frac{e_i}{\sigma}\right) \quad (4)$$

As in the case of  $M$ -estimates of location, the median absolute deviation (MAD) is often used.

$$\hat{\sigma} = 1.4826 \times \text{MAD} \quad (5)$$

$$\text{MAD} = \text{median} ( |e_i - \text{median} \{e_i\}| )$$

Taking the derivative of Equation (4) and solving produces the score function

$$\sum_{i=1}^n \psi\left((y_i - x_i' \hat{\beta}) / \hat{\sigma}\right) x_{ik} = \sum_{i=1}^n \psi(e_i / \hat{\sigma}) x_i = 0 \quad (6)$$

with  $\psi = \rho'$  which is called the influence function. There is now a system of  $p + 1$  equations, for which  $\psi$  is replaced by appropriate weights that decrease as the size of the residual increases. Define the weight function  $w(e) = \psi(e) / e$ , and let  $w_i = w(e_i)$ . Then the Equations (6) becomes

$$\sum_{i=1}^n w_i (e_i / \hat{\sigma}) x_i = 0 \quad \text{for } i = 1, 2, \dots, n.$$

This is exactly the system of equations that can be solved by using the iterated reweighted least squares (IRLS) procedure.

There are various  $M$ -estimators according to the choice of  $\psi$ -functions. In this study  $M$ -estimator based on Huber  $\psi$ -function and  $M$ -estimator based on Bisquare  $\psi$ -function are chosen to apply to the real data.

### 3. Results and Discussion

The maternal mortality ratio (per 100,000 live births) was studied as a function of the contraceptive prevalence rate (% of married women aged 15-49), births attended by skilled health personnel (%), total fertility rate (birth per women), life expectancy at birth (years), physicians (per 100,000 people), female labor force participating rate and public expenditure on health (% of GDP). Concerning these, a model was constructed that



explains the maternal mortality ratio for sample of 80 countries based on these seven explanatory variables. So, the distribution of the individual variable was examined first. It was found that the dependent variable was not linear with the explanatory variables. To make linearity, this dependent variable was transformed by taking the logarithm. Next, whether or not these explanatory variables shown above were individually related to the dependent variable was checked. Then, the correlation coefficient for each of the explanatory variables with the dependent variable was computed. It was found that these explanatory variables were highly correlated with the dependent and thus they were used in model building process. Thus, a model to predict the maternal mortality ratio of countries was built based upon the contraceptive prevalence rate, births attended by skilled health personnel, total fertility rate, life expectancy, physicians, female labor force participating rate and public expenditure on health. In this study, it can be expected that the maternal mortality ratio might be inversely related to the contraceptive prevalence rate, births attended by skilled health personnel, life expectancy, physicians and public expenditure on health, but it can directly be related to the total fertility rate. The multiple linear regression model is seen as follows:

$$\ln MMR_i = \beta_0 + \beta_1 CPR_i + \beta_2 BABSHP_i + \beta_3 TFR_i + \beta_4 LE_i + \beta_5 PHY_i + \beta_6 FLFPR_i + \beta_7 PEOH_i + \varepsilon_i \quad (7)$$

where,

MMR	= maternal mortality ratio
CPR	= contraceptive prevalence rate
BABSHP	= births attended by skilled health personnel
TFR	= total fertility rate
LE	= life expectancy
PHY	= physicians
FLFPR	= female labor force participating rate,
PEOH	= public expenditure on health.

The OLS method was applied using these data and the parameters  $\beta_0, \dots, \beta_7$  in the model (7) were estimated. The results are shown in Table (1). From this table, it is obtained that most of the variance inflationary factor (VIF) values for each explanatory variable are relatively small, ranging from a high of 4.353 for TFR to a low of 1.068 for FLFPR. Due to these results, neither of the slope coefficients (CPR, TFR and FLFPR) is individually statistically significant. In addition, it is found that the  $F$  value is highly significant at 1% level which is shown in Table (3). Hence, there may be multicollinearity among the explanatory variables.



**Table (1) Summary of OLS Regression Model Fitted to the Maternal Mortality Data**

Coefficients	Value of Coefficients	Standard Errors of Coefficients	<i>t</i> Statistics	Significance of <i>t</i>	Collinearity Statistics	
					Tolerance	VIF
Constant	11.391***	1.218	9.354	0.000	-	-
CPR	-0.001	0.005	-0.182	0.856	0.379	2.639
BABSHP	-0.013***	0.005	-2.697	0.008	0.400	2.503
TFR	0.061	0.125	0.486	0.628	0.230	4.353
LE	-0.067***	0.013	-5.282	0.000	0.348	2.876
PHY	-0.033***	0.009	-3.883	0.000	0.513	1.949
FLFPR	-0.002	0.005	-0.424	0.673	0.937	1.068
PEOH	-0.153***	0.043	-3.552	0.001	0.824	1.214

Note: (1) Dependent variable: lnMMR  
(2) \*\*\*, \*\*, and \* : Significant at 1%, 5% and 10% respectively

Data Source: Human Development Report (2009)

Thus, a widely used procedure, “search” called stepwise regression was applied for exploring the regressors. Table (2) presents the results obtained from the SPSS STEPWISE procedure. According to these results, the three variables (CPR, TFR, and FLFPR) were dropped out from the model (7) and the new model under consideration thus contains four explanatory variables: BABSHP, LE, PHY and PEOH. The new model can be seen as follows:

$$\ln MMR_i = \beta_0 + \beta_1 BABSHP_i + \beta_2 LE_i + \beta_3 PHY_i + \beta_4 PEOH_i + \varepsilon_i. \quad (8)$$

**Table (2) Summary of New Model Fitted to the Maternal Mortality Data**

Coefficients	Value of Coefficients	Standard Errors of Coefficients	<i>t</i> Statistics	Significance of <i>t</i>	Collinearity Statistics	
					Tolerance	VIF
Constant	11.794***	0.562	20.983	0.000	-	-
BABSHP	-0.015***	0.004	-3.373	0.001	0.498	2.008
LE	-0.072***	0.010	-7.170	0.000	0.555	1.802
PHY	-0.035***	0.008	-4.173	0.000	0.537	1.864
PEOH	-0.153***	0.042	-3.685	0.000	0.865	1.156

Note: (1) Dependent variable: lnMMR  
(2) \*\*\*, \*\*, and \* : Significant at 1%, 5% and 10% respectively

Data Source: Human Development Report (2009)



In Table (2) the stepwise method shows a statistically significant negative effect of each of the explanatory variables (BABSHP, LE, PHY and PEOH) and suggests that when the CPR, TFR and FLFPR variables are removed, a slight change in the values of coefficients of the remaining variables is found out. As expected, the coefficients of BABSHP, LE, PHY and PEOH are negative. The intercept value slightly increases from 11.391 to 11.974. In addition, the slope coefficients of the BABSHP, LE, PHY and PEOH slightly change from -0.013, -0.067, -0.033 and -0.153 to -0.015, -0.072, -0.035 and -0.153 respectively. Moreover, the value of  $F$  increases from 51.346 to 92.064 which is also shown in Table (3).

**Table (3) Performance of Models Fitted to the Maternal Mortality Data**

Model	Adjusted $R^2$	Standard Error of Estimates	$F$ - Value	Significance of $F$	D.W.
Original <sup>a</sup>	0.788	0.734	51.346	0.000	1.818
New <sup>b</sup>	0.793	0.724	92.064	0.000	1.826

Note: (1) Dependent variable: lnMMR

(2)a: Predictors:(Constant),CPR, BABSHP, TFR, LE, PHY,FLFPR, PEOH

b: Predictors:(Constant), BABSHP,LE, PHY, PEOH

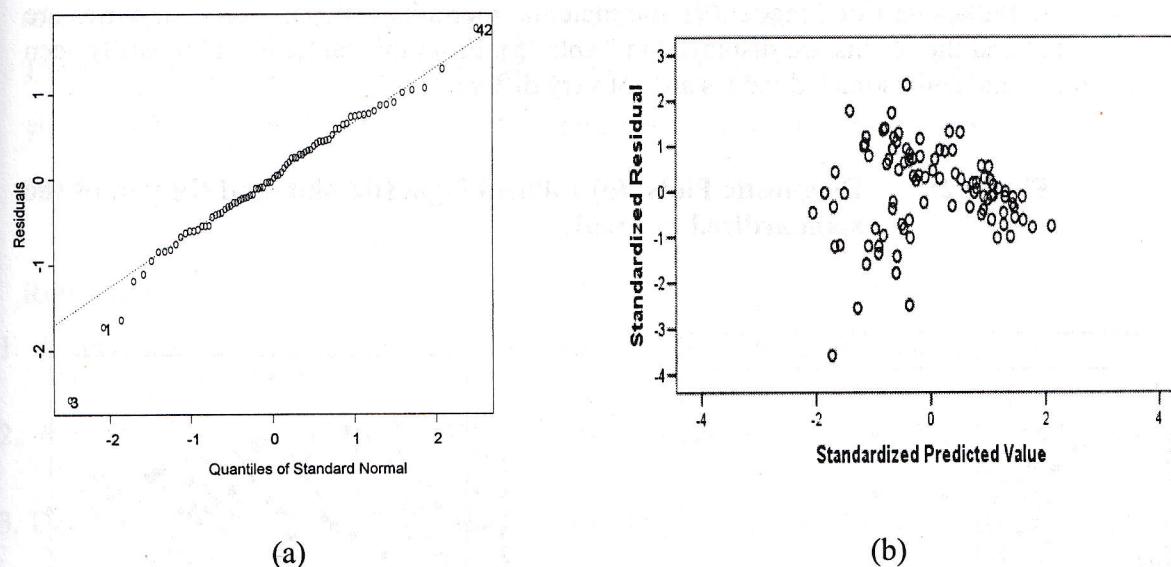
Data Source: Human Development Report (2009)

After the explanatory variables to be included in the model have been selected, a residual analysis was used to evaluate the aptness of the fitted model. Thus, the diagnostic plots which are shown in part (a) and (b) of Figure 1 are used for the study. Figure 1(a) suggests that the residuals of the fitted model (8) do not follow the normality assumption because some of the points do not fall in a straight line. It can be observed from the part (b) of Figure 1 that there is no apparent pattern between the standardized residual and predicted value. The residuals appeared to be evenly spread above and below the mean value for the predicted value. According to the part (a) of Figure 1, the new model violates the normality assumption. This result implies that, the data contain some outliers. Thus, the alternative procedure is used to achieve the robustness properties.

Before the application of robust methods, the types of unusual observations were investigated using a robust diagnostic plot. This plot is shown in Figure 2(a). Figure 2 reveals that observations 1, 3, 13 and 42 are vertical outliers and twelve observations are good leverage points. Therefore, according to the robust diagnostic plot, data contain four vertical outliers and twelve good leverage points. The Huber and bisquare  $M$ -estimation methods were applied to the same data set. The results are shown in Table (4).



**Figure 1: (a) quantiles standard normal plot, and (b) standardized residuals versus predicted value of new model**



Source: Based on Calculation

**Table (4) OLS and *M*- Regression Models Fitted to the Maternal Mortality Data**

Estimation Methods	$\beta_0$	$\beta_1$	$\beta_2$	$\beta_3$	$\beta_4$	MSE
OLS	11.794*** (20.983)	-0.015*** (3.373)	-0.072*** (7.170)	-0.035*** (4.173)	-0.153*** (3.685)	0.525
M-Huber	11.460*** (19.382)	-0.018*** (4.073)	-0.064*** (6.197)	-0.030*** (3.518)	-0.139*** (3.230)	0.399
M-Bisquare	10.703*** (18.590)	-0.015*** (3.515)	-0.054*** (5.391)	-0.035*** (4.212)	-0.123*** (2.940)	0.183

Note: (1) Absolute values of *t* statistics in parentheses

(2) \*\*\*, \*\*, and \* : Significant at 1%, 5% and 10% respectively

Source: Human Development Report (2009)

Table (4) gives the estimates from OLS and *M*-estimation regressions fitted to the maternal mortality data. The intercepts of *M*-estimates based on Huber and bisquare *M*-estimation are not too much different. Due to the vertical outliers, the mean squares error

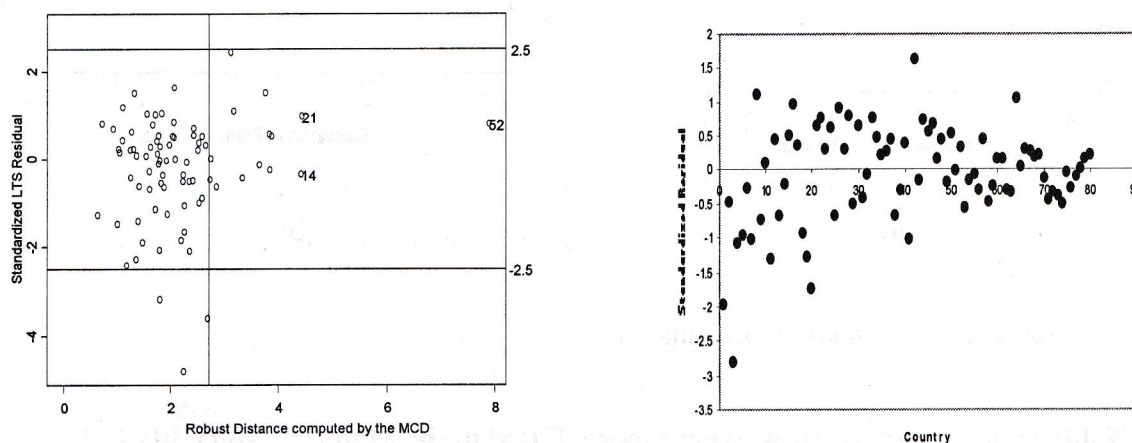


(MSE) of OLS is the largest value among the others. The MSE of  $M$ -estimates is quite different from OLS method. The  $M$ -estimation methods detected the outliers for Australia, Ireland, Mauritius and Guyana and these are given relatively small weights. In this study, the optimal result was obtained by using the  $M$ -estimates based on bisquare  $\psi$ -function. The fitted regression model is given below:

$$\ln MMR = 10.703 - 0.015 BABSH\hat{P} - 0.054 L\hat{E} - 0.035 PH\hat{Y} - 0.123 PEO\hat{H}. \quad (9)$$

Based on the above fitted model (9), the maternal mortality ratios of some countries are estimated and the results are displayed in Table (5). From this table, it can be easily seen that the actual and estimated values are not very different.

**Figure 2:** Diagnostic Plots: (a) robust diagnostic plot, and (b) plot of the standardized residuals



(a)

(b)

Source: Based on Calculation

**Table (5) Actual and Estimated values of Maternal Mortality Ratio**

Country	MMR		
	Actual	Estimated	Error
Netherlands	6	14	8
Canada	7	14	7
Syrian, Arab Republic	130	135	5
Tajikistan	170	147	23
Vietnam	150	120	30

Source: Calculated from Equation (9)



#### 4. Conclusion

The data of the maternal mortality ratio for 80 countries are used to analyze the performance of ordinary least squares (OLS) and  $M$ -estimation methods in multiple linear regression model. The OLS method, which is sensitive to outliers, is used to estimate the regression parameters. It is found that, the OLS method does not meet the basic assumptions due to the vertical outliers and the mean squares error (MSE) is large. Therefore, the model is estimated by  $M$ -estimation method based on Huber and bisquare  $\psi$ -function. It is found that  $M$ -estimation based on bisquare  $\psi$ -function gives the actual and estimated values which are not very different.

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# CONSUMER BEHAVIOR TOWARDS COFFEE MIX IN YANGON

Tin Tin Aye<sup>1</sup>

## Abstract

This study focuses on Consumer Behavior towards Coffee Mix in Yangon. The analysis is based on two levels: (a) analyzing the current situation of coffee mix and compute the incidence rate for country level, and (b) examining the consumer behavior. For the sake of computational advantage and detailed analysis, Yangon was selected from two metropolitan cities, namely, Yangon and Mandalay. There are 33 townships in Yangon and only 6 townships were chosen by using two stages Simple Random Sampling. Five wards are collected from each township and fifty respondents are chosen from each ward. This consumer survey is conducted with 300 respondents to analyze the consumer's behaviors. From the analysis, the steady growth in the sales of instant coffee mix products reflects the increased acceptance and preference for coffee drinking in Myanmar. About 39 brands are available in the market, the Myanmar coffee mix market has long been dominated by the Super brand, followed distantly by Mikko, Gold Roast, etc. In Yangon Coffee mix market, most of the consumer prefers Premier. The second one is Nest café and the third one is Super. It is found that consumer's preference brands are different between Yangon and the whole country. According to the consumer survey, the most of the coffee drinkers' age group is (31-40) years. The largest number of consumer's taste is bitter. Most of respondents drink coffee mix daily with "3 in 1" instant coffee mix and they know the coffee mix brand from TV. Also, many of coffee mix buyers thinks that the price of them is fair and they usually buy the coffee mix in package. TV commercial is very attractive program among advertising media and the respondents prefer to buy the coffee mix due to discount. Moreover, the respondents would change from current brand to new brand of coffee mix because of better taste and smell. In 2010 survey, coffee mix drinking incidences are higher than in 2008 at metropolitan area, plain area and delta area. From 2010 survey, coffee mix drinking incidence had rose 5% than in 2008 survey. The number of population and percentage of drinking incidence increase in all areas except hilly and dry area. Consumers are seeking out coffee mix brands as the products are of a high quality as well as being reasonably priced.

Keywords: consumer behavior, preference, 4 Ps

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<sup>1</sup> Associate Professor, Department of Management Studies, Yangon Institute of Economics



## 1. Introduction

All over the world, marketers are responsible for developing and marketing strategies that facilitate satisfying exchanges between buyers and sellers. Marketing Strategy entails selecting and analyzing a target market and developing a marketing mix for this target market. In marketing mix, promotion has been recognized as major elements and it includes five activities such as advertising, sale promotion, personal selling, publicity and direct marketing. Today in modern world, promotional activities have evolved into a vital communication activities for both consumers and business.

A coffee mix is one of the consumer goods and there are variety of brands in global market. As coffee consumption is growing, many locals are familiar with the coffee culture. Coffee mix is stands as one of the essential products in the household's commodities because the consumers are consuming it in daily. Many new brands of coffee mix also entered into the market and tried the best for getting the higher market share among each others. In order to gain the more market share, the coffee mix enterprise made attempt by applying the variety of promotional activities, pricing strategy and market penetration techniques. The improvement of the industry and intense market competition push forward the coffee mix enterprise to improve the quality of the products and smooth, distribution networks. Moreover, the promotional activities are also competitively launched. These improvements extend the considerable impacts to the customers' attitude and behavior. Many of new coffee mix products are assaulted in the coffee mix industry nowadays due to the effect of the market demand. In today's market, it is found that coffee mix product is the best selling product. The coffee mix market will keep growing year by year and coffee mix is a commodity that can be supposed as one of the big markets among the consumers' goods in Myanmar. Many of local and imported brands are available in the market.

Since a coffee mix has the huge market in Myanmar, it is interesting to study the consumer's behavior on consumption of coffee mix products in Myanmar. Because Myanmar is a nation of tea/coffee drinkers, drinking coffee mix has become a traditional habit of each family and coffee mix is served at every social or religious ceremony or function in many places in Myanmar. Most of Myanmar people, especially young people, usually sit at teashop in different places. Teashops become one of the busiest forms of food and beverage outlets in Myanmar, and demand for coffee mix is also big in there.

Consumer behavior is the study of when, why, how, and where people do or do not buy product. The consumption behavior is changing in accordance with the changes of living standard of the consumers. One of the reason for drinking coffee mix is "Changing lifestyles in Myanmar" that is encouraging new eating habits and coffee mix products are growing in popularity under the change.





### 1.1 Objectives of the Study

The study mainly focuses on the following

1. To identify the current situation of coffee mix market in Myanmar.
2. To analyze the consumer's buying behavior on coffee mix.

### 1.2 Scope, Method, and Limitation of the Study

Data collecting methods include two levels: (a) one survey for analyzing the current situation of coffee mix and computing the incidence rate for country level, (b) one survey for examining the consumer attitude. For the sake of computational advantage and detailed analysis, Yangon was selected from two metropolitan cities, namely, Yangon and Mandalay. There are 33 townships in Yangon and 6 townships were chosen by using two stages Simple Random Sampling. The selected townships are Dagon Township, Sanchaung Township, Tamwe Township, Hlaing Township, Yankin Township and Bahan Township which are used as the primary sampling units. Five wards are collected from each township and fifty respondents are chosen from each ward. This consumer survey is conducted with 300 respondents to analyze the consumer's behaviors. Due to the time constraint, consumers are collected from Yangon only. Although Yangon has 33 townships, there is some limitation in this research and it encloses only six townships in Yangon for time constraint.

Secondary data gets from, previous academic research work done, marketing reference books, Newspaper and magazine articles, previous studies/surveys conducted by other market research agencies.

## 2. Coffee Mix Market in Myanmar

Myanmar is focusing on the open market economy and the Government also enforces and supports the private sector to promote the industrial development. So many industries including coffee mix industries are developing in the country. Many of new coffee mix products are assaulted in the industry nowadays due to the effect of the market demand. In today's market, it is found that coffee mix product is the best selling product. The coffee mix market will keep growing year after year and coffee mix is a commodity that can be supposed as one of the big markets among the consumer's goods in Myanmar. Many of the local and imported brands are available in the market and about (39) brands are available in the market, with consumption estimated at about million single-serve sachets a day. These (39) brands are Super , Mikko, Gold Roast, Java, Ben , Premier Pure Coffee, Coffee King, Super One, Birdy, Preserve Espresso, Rich Coffee, Mistercup, Morning Cup, Nescafe, Golden Lion, Bravo, Dream , Sinoda , Owl and Gold Roast. Among them, Nescafe, Birdy and Mistercup are foreign brand. Nescafe Coffee mix was imported from neighboring countries and there was no factory for local production. Because of a very good image and quality and without local production, Nescafe coffee mix is the most expensive of other



brands. Super coffee mix is originated from Singapore and there is a factory here to produce coffee mix. Super is the second most expensive and leading brand here because of good quality with its price lower than Nescafe coffee mix. Other brands are local brands sold with lower prices than Nescafe coffee and Super coffee. The coffee mix market has been dominated by private manufacturers and one government brand. The ingredients for the coffee mix include instant coffee powder, non-diary creamer and sugar.

Golden-Lion uses instant coffee powders from its own factory. Private manufacturers import coffee and creamer. Most local coffee mix suppliers order coffee powder from Brazil, creamer from Holland through dealers in Singapore and sugar from local suppliers. The packaging comes from Singapore. Premier, however, uses pure local coffee instead of imported.

Since 1995, however, Myanmar has a number of coffee shops which try to introduce western-style coffee culture here with varying degrees of success. The pioneers in the market, such as Fuji Coffee House on University Avenue in Kamaryut Township, faced several initial hurdles, including customers' attitude and sourcing the ingredients and machines.

Nowadays, the consumer has a chance to choose the café and order their favourite coffee. In Yangon, about 80 to 90 % of the customers at approximately 6000 teashops drink tea, while about 10 to 20 % order coffee, either freshly made or from instant coffee mix packets.

The market for instant coffee mixes has been growing since the past five years, during which time the growing competition has given consumers a wider range of choices and has helped keep prices down. Also known as "3 in 1" because of their three main elements – instant coffee powder, creamer and sugar most mixes come in 20-gram sachets designed to make one cup of coffee after hot water is added.

Popular brands in the Myanmar coffee mix market include Super, Mikko, Gold Roast, Super One, Ben, Java and Premier; All of them are products of different private companies which use imported ingredients, but the products are packed here. Another company, Golden Lion, is government-owned and it produces instant coffee mix at the factory in Pin Oo Lwin near Mandalay.

The competitiveness creates the constant battle among instant beverage producers including coffee mix and tea mix. The consumption of coffee mix and tea mix which also stand place in the market has regularly increased by 4.5% annually and coffee mix is the booming. Instant beverage market is dominated by six players which are Super, Premier, Gold Roast, Mikko, Nescafe and Super One even though the market share might be different from one brand to another. However, exported coffee mix brands such as Birdy and Mistercup from Thailand are also taking up some market share in the local after Nargis Cyclone and it is surprisingly to see that Birdy has penetrated so well to the local market within a short period. And Rich coffee mix



brand from Thailand also speedily penetrated into Myanmar market after 2009 Thingyan Water Festival.

Changing consumer behavior in Myanmar encourage new habits of having instant foods and people's brand choices differ from time to time. Therefore, some influenced major brands are facing downturn in their market share because today consumers shifted their taste to a bit creamy from previously popular flavor, bitter.

The result of the competition hot in coffee mix market; the keener the competitions, the higher the quality. It also noted that the lower the prices and the better the service. The fight among the instant beverage-especially coffee mixes- is one such competitive market. As a result, tremendous amounts of money are being ploughed into TV for advertisement using popular film stars in an attempt to win a large slice of the market. New entrants usually occur in coffee mix market and they try to get the market share with strong competition.

Therefore, it is interesting to conduct a research on consumer behavior regarding coffee mix. When many coffee mix brands are available in the market, the firms need to know how the consumer search information to purchase it and which advertising and sales promotion programs are attractive for them.

## 2.1 Coffee Consumption of Myanmar

The coffee is not a new thing to Myanmar. It is in fact playing a prominent role in daily life of the majority of Myanmar society, in line with tea. Myanmar people have the habit of drinking tea and coffee at home, at work and at café or tea shop. It could be easily seen that numerous small café and tea-shops are sprung up at every town and city in Myanmar as a whole, which shows the strong drinking habit of tea and coffee for this favorable situation. Consequently, coffee mix becomes a highly potential consumer product for Myanmar market.

For getting the situation of coffee mix industry at country level, the survey was conducted in February to May 2010 by Myanmar Marketing Research and Development (MMRD) service centre and the estimated figures are computed according to the survey methodology that are based on 42.1 million people of age ten years old and above. The estimated figures of 2010 survey are presented in this section compared with 2008 survey.

Myanmar is a nation of tea drinkers: Although coffee consumption is growing, many locals are baffled by the minutiae of the coffee culture that is slowly taking hold in up-scale café throughout Yangon. Coffee mix drinking incidence by region is described in Table (1). According to the Table (1), about 55% of total population (Age 10 years and above) has the drinking habit of coffee mix. In 2010, coffee mix drinking incidences are higher than in 2008 at metropolitan area, plain area and delta area. In 2010, coffee mix drinking incidence of hilly area and dry area are less than in 2008.



**Table (1) Drinking Incidence of Coffee Mix by Region**

(Population in Million)

SN	Region	2008			2010		
		Total Pop <sup>n</sup>	Drinking Pop <sup>n</sup>	%	Total Pop <sup>n</sup>	Drinking Pop <sup>n</sup>	%
1	Metropolitan	4.5	3.3	72%	4.6	3.5	75%
2	Hilly	7.0	3.4	48%	7.1	3.1	43%
3	Dry	11.2	6.0	54%	11.3	5.9	52%
4	Plain	7.3	2.9	40%	7.4	4.0	54%
5	Delta & Coastal	11.5	5.1	44%	11.6	6.7	58%
	Total	41.5	20.7	50%	42.1	23.1	55%

Source: Myanmar Marketing Research and Development (MMRD)

From 2010 survey, coffee mix drinking incidence rose 5% than that in 2008 survey. The number of population and percentage of drinking incidence increase in all areas except hilly and dry area. For delta and costal, the region where the highest percentage and population of drinking incidence existed in 2010 is noticeably increased than that in 2008. Coffee Mix drinking incidence increase year after year. Coffee mix drinking incidence by gender is shown in Table (2).

**Table (2) Coffee Mix Drinking Incidence by Gender**

(Population in Million)

SN	Gender	2008			2010		
		Total Pop <sup>n</sup>	Drinking Pop <sup>n</sup>	%	Total Pop <sup>n</sup>	Drinking Pop <sup>n</sup>	%
1	Male	17.1	8.9	52%	19.4	10.8	56%
2	Female	24.4	11.8	49%	22.7	12.2	54%
	Total	41.5	20.7	50%	42.1	23.1	55%

Remark: The figures are estimated based on 42.1 Million People (Age 10 years and above)

Source: Myanmar Marketing Research and Development (MMRD)

According to the 2008 and 2010 survey, coffee mix drinking incidence increase in all gender. Male rising incidence is 4% and female rising incidence is 5%.



## 2.2 Market Share of Selected Coffee Mix Brands in Myanmar

Market share of seven selected brands for coffee mix in Myanmar are analyzed in Table (3). In this survey, data concerned with market share is collected from thirteen towns in Myanmar.

According to Table (3), super brand gets more market share than other brands, representing the 60% of market in Myanmar. Gold Roast market share is 16% of market. Mikko brand gets 11% of market. Premier brand's market share is 11% of market. While Nescafé and Birdy brands get 3% of market. In addition other brands' market share is 3% of market.

**Table (3) Market Share of Coffee Mix Brands**

SN	Brand	Share %
1	Super	60
2	Gold Roast	16
3	Mikko	11
4	Premier	4
5	Nescafe	3
6	Birdy	3
7	Other	3
	<b>Total</b>	100

Source: Myanmar Marketing Research and Development (MMRD)

## 2.3 Brand Awareness of Coffee Mix

For the product competition world, coffee mix companies need to know the level of awareness for each brand to work out the market strategy. For nation wide survey, the brand which are influenced in Myanmar people, shown in Table (4).

**Table (4) Percent of Brand Awareness for Coffee Mix**

SN	Brand	Top of Mind Brand	Spontaneous	Prompted
1	Super	52%	79%	97%
2	Gold Roast	12%	42%	84%
3	Birdy	9%	24%	61%
4	Mikko	8%	20%	83%
5	Premier	7%	21%	70%
6	King	4%	16%	70%
7	Nescafe	2%	10%	57%
8	Rich	2%	9%	44%
9	Java	2%	10%	79%
10	Super One	1%	5%	61%
11	Mistercup	1%	2%	22%
12	Gold Roast Gold	0%	2%	24%

Source: Myanmar Marketing Research and Development (MMRD)



From Table (4), Although 39 brands are available in Myanmar coffee mix market, this survey is conducted from nine brands that are dominated for the Myanmar coffee mix market. Table (4) shows the three categories of the level of awareness, namely, "top of mind", "spontaneous" and "prompted". According to the Table (4), top of mind brand awareness of Super is highest in percentage follow by Gold Roast. Super leads the top of mind brand awareness of coffee mix drinkers. Even though, it is analyzed by the "Spontaneous" and "Prompted" in the mind of Myanmar consumer, it is the same symptom of the top of mind awareness. Hence, "Super" achieved the highest brand awareness and Gold Roast is the second level of awareness. So it can be concluded that Super brand is the most favorite brand in Myanmar market. The second favorite brand of Myanmar consumer is Gold Roast. As "top of mind" is important factor to analyze the situation of the coffee brand, in this study the "top of mind" awareness is analyzed in detailed by region, area, gender and age group etc.

**Table (5) Percent of Top of Mind Awareness by Region**

SN	Brand	Hilly	Dry	Plain	Delta & Coastal
1	Super	36%	55%	56%	59%
2	Gold Roast	5%	16%	15%	11%
3	Birdy	6%	6%	10%	12%
4	Mikko	43%	4%	2%	2%
5	Premier	1%	8%	6%	3%
6	King	1%	2%	4%	5%
7	Nescafe	1%	4%	2%	1%
8	Rich	1%	1%	3%	2%
9	Java	4%	2%	1%	1%
10	Other	2%	1%	2%	3%

Source: Myanmar Marketing Research and Development (MMRD)

According to the Table (5), Super has the highest percentage of top of mind for all the regions. That is, top of mind brand awareness of super is similar in all regions except the hilly region, where Mikko has the highest with 43%. Beside from Super coffee mix, top mind brand awareness of Gold Roast is the highest in percentage in Dry zone as well as Plain area, and Birdy is the highest in percentage in Delta and Costal area.

### **3. Analysis on Consumer Attitude towards Promotion Strategy of Coffee Mix**

#### **Industry**

In this section, it is described the consumer behavior of instant coffee mix, consumer perception on coffee mix, promotional strategy of coffee mix industry and attitude towards the new brand of coffee mix by promotional strategy. This study focuses on consumer's attitude towards promotional strategy of instant coffee mix



product in Yangon. Although there are 33 townships in Yangon, 6 townships were chosen by using the two stages Simple Random Sampling.

### 3.1 Consumer Behavior of Instant Coffee Mix

In this section, the Demographic characteristic of respondents, consumption manner of consumer, buying behavior of consumer, 300 respondents of selected from different area of Yangon are analyzed.

#### 3.1.1 Consumption Pattern of Consumer

The drinking pattern of consumers in Yangon, the brand choice of consumer reason for first time of drinking, the drinking habit of consumer, place of drinking, and the reason of consumption are analyzed.

**Table (6) Number of Respondents by Drinking Patterns**

Drinking Pattern	Frequency	%
Coffee-only	90	30
Tea only	135	45
Both	75	25
Total	300	100

Source: Surveyed data, 2010

The drinking pattern of consumer is shown in Table (6). Drinking pattern is classified into three groups such as "Coffee-only", "Tea only", and "Both". According to the table, coffee-only drinkers are 30 % of total sample size and tea only drinkers are 135 with 45 %. The rest of respondents are both tea and coffee drinkers and it has 25 % of total sample size.

The brand choice of consumer is shown in Table (7). Although thirty nine coffee mix brands are available in Myanmar's coffee mix market, the data are collected from ten brands in this research. According to the survey, Premier is the most popular brand in Yangon. It has 37.7 % of the total respondents, followed by the Nescafe which has 14.3 %. Then super is ranked as the third position in Yangon, about 13.3 %. Birdy has 12 % of total respondents and Mistercup is responded by 0.6 % only. So it can be concluded that most of the consumers prefer brand is Premier, second most of the consumers' prefer brand is Nescafe, the third most of the consumer's prefer brand is Super in Yangon area.



**Table (7) The Brand Choice of Consumers**

Brand Choice	Frequency	%
Super	40	13.3
Premier	113	37.7
Java	6	2.0
Gold Roast	20	6.7
Super One	4	1.3
Mikko	5	1.7
Ben	12	4.0
Rich	12	4.0
Birdy	38	12.7
Nestcafé	43	14.3
Mister cup	2	0.7
Coffee king	5	1.7
Total	300	100

Source: Surveyed data, 2010

The first time of drinking of consumer is shown in Table (8). According to the Table (8), 30 % of respondents try to test for drinking of coffee mix as the first time. 22.4 % of respondents drink the coffee mix at their home because their family member bought certain brand of coffee mix. 17.3% of respondents drink the coffee mix since they come to know the brand on TV commercial.

**Table (8) Reason for First Time of Drinking of Coffee mix**

Reason	Frequency	%
TV Ad.	52	17.3
Other people urge	23	7.7
Many people drink	26	8.7
Want to test	90	30.0
Can get gift	4	1.3
Family member buys	67	22.4
Tea-shop serves only this brand	4	1.3
Other	34	11.3
Total	300	100

Source: Surveyed data, 2010

According to the Table (9), drinking habit is classified into five groups and the number of respondents is counted into these groups. It was found that most of the people in Yangon usually drinks the coffee mix daily. It has 75% of total respondents. Some of the respondents do not drink the coffee mix daily.



**Table (9) Drinking Habit of Coffee Mix in a Week**

Drinking habit	Frequency	%
Daily	225	75
Five days in a week	21	7
Four days in a week	21	7
Three days in a week	12	4
Two days in a week	21	7
Total	300	100

Source: Surveyed data, 2010

It can be said that Myanmar people usually drink the coffee mix more than one time in a day. Hence, it needs to analyze and it is shown in Table (10)

**Table (10) Drinking Times of Coffee Mix in a Day**

Times in a day	Frequency	%
One time	150	50
Two times	104	35
Three times	35	12
Above three times	11	3
Total	300	100

Source: Surveyed data, 2010

In Table (10), the drinking times of coffee mix is classified into four groups such as “One time”, “Two times”, “Three times” and “Above three times”. The large number of respondents usually drink the coffee mix one time in a day with 50 % of total sample size. The least number of respondents who drinks the coffee mix is more than three times.

Many coffee mix brands are available in Myanmar market. Consumer can choose the brand from market. Consideration factors for choosing of the brands are analyzed in Table (11). The classification of consideration factors is shown in this table. The considered factors are taste, price, Easy to buy, family’s choice and brand. Most of the respondents favor the taste as the consideration factor that has 65% of total respondents. While the least number of respondent’s consideration factor is family’s choice representing 3% of total sample size.

**Table (11) Consideration Factors for Choosing of Brands**

Factors	Frequency	%
Taste	194	65
Price	18	6
Easy to buy	44	15
Family’s choice	9	3
Brand	35	11
Total	300	100

Source: Surveyed data, 2010



Myanmar people have the habit of drinking tea and coffee at home, at work and at café or tea shop. It could be easily seen that numerous small café and tea-shops are sprung up at every town and city in Myanmar as a whole, which shows the strong drinking habit of tea and coffee for this favorable situation. Place of Drinking coffee mix is analyzed in Table (12).

**Table (12) Place of Drinking Coffee Mix**

Place	Frequency	%
At home	178	60
At office	49	16
At teashop	73	24
Total	300	100

Source: Surveyed data, 2010

According to the Table (12), 60 % of respondents answer that they mostly drink coffee mix at home, while 16% respondents drink the coffee mostly at office and 24 % of respondents drink the coffee at tea shop. So it can be concluded that most of the coffee drinkers drink the coffee at home.

### 3.2 Consumer Perception on Coffee Mix

Consumer perception is important for every business. This section is described the consumer perception on habit of drinking coffee mix, perception on drinking coffee mix and perception on kinds of coffee mix. There are 39 brands which are now available in Myanmar market. But there are different tastes that are produced and distributed to the market. Hence, the favorite taste of coffee mix is shown in Table (13). Taste is classified into four groups.

**Table (13) Consumer's Perception of Taste of Coffee Mix**

Perception Taste	Over		Normal		Without	
	Frequency	%	Frequency	%	Frequency	%
Bitter	189	63	75	25	0	0
Sweet	31	10	89	30	46	15
Astringent	75	25	61	20	162	54
Creamy	5	2	75	25	92	31
Total	300	100	300	100	300	100

Source: Surveyed data, 2010

These are different Consumer's Perception on Taste such as bitter, sweet, astringent and creamy. "Creamy" and Consumer's perception level is classified into three levels. The levels are "Over", "Normal" and "Without". The largest number of consumer's taste is bitter and it has 63 % of total sample size. Then 162 respondents like without astringent taste.



Many kinds coffee mix are available in market. Consumer prefers different kinds of coffee mix. So it can be concluded that coffee mix manufacturers must be aware of the kinds of coffee mix which is preferred by consumers. It is shown in Table (14).

**Table (14) Consumer's Preference Kinds of Coffee mix**

Kinds of Coffee mix	Frequency	%
Cappuccino	10	3
Espresso	48	17
3 in 1 instant	184	61
2 plus 1 instant	58	19
Total	300	100

Source: Surveyed data, 2010

According to the Table (14), 61 % of respondents like "3 in 1 instant" coffee mix. Some of respondents give the response that they like "2 plus 1" instant coffee mix.

### 3.3 Buying Behavior of Coffee Mix

For distribution of coffee mix, the buying behavior is important for raising the sale volume. In this section, the place of purchasing, size criteria and price attitude of consumers for coffee mix are analyzed.

In Myanmar coffee mix market, many brands of coffee mix are available in different place. Purchasing place can be classified into four places. The number of respondents who purchase the coffee mix is shown in Table (15).

**Table (15) Place of Purchasing**

Place	Frequency	%
Market	62	21
Store	53	18
Supermarket	79	26
Grocery	106	35
Total	300	100

Source: Surveyed data, 2010

According to the Table (15), 35% of respondents buy coffee mix from grocery shop. 26 % of respondents buy from supermarket and 18 % of respondents buy from store that is located in convenient place etc. So it can be concluded that convenient location is the one of the consumers' consideration factors to buy the coffee mix. According to the survey, most of the grocery shops should be opened near target consumers.



**Table (16) Consumers' Criteria Regarding Coffee Mix**

Criteria	Frequency	%
Taste and aroma	213	70
Price	13	4
Easy to buy	50	17
Brands	13	4
Other	11	4
Total	300	100

Source: Surveyed data, 2010

Regarding the question of what criteria to take into account at buying coffee mix, 70 % of the respondent chose the coffee mix based on its taste and aroma, 17 % of respondents answered that they mainly considered on the factor of easy to buy and 4 % of respondents prefer price and brands and no one is considered packing, family choice, lucky draw, gift and get from only one shop. Other category, representing 4 % of respondents, consists of medical benefit (e.g. sliming and diet) and freshness from drinking coffee mix and other.

The table (16) reveals that the most important criteria for choosing coffee mix are its taste and aroma. If the product does not have unique taste and aroma among the other brands, it is difficult to get the market share. It is also important to make the effective distribution channels to reach everywhere because the consumer are prefer to buy the product easily and they do not want to waste the time by asking and finding coffee mix.

### **3.4 Consumer Perception on Promotional Activities of Instant Coffee Mix**

In general, the successful business uses the promotional tools to promote the brand awareness. This section is analyzed the sources of information for purchasing of coffee mix Brands, consumer' respond on promotion activities of coffee mix industry.

#### **Sources of Information for Purchasing of Coffee Mix**

Consumer wants to know the brand. Source of information for the coffee mix brands are shown in Table (17). According to the table and figure, 171 respondents (57 %) come to know the certain coffee mix brand on TV advertising media. 28% of respondents observe the brand of coffee from newspaper and journal. Hence, television advertisement is a good way to make the awareness for Myanmar people.



**Table (17) Sources of Information for Purchasing of the Coffee Mix Brands**

Sources of Information	Frequency	%
From newspaper/journal	84	28
From words of mouth	3	1
From Billboard / wall poster	3	1
From TV / Radio advertising	171	57
From Sponsorship programs	11	4
From Pamphlets	22	7
Others	6	2
Total	300	100

Source: Surveyed data, 2010

Consumer's respond on promotion activities of coffee mix industry are analyzed in Table (18). Promotion activities are classified into five groups.

**Table (18) Buying of Coffee Mix with Promotional Activities**

Promotion activities	No. of respondents	Percent
Advertising	160	54
Personal selling	25	8
Sales promotion	90	30
Public relation	15	5
Direct marketing	10	3
Total	300	100

Source: Surveyed data, 2010

From Table (18), the largest number of respondents buys the coffee mix according to advertising of coffee mix, representing 54 % of total sample size. 30% of respondents answers that the coffee mix is bought by sales promotion activities. According to the survey, among the promotion methods, most of the consumers interesting method are advertising. Due to the survey results, the advertising should be used to do the promotion activities for coffeemix industries.

Moreover, the attractive advertising program is important for advertisement of consumer products. It is shown in Table (19).



**Table (19) Consumer Purchases Based on Attractive Advertising Program**

Advertising program	Frequency	%
TV/Radio advertising	165	55
Print advertising	60	20
Place advertising	75	25
Total	300	100

Source: Surveyed data, 2010

According to the Table (19), 55% of respondents gave the response. They prefer TV/Radio advertising that is an attractive programme to let the brand answer 25% of respondents replied that they are prefer place advertising which is an attractive programme to know the brand. The rest of 20 % answer that they prefer the print advertising.

### 3.5 Analysis on Consumer Buying Behavior between Demographics Characteristics and the Main Factors the Consumers Considered to Purchase Coffee Mix

Demographic trends are highly reliable for the short and intermediate run for marketer. Marketers are keenly interested in the size and growth rate of population in cities; age, education level, household patterns, occupation and income level of the consumers because consumers make up market. The result showed the relationship between demographics characteristics of the respondents and the main factors the consumers considered to choose coffee mix.

**Table(20) Relationship between Gender and Brand, Advertising, Sale Promotion and Price**

Gender	Brand		Advertising		Sale Promotion		Price		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Male	31	10	40	14	30	10	16	5	117	39
Female	21	7	85	29	60	20	17	6	183	61
Total									300	100%

Source: Surveyed data, 2010

According to the Table (20), 10% of male respondents chose coffee mix by brand, 5 % of male respondents chose by price, 14% of male respondents chose due to advertising, 10% of male respondents chose by sale promotion and 7% of female respondents chose coffee mix by brand, 6% of female respondents chose due to price, 29% of female respondents chose advertising and 20% of respondents chose sale promotion.



This result showed that most of the male and female respondents' priority is an advertisement when they choose coffee mix. Price is a less important factor for them to choose coffee mix.

**Table (21) Relationship between Education Level and Brand, Advertising, Sale Promotion, and Price**

Education Level	Brand		Advertising		Sale Promotion		Price		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Students	4	1	13	4	8	3	5	2	30	10
Under-Graduate	10	3	45	15	40	14	7	2	102	34
Graduate	17	6	58	19	44	15	10	3	129	43
Other	5	2	15	5	11	3	8	3	39	13
<b>Total</b>									300	100%

Source: Surveyed data, 2010

Education level also is reflected respondents' choice on coffee mix. Result in table (21) shows that 1% of the students chose coffee mix due to brand, 4% is advertising, 3 % is sale promotion and 2 % is price.

In the group of under- Graduate, 3 % of respondents' choice is brand, 15 % is advertising, 14% is sale promotion and 2 % is price. In the group of graduate, 6 % of the respondents' choice is brand, 19 % is advertising, 15% is sale promotion and 3 % is price.

It can be concluded that most of the respondents from any education levels which are high school, undergraduate, and graduate want to purchase coffee mix due to the attractiveness of the advertisements. Sales promotion techniques are also second important influence factors on the consumers' buying process. In coffee mix market, advertising plays a vital role to induce the consumers and it influences on the consumers buying behavior.

### 5.1 Findings and Suggestions

At the view of the consumer behavior and habit, the study found that coffee drinking becomes increasing more than just a daily ritual at everywhere. The steady growth in the sales of instant coffee mix products reflects the increased acceptance and preference for coffee drinking in Myanmar.

The amount and percentage of drinking incidence increased in all areas by 2008 and 2010 survey. In 2010 while other coffee mix drinking incidence of hilly area and dry area are less than in 2008. From 2010 survey, coffee mix drinking incidence had rose 5% than in 2008 survey. The number of population and percentage of drinking incidence increase in all areas except hilly and dry area. Consumers are seeking out coffee mix brands as the products are of a high quality as



well as being reasonably priced. About 39 brands are available in the market, with consumption estimated about five million single-serve sachets a day. The Myanmar coffee mix market has long been dominated by the Super brand, followed distantly by Mikko, Gold Roast, Super one, Sinoda, Ben Café and Coffee King for last five years. In recent year, Although 39 brands are available in Myanmar Coffee mix market, six brands get more market share than other brands. These brands are Super, Gold Roast, Mikko, Premier, Nescafe, Birdy.

In Yangon Coffee mix market, most of the consumer prefers Premier. The second brand is Nest café. The third brand is Super. But Super is the most prefer brand as the national wide. So it is found that consumer's preference brands are different between Yangon and the whole country.

According to the consumer survey, the most of the coffee drinkers' age group is (31-40) years. The largest number of consumer's taste is bitter. 75 % of respondents drink coffee mix daily with "3 in 1" instant coffee mix. Most of the respondents knows the coffee mix brand from TV and who purchase the coffee mix in package. Also, many of coffee mix buyer that the price of them is fair.

Among the advertising media, TV commercial is very attractive program. The respondents who buy the coffee mix due to discount. Moreover, the respondents would change from current brand to new brand of coffee mix because of better taste and smell.

Drinking coffee mix becomes daily habit for the people in Yangon and the competition is also more extensive in the recent years. The consumers have the chance to choose their favorite brands among of many brands which will be local product or foreign ones. Therefore, it is important for the firms to know the consumer's searching information regarding coffee mix; how the consumer respond to the advertising and sales promotion programs; and the consumer's brand loyalty and brand switching on coffee mix.

There are many types of coffee mix in the market to penetrate the different target market. 3 in 1 instant coffee mix is the consumers like most and 2 plus one pure coffee is the following one. The other types of coffee mix for niche markets (e.g. slimming coffee mix, diet coffee mix, no cream coffee mix and etc) are occurred in the recent years. Although the type of coffee mix is the same, its ingredients are differing from that of other brands and it can be successful or fail tastes and aroma to induce the consumers. Another advantage of coffee mix is easy to drink. The daily life of the people in Yangon is busy and it is difficult to waste the time in tea shops very often. As a result, the consumers want to choose the coffee mix because it can be made in very short time and drink easily.

As the consumer's main criteria to choose the coffee mix are its taste and aroma, it can be concluded that one brand of coffee mix can be popular due to the intensive advertising but it is also need to fulfill the consumers' preferred tastes and



aroma. Otherwise, this brand will lose the market share and its brand image. The price of coffee mix is slightly different among of them, and so the consumer will notice the coffee mix brand if its price is very higher than others. The other important criterion to purchase the coffee mix is easy to buy and it describes that the effective marketing channels and value network are important and need to be created to reach the end users.

Most of the consumer know the coffee mix brands from the media advertising such as TV, and Radio. Therefore, firms usually use this media advertising as one of the effective marketing communication although advertising on TV cost a lot of money. Other marketing communications such as billboard, wall posters, sponsorship programs, and pamphlets are less effective than media advertising. In other words, most of the consumers get the information regarding coffee mix from print media and TV/Radio advertising. Consumers' attitude on advertising programs also revealed that TV/ Radio advertising is the most attractive marketing communication for the consumers rather than the other advertising programs.

## 5.2 Needs for Further Research

Based on the findings of the study, the consumer attitude is vary by region. Due to the time constraint, this paper has only emphasized in Yangon area for analyzing consumer attitude. In addition, Myanmar is a nation of tea drinkers, and although coffee consumption is growing many locals are baffled by the minutiae of the coffee culture. Myanmar people have the habit of drinking tea and coffee at home, at work and at café or tea shop. Now, coffee mix becomes a highly potential consumer product for Myanmar Market. To be more precise and sharp recommendations, the better consumer attitude survey for other region and consumer behavior of coffee shop. Should be done due to the time constraint, this paper is presented as a descriptive study only. It should be analyzed more statistically to make the decision of the hypotheses more firmly. Future investigation will be needed for more precise data with the help of statistical analysis and make forecast the coffee consumption for future aspect.

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# **A STUDY ON DRUG RELATED HARM REDUCTION PROGRAMME IN MYANMAR (2002 - 2010)**

Khin Khin Htwe<sup>1</sup> & War War Myint<sup>2</sup>

## **Abstract**

To reduce the transmission of virus amongst injecting drug users and, to prevent drug misuse and adoption of risky life styles and behaviors among youth clusters in Myanmar, the harm reduction programme starts initiating in early 2000, but the coverage can grasp only 15% of population. Indirectly inherited colonial Myanmar drug laws, public health policies and less sophisticated infrastructure not only correct drug misuse behavior with few punitive components but also creates these less aware of public health essence. Booming of jade, gold mining business and trans-border trade after 1996 has made trafficking of drugs and precursor chemicals. Peace keeping agreements with armed ethnic minorities generally reduce cottage industries converting raw into heroin and stimulants. Slow but effective advocacy could pave players expand their services and in order to sustain the services, the initial community commitment and participation at various levels of interventions is needed. As injecting drug use is cross cutting issue over sex work, social dysfunction, poverty, migration, border trade, there has been initiatives from various organizations in programme, planning and decision making. To enhance and to facilitate in a systematic way, it is necessary to focus on right to carefully focus on right based perspectives of these beneficiaries.

**KEY WORDS:** Supply reduction, Demand reduction, Harm reduction, Drug demand reduction

## **Introduction**

Harm reduction is the reducing harms associated with drug use to individuals and the community. Individual who abused drug becomes drug addiction. Now, the drug addicted people are survivor of the HIV epidemic who created the socio-economic problems amongst their community.

Drug addiction is a chronic relapsing medical disorder with co-morbidity. It is simply the medical condition where client is in need of initial detoxification therapy to get rid of craving and withdrawal arising deep from central nervous system. Long-term follow up and leverage of other physiological functions is main prime of medical specialists including psychiatrists. Range of options should be made available for clients accessing the services. Clients should be able to choose the services they like or services should meet diverse and sophisticated need of clients such as poly drug use, alcohol use, underlying liver diseases and

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<sup>1</sup> Associate Professor, Department of Applied Economics, Yangon Institute of Economics

<sup>2</sup> Medical Profession, EMPA-7<sup>th</sup> Batch Candidate, Yangon Institute of Economics



other associated problems, mental disorders, deficient occupational and communication skills, society outcasts and social-marital problems. But in Myanmar, it focuses on abstinence and drug free lifestyle. Drug related laws in many Asian countries composed in part of incarcerating drug users, put them in long queue of waiting in lock ups, painful cold turkey detoxification, make them unable to access medical and psychiatric consultations, spend their sentence in prisons where there is no HIV and drug education facilities, marginalize them with the stigma of registration in the society and bore their esteem in lengthy correction process. First and second time drug users have no grace period from being arrested and put under lawsuit.

As injecting drugs and getting HIV and other blood borne viruses transmitted are linked, current Asian laws somehow push drug users underground. Reusing and sharing needles, syringes or other equipment for preparation and injecting drugs represents highly sufficient way of HIV transmission. It is noted that more than 110 countries have faced HIV epidemics associated with injecting drug use<sup>3</sup>. Therefore, interventions aiming at reducing risky behaviors such as sharing of needles and unprotected sex will degrade injecting drug use, the main driver of HIV epidemic in Asian countries.

While most developing countries in Asia rely on external resources to curb the menace of drugs and HIV and accept the nonparallel projects and programs, sustainability is the question that community and society at large have to answer. Extensive dialogue with decision makers advocates flexible policy changes, and review of regulations causes the enabling environment for public campaigns. Longitudinal research tells that therapeutic communities where most of ex-users work for betterment of drug users at an array of services bearing the scenario that project beneficiaries should speak out for the right of themselves, serve as strong role models and activists to influence bodies such as parliamentarians, to get into international network of them and to build self capacity to each other. It has been evident that strengthening the capacity of affected population is the best way to remove stigma in society. It also makes rest of their life meaningful and use this instrumental force to design future programs in the global setting.

The direction of study goes to review advocacy, intervention and impact of drug related harm reduction programs in Myanmar and services used for drug users, client perspectives over range of services, and negotiation process with Global Fund coming into Myanmar 2011.

This study focuses on the activities of harm reduction in Myanmar from 2002 to 2010. Superficial touch is onto parallel government ground in drug treatment and rehabilitation. Law enforcement activities are mentioned where relevant to HIV-related services, and supply reduction in terms of drug related seizures is looked just to reflect the

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<sup>3</sup> National Harm Reduction Review, 2010 May 22



area of drug consumption. Rehabilitation data is listed in order to complete range of services available in country.

Although the aims of study are offered to drug users, client perspectives over range of services, Asian setting of compulsory centers, tailoring services which are noncompulsory and peer based, new dimension of Civil Society involvement, it only was able to incorporate baby steps on development in the light of Global Fund in negotiation process coming into Myanmar 2011.

The weakness of description lies at lack of connection and linkages at official procedures such as registration at drug treatment centers, remand and waiting at police lock ups, registration and deregistration, urine and blood testing of clients, collaboration between medical and law enforcement officials, revisiting Township management structures and analysis of operational status and national budget for drug related sector.

### **Harm Reduction Programme in South East Asia Setting**

Injecting drug use is global phenomenon identified in 148 countries. WHO estimated that there are 15.9 million people with injecting drug (PWID) people who inject drugs. Globally, up to 10% of all HIV infections are linked with injecting of drugs and up to 3.3 million PWID are living with HIV<sup>4</sup>.

By responding to epidemic stemming from injecting drugs, countries in South East Asia generated range of public health plans. Since the 1990s the majorities of countries in the South East Asia region have experienced a significant injecting drug use problem, accompanied by explosive rates of HIV at the some sites. The governments have increasingly been to implement various harm reduction interventions to reduce the HIV prevalence and address the health needs of PWID. In the most of these countries with a high and medium burden of illicit drug injecting and PWID are either HIV infected or have a potential for being infected. The South East Asia countries reviewed are Bangladesh, India, Indonesia, Myanmar, Nepal and Thailand.

PWID are primarily concentrated in urban settings. High-risk behaviors are consistently found among PWID. Significantly high rate of sharing injecting equipment are mostly widespread. Unsafe sex among PWID is common and inconsistent condom use with a permanent partner, a casual partner or a female sex worker is widespread. Condom use with a regular sexual partner tends to be low compared to other sexual partners. Sexual relations with female sex workers are common in South East Aisa.

Injecting drug use has significantly contributed to the spread of HIV in Indonesia, Myanmar, Nepal and northeast India. In 2008, HIV prevalence among PWID is mostly high but varies widely among countries: Bangladesh (7%); India (9.19%); Indonesia (52%); Myanmar (37.5%); and Thailand (48%).<sup>5</sup> Wide variations of HIV prevalence within

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<sup>4</sup> World Health Organisation Report-2000

<sup>5</sup> Meeting minute, Constitution of National Drug User Network, 2009 Dec 9



countries can be found, for example, in Myanmar (Myitkyina 54% and Taunggyi 12.5%) and in India (Manipur 28.65% and Ut'tar Pradesh 2.64%)<sup>6</sup>. HIV prevalence among PWID has remained consistently high in Indonesia, India, Thailand and Myanmar/ while it is rising in Bangladesh, and declining in Nepal. Many PWID are currently incarcerated and at risk of becoming HIV infected in closed settings.

Each country has drug control legislation to address drug use issues and has policy linked to national HIV strategic plans in which prevention, care and treatment of PWID are overall given a priority, to varying degrees. In recent years the policy environment has changed substantially, so that harm reduction interventions are increasingly viewed with understanding and greater acceptance.

Harm reduction interventions as a means to address HIV among PWID are increasingly accepted as the appropriate public health model for PWID. This is despite, at times, the criminalization of drug use overshadowing HIV prevention efforts for PWID.

Needle and syringe programmes (NSP) are found in all countries reviewed. Despite an overall expansion of NSP and an overall increase in the number of needles and syringes distributed, coverage of NSP was mostly low: less than a third of PWID are reached by NSP at least once over a 12 month period in South East Asia.

Opioid substitution therapy (OST) programmes offering methadone and buprenorphine, or sometimes both, are found in all countries. Yet, the numbers of PWID having access to and availability of OST remains very low (less than 5%) and considerably less than those able to secure clean injecting equipment.

Overall coverage of harm reduction interventions as part of a comprehensive package of services has increased compared to previous years. But the majority of PWID do not receive services to meet their general health needs. The overall number of PWID who are also HIV-infected and able to access antiretroviral therapy is small, despite the fact that in some countries PWID have the highest rates of HIV prevalence.

### Policy Environment

The Narcotic drugs and Psychotropic Substance Law (1993) replaced the previous law and established the Central Committee for Drug Abuse Control (CCDAC), which is chaired by the Minister of Home Affairs and consists of representatives from the relevant ministries and government departments including the national police, customs, military intelligence and army. The CCDAC has comprised of 27 anti-narcotic task forces throughout the country. The main function of the committee is to formulate policies on all aspects of drug control.

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<sup>6</sup> Hla Htay et al, 5 years follow up study of post treatment and rehabilitation, 2003 Myanmar Medical Conference



A drug user who fails to register at the place prescribed by the Ministry of Health or at a medical center recognized by the government for this purpose or who fails to abide by the directives issued by the Ministry of Health for medical treatment shall be punished with imprisonment for a term which may extend from a minimum of three years to a maximum of five years.

Drug users in Myanmar are required to register with the government and can be prosecuted if they did not do so. Drug control remains the mandate of the CCDAC, which has only implemented harm reduction in Myanmar over the past decade, assisting in resource mobilization, supporting programs and advocating for policy changes where these impede harm reduction.

An old law that has not yet been replaced is the Burma Excise Act (1917) which regulates the provision of needles and syringes. Possession of syringes and needles without a granted license is liable to punishment of up to six months imprisonment or a fine up to 1000 kyat or both. Needle and syringe programs (NSPs) are still hampered by legal constraints, which also cause misunderstandings regarding their effectiveness in HIV/AIDS prevention among various stakeholders. Under current legislation, drug use in Myanmar remains a judicial rather than a health problem.

Amendment and relaxation of laws that is called Alternating Sentencing through legal review workshops were participated by lawyers, advocates, law enforcement officials, health officials in 1993 and 2010. Discussion focused at creating flexibility at current drug related laws and rooms for grace period for drug users. Following recommendations were made in March 2010 which is to be submitted to Cabinet.

### Overview of HIV Situation

Myanmar has the third-highest HIV burden of people living with HIV and AIDS in the South East Asia Region after India and Thailand, with an estimated 240 000 (range 160 000-370 000) as of 2007.<sup>7</sup> The HIV epidemic in Myanmar is driven by a combination of injecting drug use and sex work. It occurs especially in large cities and the north and east regions because of large-scale production and movement of illicit drugs.

Injecting drug use has significantly contributed to the spread of HIV/AIDS accounted for about 30% of total infections in the country. Sentinel surveillance data indicate that Myanmar's HIV epidemic peaked in 2000-2001 and then started declined but remains vulnerable to the continuing spread of HIV due to social factors such as poverty, population mobility, HIV-associated stigma and the limited capacity of the health systems to scale-up services. The overall adult HIV prevalence is estimated to be 0.7% but populations with high-risk behaviors are disproportionately affected. In the most recent HIV sentinel-

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<sup>7</sup> Hla Htay et al, 5 years follow up study of post treatment and rehabilitation, 2003 Myanmar Medical Conference.



surveillance survey of 2008, 18.38% of FSW, 37.5% of PWID and 28.8% of men who have sex with men (MSM) were infected.

### Overview of Drug Use Situation

Opium use and production happen as a long history in Myanmar. Currently, it continues to be the second-largest producer of poppy opium in the world, after Afghanistan. However, the trend of using pattern has changed from opium to heroin and opiates are still the preferred category of drugs consumed by 2003-2004, Amphetamine Type Stimulant (ATS) were ranked as the third-most serious drug of abuse in Myanmar after heroin and opium. Although Heroin is commonly administered through injection and no official estimates of the number of drug users due to problems in collecting independent data in Myanmar, it has been reported that numbers is likely to be between 300 000 and 400 000. The current nationally agreed estimate for the size of the PWID is 75 000 (range 60 000-90 000). This translates into a 0.23% prevalence of drug injecting in the male adult population-one of the highest in Asia after China, Malaysia, Thailand and Viet Nam.

No formal mapping or size estimation of high-risk group populations is available to describe the geographical distribution of PWID. However, based on observational and ethnographic-type data, it appears to roughly reflect the drug production centers and trafficking routes in the country. The largest concentrations are to be in the northern (Kachin) and eastern (Shan) states that share borders with China, Laos and Thailand (Golden Triangle).

It has been reported that PWID population in Yangon is mostly underground, where heroin is limited, and due to the high cost. However, use of tranquilizers was common in Yangon and 69% of all PWID in Yangon injected their tranquilizers. In Mandalay the population of PWID is considered to be large and young and heroin is also expensive and less readily available.

In Lashio (Shan State) and Myitkyina (Kachin State), PWID has easy access to inexpensive heroin, but the size of PWID population is not clear. The majority of poppy opium is grown in the Shan state while heroin and amphetamines are manufactured and then trafficked across the China and Thailand border areas. It has been reported that in recent years precious gem-mining areas within the Shan and Kachin states have employed approximately 500 000 seasonal male migrant laborers who were known to engaged in high levels of both drug use and commercial sex.

The data from the drug treatment centers is likely that only a small proportion of the total drug users in Myanmar are registered due to the inadequate capacity at these facilities and only a few systemic studies are available. Injecting practices may be more common in areas where availability of drugs becomes scarce or expensive, due to injection providing a higher impact from a smaller quantity of drug.

Most information about sharing practices among PWID is derived from field observations. Sharing behavior appeared more common among long-term injectors compared



with those starters. The most recent information on injecting risk behaviors is available from the National Behavioral Surveillance Survey (BSS) 2007-2008 of PWID from four cities. While needle and syringe sharing is a moderately high in Yangon rather than Myitkyina and Lashio, and relatively low in Mandalay. That may suggest an overall higher level of potential for transmission among PWID networks.

Limited information on the sexual risk behavior of PWID included in some baseline assessments from implementers of harm reduction programmes. But the sexual activity is strongly associated with use of type of drugs. In the cities, more than a third of PWID having sex while under the influence of amphetamines.

HIV prevalence among PWID peaked in the early 1990s at over 70% before beginning a slow, but steady decline during 2005-2006. However, sentinel surveillance data clearly show HIV prevalence was currently still too high among PWID in the all locations and provided sufficient evidence for the need for prevention programmes.

Some situation assessments noted that a particularly high level of HIV infection among new drug injectors. The high level of HIV prevalence among PWID is due to sharing of equipment is reported, are consistent with high rates of transmission among PWID overall. In addition, the high proportion of PWID who report having paid and casual sex is an important area. Migrant workers, particularly miners, are more vulnerable to developing injecting drug use habits and returning to their home and sparking local epidemics. This is already a cause for concern and that has moved much beyond a core PWID group.

#### **Available Interventions**

HIV epidemic among PWID has been well established since the mid-1990s, with HIV prevalence levels reaching some of the highest in the world at that time. The government recognized the role of the injecting drug use in the spread of the epidemic and has expressed explicit policy support for harm reduction in national policy documents. Reducing HIV-related risk, vulnerability and impact among drug users is one of the main priorities within the National Strategic Plan on HIV/AIDS (2006-2010). Harm reduction as HIV prevention interventions such as NSPs, opioid substitution therapy, condom promotion, outreach, and peer education efforts have increased, but it is not yet comprehensive and the scale of response has yet to match the magnitude of the problem.

#### **Treatment of Drug Dependence**

A range of treatment services is available for drug users, including detoxification, counseling, rehabilitation, methadone maintenance and after-care.

There are six major drug treatment centers and 22 minor treatment centers under the Ministry of Health and eight rehabilitation centers, which together have provided services to around 70 000 drug users in the past decade. In 2000, UNODC established community-based treatment programmes in Northern Shan State to complement government treatment centers. By 2007, UNODC was operating five drop-in-centers (DIC) and international NGOs, such as



ARHP, MDM and local NGO- MANA were operated drop-in-centers especially in Shan and Kachin States. In 2006-2007 more than 5000 people sought treatment and support from these DIC and outreach services in these areas. Further DIC developments under these organizations were occurred up to 36 DICs currently and 15 were connected to UNODC. In 2009 there were 1059 registered drug users, the main drug of dependence was heroin, followed by opium.

### **Targeted Interventions**

#### **(1) Needle and Syringe Programme**

The number of needles and syringes made available to PWID has been increasing steadily since 2003. In 2009, more than 5 million needles and syringes were distributed, according to the information provided at the national harm reduction review in May 2010. In 2008 there were 19 NSPs offering clean injecting equipment for PWID. The majority of PWID in the BSS (2008) mentioned pharmacies as the most common place to collect needles and syringes, followed by NGOs, then health workers and lastly drug dealers.

#### **(2) Opioid Substitution Therapy**

The opioid substitution therapy is methadone maintenance therapy (MMT) preparation started in Myanmar since 2004, but the Ministry of Health started the delivery of MMT for the treatment of PWID in 2006. In the beginning, there were four drug treatment centers used for detoxification as pilot areas. After that three more centers were opened and one additional site in Yangon at the outpatient department of hospital. In 2010, there were ten methadone dispensing centers in the country. In January 2010 the current data was 821 clients from eight sites.

The MMT programme was informally evaluated in 2007, less than 20% injected again and only occasionally; 86% showed improvement in health; and 92% reported better quality of life. The challenges were that some sites had low doses of methadone, and a prolonged duration of in-patient stabilization. Currently, the MMT programme is small with less than 1% of the estimated 75 000 PWID accessing MMT.

#### **(3) Prison Interventions for PWID**

Since around 2007 HIV health education for prisoners, prison staff and their family members in prisons were started. Also UNODC have reportedly undertaken HIV prevention training for inmates and correctional staff. But information, education and communication materials about HIV prevention were reportedly not available inside the prisons. There are no other forms of HIV prevention interventions for PWID in prisons.

#### **(4) Access to Antiretroviral Treatment**

In 2008, 15 191 PLHIV were receiving ART, but still a small proportion of those who are estimated as in need (76, 000). It is believed that ART for PWID remains away from access as is the case in the many countries in South East Asia, and there are some NGOs excluding drug users, even if they are stable on methadone.



### **Harm Reduction Players in Country**

State Peace and Development Council has laid down guidelines on implementation of 15 years Narcotic Drugs Elimination Program. The program has started since 1999 and 2009 to 2014 is the third 5 years program.

Myanmar model focuses on abstinence and a drug free lifestyle by encouraging behavioral changes. It provides a safe environment for recovery and prepares drug user for social-reintegration. Government rehabilitation offices exist in Yangon, Mandalay, Myitkyina, Lashio, Namlatt (Banmaw), Kyaing Tong and Tachileik which run small courses on a limited budget.

The Department of Health, under the guidance of Ministry of Health, has set up a total of (26) major Drug Treatment Center (40) Subsidiary Centers and Drug Treatment Unit at three Youth Correction Center. In addition, Township Medical Officers are trained to provide registration and treatment services, if Drug Treatment Centers are not available. In National Health Plan of Myanmar, drug abuse is one of the priority diseases and 2010 was the second year of last five years plan of 15 years Narcotic Drugs Elimination Program. To achieve the Millennium Development Goal of combating HIV, proper control of drug abuse problems and their high risk behaviors will be important.

Myanmar adopted a strategy on preventing the transmission of HIV and reducing the impact by controlling injecting drug use in the National Strategic Plan for HIV and AIDS (2006-2010) and Substance Abuse Control Project of the department of health became responsible to implement this program.

The leading agency is UNODC which is also main body for advocating and collaborating with the government in Myanmar. The other harm reduction players are as International NGOs such as BI MM, Care Myanmar, AHRN, MdM, AZG and as Local NGOs are MANA, SARA, MBC and MCC.

### **Findings and Discussion**

The official prevalence of HIV amongst IDUs and general community are 37% and 0.62% respectively. It is urgent to reduce the prevalence of HIV amongst PWID as transmission of HIV from IDUs to other IDUs, sexual partners, spouse as it has been evident as reservoir spreading into general community.

Reviewing current infrastructure of drug treatment, mental health, focused intervention of National AIDS Program over risk groups, IDUs in particular identifies needs. While about 0.3% of national GDP comes to national health budget, per head allocation for concerning drug and alcohol remains negligible. The major rehabilitation centers existed in Phe Kon, Pyay and Namphatkar townships in Shan State and Bago Division of which only one is functional at the moment. Only seven drug treatment centers have been function and total capacity is about 350 beds. Those who faced with treatment and rehabilitation system served their lives with boredom into dysfunctional deregistration.

Partial opening towards international assistance 2003-2010 led to piloted harm reduction programs reaching out to roughly 15% of existing hidden population, at \$20



million budget. Piloted harm reduction programs started in 2003 under the supervision of CCDAC. National AIDS Program at its operational plan identified 29 prioritized townships suitable for harm reduction. Now the programs lead to 40 drop in centers. When such pilot initiative proved that harm reduction works in Myanmar, further endeavors to scale up the program continued.

However, there are changing donor stand points. Globally, GFATM prefers to run peer-linked programme in countries where decriminalization takes place. United States government lifted the ban over needle and syringe programs in 2010 and PEPFAR (President Emergency Preparedness Fund for AIDS Response) shows strong interest to fund NSPs all over the world, although political priority still exist to allied countries.

The medical essence of drug dependency as chronic medical disorder and in most cases, mental co-morbidity is not officially recognized by legal and judicial perspectives hence institutionalize them into lock ups, custody, camping into less attractive models where government financial support could not follow as much as the legal sentence extends. Hence, more than third of prison population in Shan and Kachin States are drug related cases.

The laws making mandatory registration stigmatize people who use drug and who inject drugs (PWID) as drug users compulsory to undergo into the chain of medical treatment, referral to rehabilitation center, deregister and reintegrate into society. One study<sup>8</sup> denoted that those who registered at major treatment centers could not effectively deregister who face periodic follow up from social workers group up to five years after registration, about one third of population died of AIDS related symptoms and other third got into prison. One incident<sup>9</sup> of IDU, after being caught for keeping sample amount of heroin, was under trial for more than a year before 4 years imprisonment.

There is lack of HIV education, options of treatment and case management schemes and presence of agro-husbandry exercise leading to accusation of violation of human rights, although not true in actual setting. This all leads to current weakness of public services.

Locally, the national strategic plan 2010-14 highly recognizes the participation of affected populations such as Self Help Groups, Community Based Organizations, PLHIVs, PWIDs, MSMs, SWs, IDUs being accountable for attending meetings and participatory decision making roles. However, commitment does not extend to Ministry of Home Affairs and state or divisional military commanders. Further advocacy is necessary to make leverage so that official HIV/AIDS laws and flexible drug sentences can occur.

There has been enormous attempt by health department to run substitution therapy for drug users. The philosophy is to stabilize their nervous system signals arising from shortage of opiates hence lessen their criminal potential and HIV risk behaviors. On the practical

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<sup>8</sup> Hla Htay et al, 5 years follow up study of post treatment and rehabilitation, 2003 Myanmar Medical Conference

<sup>9</sup> National Harm Reduction Review, 2010 May 22



ground, recruitment of MMT of about 1% is very less in order to see valid impact such as reduction in crime rate, increased life expectancy, Disability assisted life years and reducing further needle sharing, 2009 needles distribution, of about 5 millions translates that existing 75,000 PWIDs are using less than one needle per day while the actual need is three per day.

It is evident that there is a gap between actual financial need and expended. Room to change exist at existing punitive nature of drug laws, criminalizing drug use, lack of synergy between multiple Ministries especially between Home Affairs and Health. Harm reduction projects of both local and international players are found to be donor driven, program approach intentionally ignoring the essence.

These all factors serve as constraints and limitations to attract more international funding despite the increasing political commitment, geographical interest of donors to South East Asia region.

### Recommendations

It is necessary to continue advocating for involvement of drug related community, integration of optional treatment and vocational facilities and amendment of laws of illicit drugs to become flexible that will reduce medical, social, legal harms associated with drug use. As the concept of therapeutic community says problems of multiple dimension will be solved in the hands of affected community once sense of belonging and ownership ensured. This translates that lessons learnt from unnecessary evils of system will be best corrected by clients not by service providers. The service providers should support to explore competently their actual needs of client himself. It is very important that drug users work for the rights of drug users. That will only curb the HIV epidemic.

Drug law enforcement has been relatively ineffective in reducing supply, has been associated with significant unintended negative consequences and has also been cost-ineffective. Although reducing harm of illicit drugs, no effective outputs because that is significantly associated with reducing in both demand and supply. Drug use should be redefined as primarily a health and social problem with consequent funding increased to the level of the criminal justice system.

HIV preventive education and harm reduction are necessary in the closed settings as identified internationally as incubators for HIV transmission. Drug Court is the answer for delayed trial cases in the police lock ups. The number of drug users in closed settings should be reduced. Detaining drug users because of their drug use in detention centres or prisons is very expensive, has been shown to inadvertently increase the risk of HIV infection.

Over five million sterile needles and syringes were provided to injecting drug users in Myanmar in 2009. Authorities should aim to provide 30 million needles and syringes/year within five years. Authorities should develop a plan to reach this target. This plan should indicate the funding, staffing, training, logistical support and law flexibility required to



achieve the national goal agreed upon. Achieving these targets will not be possible without an enabling environment.

Opioid Substitution Therapy (OST) should be expanded to reach more drug users at risk. US\$1 investment in medical interventions will reduce US\$7 cost in legal settings<sup>10</sup>. Improving drug user access to VCT and access to ART for HIV-positive drug users who need it—including both drug users in treatment, on MMT, and active drug users—will contribute to reducing the HIV epidemic in the drug using community.

Research for determining denominators, mapping of drug users and injecting drug users, operational research on public services, collective impact studies over international projects will serve effective inputs over national planning.

## Conclusion

HIV spreading among injecting drug users is now a controllable public health problem. In countries where a strong political will to resolve this problem has been demonstrated, where adequate resources have been made available, and an evidence-based, human rights-based public health response has been implemented and expanded rapidly to scale, epidemics of HIV have been brought under control within a few years. The higher the prevalence of HIV among injecting drug users when action started, the longer the delay between initial recognition of this problem and implementation of harm reduction to scale, the longer it takes and the more it costs to gain control of the epidemic.

Countries that have not followed this path, such as Russia, have paid a heavy price in health, social and economic terms. Future generations will pay huge costs. While some are quite prepared to sacrifice a population of injecting drug users to a premature and unpleasant death from HIV, it should be remembered that the price of inaction is not just the deaths of injecting drug users, but also the deaths of the many members of the general community with whom drug users have had sexual contact. Sooner or later, most communities ultimately accept the need for effective action because the price of inaction is just too high.

Myanmar was slow to take effective action. The interventions are still not at a sufficient scale to reverse the epidemic. These interventions are being expanded but at the current rate of expansion, it will still take some decades before this problem is brought under control. This response will cost the country a great deal. While the past cannot be changed, the future can. It has now been clear for about two decades that the harm reduction package of interventions is effective, safe and cost effective. One by one, all the major countries in Asia are now making the political commitment to implement harm reduction to scale. Now it is time for Myanmar to also take this step.

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# **A Study on Community Based Malaria Control Interventions**

## **(Case study in Naungcho, Northern Shan State)**

May Aung Lin

### **ABSTRACT**

The study was done in one of the highest malaria risk area, Naungcho Township in Northern Shan State(NSS). In Myanmar, people residing in rural areas constitute nearly 70% of the total population, and to build a developed nation, community development and poverty alleviation should be focused on rural population. This study is intended to highlight the fact that structural coverage does not mean the functional coverage. There still are many areas with demands for effective health care services. Community mobilization on malaria prevention and control could be done by efficient voluntary health workers through effective trainings, followed by proper supervision, utilization of realistic motivating mechanisms, proper monitoring and careful manipulation on feedbacks. It was found that Voluntary Health Workers (VHW) developed by CESVI (one of the International Non Government Organization) had performed well in malaria control activities and community's perception on these volunteers was highly satisfactory. Involvement of voluntary health workers should be assumed as a good approach for community mobilization in malaria control programs. Moreover, the study disclosed that community mobilization through voluntary health workers in malaria control activities could contribute distinctively to reduction of malaria burden, which in turn would improve the socio-economic status of Myanmar rural people.

**Key Words:** malaria, malaria prevention and control project, community-based, Village Health Worker, VHW, development, rural

### **1. INTRODUCTION**

Malaria, although life-threatening, is a preventable and curable disease caused by parasites that are transmitted to people through the bites of infected mosquitoes.

Basic health service is one of the essential components of rural health development scheme. Access to health care for 70% of country's population residing in rural areas has been improved through the expansion of the health infrastructure and health manpower in terms of basic health staff and voluntary health workers, i.e. community health workers and auxiliary midwives (San-Shwe-Win, 2008).

A single rural health centre serves an average of 44 villages, with a population of 22,000. One midwife is responsible for providing basic health care for 5,000 people (San-Shwe-Win, 2008).

According to health man power and population ratio, 3500 people are cared by one basic health staff in Northern Shan State, and due to communication constraints, malaria prevention and control is difficult to implement without the participation of local people (San-Shwe-Win, 2008).

Malaria prevention and control is the concern of everyone (individuals, families, communities, health staff, donors, etc). The use of Village Health Volunteers to deliver community-based malaria control interventions is one of the approaches being considered to be scaled up to contain malaria transmission in Myanmar. It is noted that there are several on-going malaria control projects in Myanmar that include delivery of services by the Village Health Volunteers for malaria prevention and control.

This study intended to explore and identify performance of volunteers in malaria control among underserved villages. This identifies ways and means for strengthening malaria control by community mobilization and highlights socio-economic impact by reducing malaria burden.

Analytic method of the study was designed to use secondary data from Department of Health, World Health Organization and Cooperazione e Sviluppo (CESVI) Myanmar's



"Community based malaria prevention and control project" which was to be compared with the survey. Primary data on perceptions of Voluntary Health Workers (VHWs) on community based malaria control method was collected through person to person interviews. Questions relating to Perception on works of VHWs, impact of malaria control strategies were asked to 72 villagers from 60 target villages.

Focused group discussions (one male group, one female group and one mixed group) were conducted to VHWs and each group consisted of 7 to 8 participants. The main issues were focused on factors that affect the performance of VHWs and motivating factors that sustain the volunteers in health care works.

## **2. GLOBAL, MYANMAR AND NAUNGCHO MALARIA SITUATION**

Malaria is a major cause of mortality and morbidity in the tropical and subtropical regions of the world. An estimated 300-500 million persons suffer from and more than one million die of malaria each year. Deaths can be reduced through effective use of standard treatment (WHO, 2005) Malaria is especially a serious problem in Africa, where one in every five (20%) childhood deaths is due to the effects of the disease. And every 30 seconds a child dies from malaria (WHO, 2009). Malaria causes about 2414 deaths a day. It is both a disease of poverty and a cause of poverty slowing economic growth by 1.3% per year in endemic areas (WHO, 2009).

In Myanmar, malaria is one of the priority public health problems. About 70% of the total population lives in malaria endemic areas. The disease is endemic in 284 out of 325 townships, mainly in rural areas and in some pen-urban malaria risk areas (29% or 15.74 million in high-risk areas, 24% or 13.03 million in moderate risk areas, and 18% or 9.77 million in low risk areas).

Malaria accounts for more than 10% of total outpatient attendance and about 16% of total hospital admissions. Actual cases and deaths could be much higher considering that significant proportion of cases either self-medicate or seek treatment from private formal and informal sector and are not included in routine health information system The majority of cases are undocumented (Bremam, 2001).

Aside from those who reside in high-risk areas, the high-risk groups are the internal migrants (laborers in development projects such as dams, irrigations, road, mining, logging, rubber plantation, etc), people who resettled in endemic areas, subsistence farmers in the forest and forest fringes, wood and bamboo cutters and other forest related workers. Ethnic minority groups are also identified as malaria risk group.

Malaria is a re-emerging public health problem due to climatic changes, uncontrolled population migration, ecological changes, existence of multi-drug resistant malaria parasite, appearance of insecticide resistant vector and change in behavior of vector. Long-term trend shows decreasing malaria morbidity and mortality in Myanmar.

In Naungcho Township, malaria was the top leading cause of morbidity from 2006 to 2010 and mortality from 2006 to 2009 (THD, 2011). Incidence of Malaria was quite high till 2007 and gradually tailed off afterwards.

## **3. MALARIA CONTROL BY GOVERNMENT AND NON-GOVERNMENT SECTORS THROUGH VOLUNTEERS**

Myanmar, after gaining independence, established campaigns to fight against major infectious diseases. Since 1978, integration of health services was carried out where the campaign or vertical programmes were all integrated into Basic Health Services using Primary Health Care approach. Among different strategies in combating malaria, one of the solutions to cover the uncovered area with essential health care is the use of Voluntary Health Volunteers who are individuals, willing to provide their services on their free will without charges. Voluntary Health Workers are categorized on their primary



function as community health worker (CHW), auxillary midwives (AMW), trained traditional birth attendants (TTBA) and ten household health worker (THHW). According to Health in Myanmar, Ministry of Health (2010) trained a total of 39,383 Community Health Workers (CHW), 23,322 auxiliary midwives (AMW) and 15,704 trained traditional birth attendants (TTBA). Health Care Coverage of rural population by VHWS in Myanmar

- Community Health Worker : Population = 1 : 900
- Auxillary Midwife : Population = 1 : 1,258

(Source: San Shwe Win)

In Naungcho Township, township health department trained 176 VHWS of which 73 (41.477%) are functioning in 2010. Several Local and International Non Government Organizations (INGOs) have been working for malaria control all over the country. CESVI (Cooperazione e Sviluppo) is Italy based INGO implementing Community Based Malaria control programme since 2007 in priority villages of Pyin Oo Lwin, Naungcho, Kyauk mae and Hsipaw collaborating with the Project teams in the various malaria control initiatives undertaken at community level. These villages were selected according to following criteria: (a) highly malaria affected (b) marginally located along townships borders, (c) having poor health infrastructures, (d) lacking access to health care facilities, (e) accessible all through the year by road, (f) villages of ethnic minorities.

At least one volunteer was selected for each of the project villages. A volunteer should have middle school education, be permanent residences, and have keen interest and volunteer spirit. They are people who can spare or share their private time. Middle age reliable male or female were mainly selected and these selections were agreed by local Basic Health Staff. Before the selection of volunteers, advocacy meetings were carried out at State and Division level, township level and village level with concerned authorities. Village leaders were assigned to select 2 or 3 VWH candidates from each of their villages. Final selection was done together by village leaders and CESVI team leaders.

Initial 3 days training was given by project staffs and staffs from Department of Health using the guide manuals developed by WHO. Training is to enable VHWS performing an early diagnosis of malaria with Rapid Diagnostic Test (RDT) kits, to provide prompt treatment with Artesunate Combination Therapy (ACT) and timely refer complicated cases to fully equipped health centres. The training will also enable VHWS to provide health education to villagers and bed net impregnation with insecticides. Refresher trainings were also given for 2 days every 6 months. During regular mobile field visits, VHWS were monitored, retrained and evaluated (CESVI, 2009). The VHWS also ensured full support for the organizations of project activities, including logistical support and securing coordination with village authorities.

#### **4. SURVEY ON COMMUNITY-BASED MALARIA CONTROL**

The survey was done in 60 villages of Naungcho Township situated in Northern Shan State. Township covers an area of 1,265.61 sq km and half of the township area is mountainous. Average altitude is 2750 ft above sea level. The temperature ranges from 6° to 34° C. Total population was 135176 in 2007. Agriculture and agriculture based industry is the major economy of the township with some mines and a cement factory project in progress (majority of population are manual laborers). The study was done in 60 villages of Naungcho Township during 2007 and 2011. These villages are in high malaria endemic area and are located at the border of Shan State and Mandalay, and their access to Lashio health services is not convenient. Tea leaf plantation and timber extraction in Naungcho attracted people from other areas of Myanmar who are not immune to severe malaria in Naungcho. Prisoners' camps in Naungcho contribute to increase malaria mortality and



morbidity rates. The study was conducted on 60 VHWs and found that male to female ratio was nearly equal (52:48). Most of them (65%) were younger than 30 years, (87%) of them got basic education level and (13%) were graduates or still studying for university degree (76%) of female VHWs and (55%) of male VHWs were single.

Ninety seven percent of male VHWs were farmers and some carpenters (3%) were involved in voluntary work. Most of female VHWs were also farmers (66%) and others were temporary labour (17%), seller (7%), tailor (7%) and carpenter (3%).

Shan constituted the most (40%) followed by Myanmar (32%) and substantial involvement from Dahnu (20%). Minorities were Gukha (5%), Kachin (2%) and Shan-Dahnu (2%).

According the performance of VHWs from survey data in table (1), The total patients attended to VHWs revealed seasonal fluctuation with higher cases during monsoon (June to September). The total patients attended in the year (2007-2008) was around 200 cases monthly and hit 800 cases per month during high season. The second project year (2008-2009) showed higher utilization of patients which reached 1200 cases per month during rainy season followed by downstream pattern of total patients attended in next two successive years.

**Table 1 : Performance of VHWs during November 2007 to October 2011 (Survey Period)**

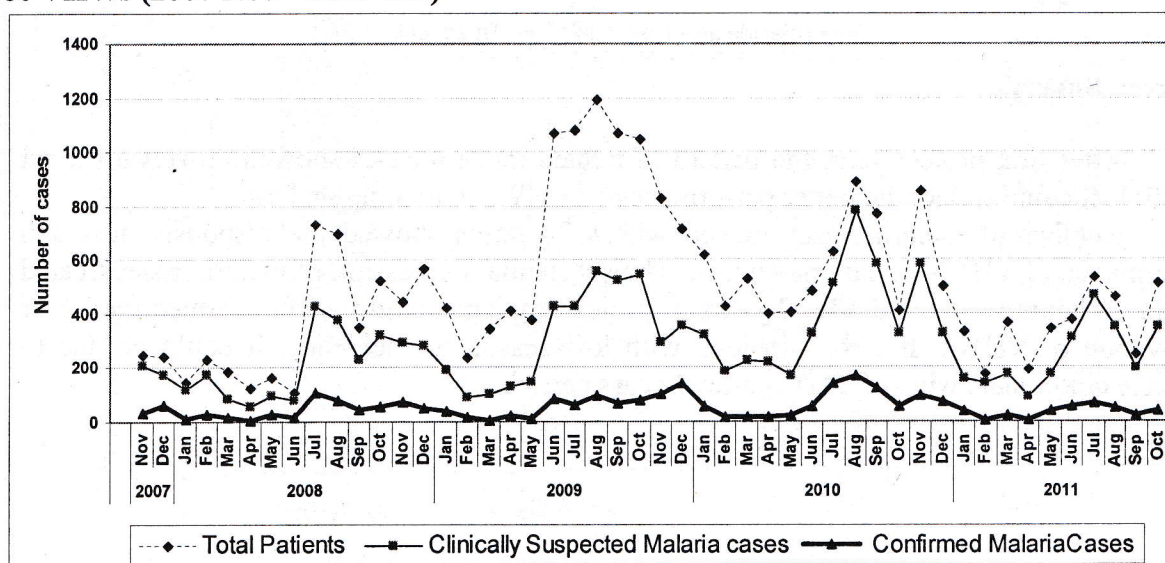
Year	Month	Total Patients	Suspected Malaria cases	Confirmed Malaria Cases	Total Malaria Treatments	Treatments < 24 h	Bednets Impregnated	No. of Health Education Sessions
2007	Nov	250	209	32	211	27	0	164
	Dec	241	175	61	193	30	0	140
2008	Jan	145	118	14	118	3	0	14
	Feb	229	172	27	169	36	0	36
	Mar	183	82	18	83	13	0	30
	April	124	59	8	8	11	0	24
	May	163	98	27	82	24	68	17
	June	107	78	17	77	24	0	19
	July	733	429	108	452	137	0	138
	Aug	697	375	76	429	173	0	109
	Sep	349	232	47	249	87	0	83
	Oct	525	321	58	318	85	0	53
	Nov	442	291	72	254	59	0	97
	Dec	566	279	48	272	81	0	135
2009	Jan	421	191	38	166	51	0	112
	Feb	237	92	16	80	34	0	32
	Mar	345	102	8	72	28	0	42
	April	408	131	20	110	34	0	19
	May	375	148	12	71	17	2221	42
	June	1066	429	83	233	67	1876	100
	July	1081	429	61	133	21	157	70
	Aug	1194	559	98	132	13	0	71
	Sep	1066	522	70	93	11	13	79
	Oct	1043	548	76	88	5	0	50
	Nov	824	295	101	108	13	0	69



	Dec	715	353	138	138	9	0	44
2010	Jan	619	321	57	59	1	0	42
	Feb	430	186	16	16	0	0	42
	Mar	527	225	15	22	1	0	67
	April	400	222	16	16	1	0	37
	May	404	169	25	25	2	0	52
	June	484	325	59	60	5	0	44
	July	629	511	138	140	37	2575	33
	Aug	886	780	167	168	39	0	16
	Sep	771	582	124	124	27	0	54
	Oct	412	324	56	58	12	0	37
	Nov	855	584	97	109	17	0	89
	Dec	502	324	73	74	11	430	27
2011	Jan	332	155	40	41	11	0	46
	Feb	175	141	8	8	0	0	18
	Mar	364	175	24	24	4	0	29
	April	190	92	6	6	1	0	21
	May	344	174	37	38	5	0	36
	June	377	307	55	56	30	0	26
	July	532	468	67	67	31	0	13
	Aug	463	349	50	50	22	0	43
	Sep	247	194	22	23	10	0	30
	Oct	513	350	39	44	14	0	71

Source. Survey

**Figure 1: Total Patients, Clinically Suspected and Confirmed Malaria Cases Detected by 60 VHVs (2007 Nov – 2011 Oct)**



Source: Data from Table 1

More and more cases of clinically suspected malaria were detected from 2007 to 2010 with seasonal fluctuation reveal the better performance in malaria case detection by VHVs.



But in 2011, lower detection of clinically suspected malaria cases might reflect the impact of the project and the health care contributed by VHWs.

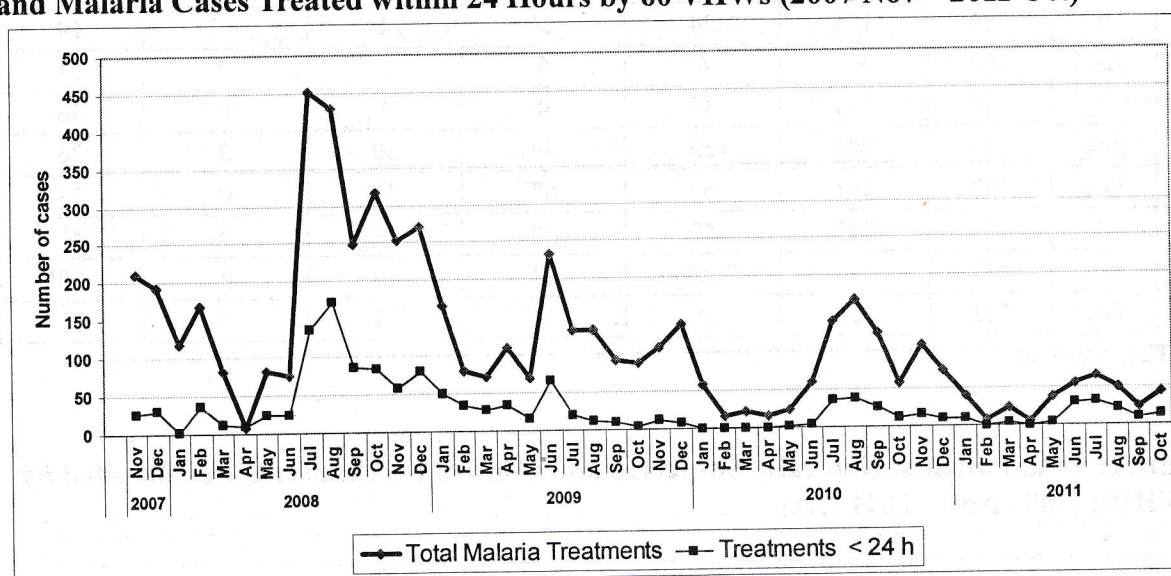
The pattern of clinically suspected malaria cases detected was not coinciding with the pattern of total patients attended cases and that could be due to reduction in non-malaria cases visiting VHWs after realizing that the project primarily was aiming to control malaria only

**Table 2: Seasonal Index of Malaria Cases Treated by VHWs**

period	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
seasonal factor %	78.3	22.8	44.0	21.2	48.5	81.9	205.1	213.9	128.6	93.3	126.5	136.1

Source: Survey

**Figure 2: Responsiveness of VHWs in Malaria Control: Total Malaria Cases Treated and Malaria Cases Treated within 24 Hours by 60 VHWs (2007 Nov – 2011 Oct)**

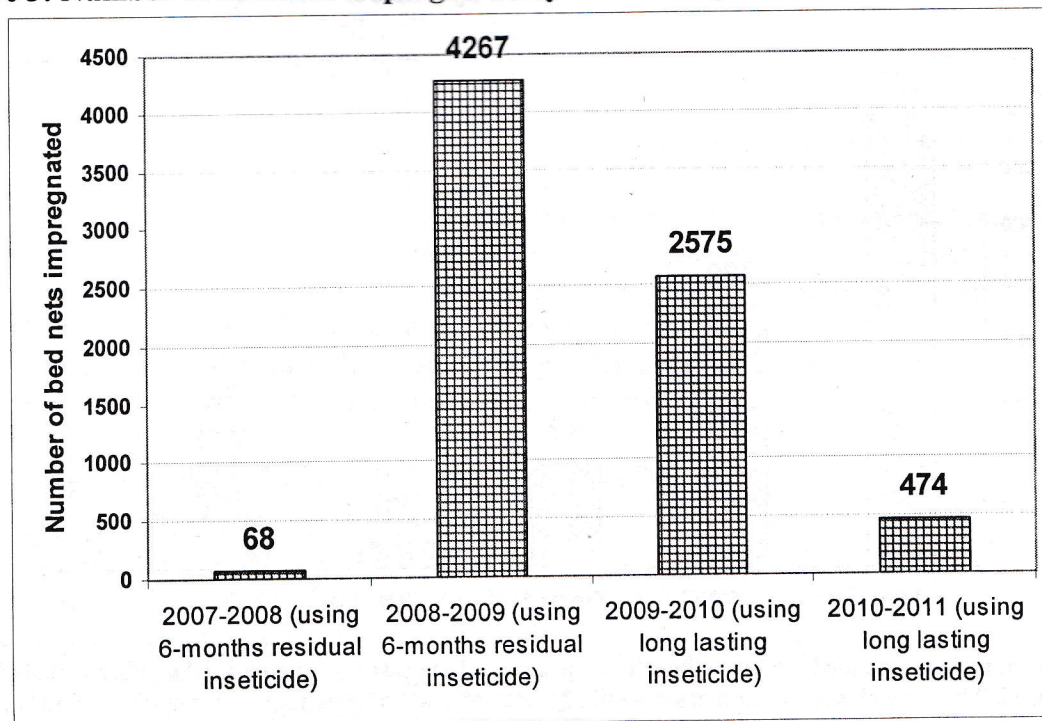


Source: Survey

After first project year, the pattern of treated malaria cases showed downward trend till 2011. It could reflect the better performance of VHWs in treating malaria.

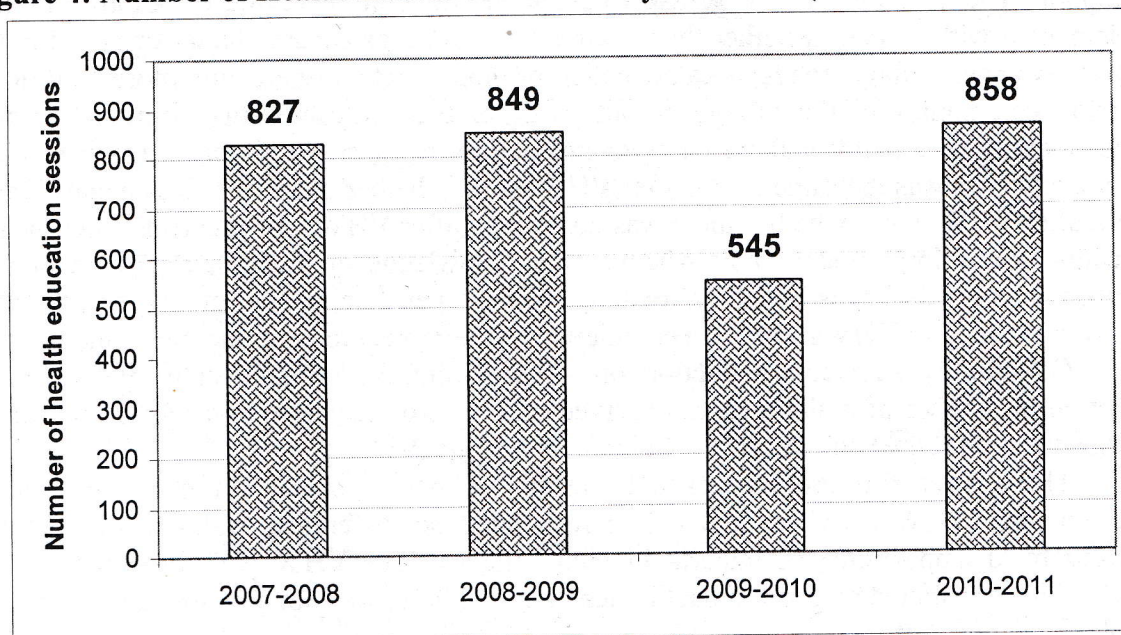
Number of malaria cases treated within 24 hours showed the responsiveness and performance of VHWs in malaria control. The substantial depression of malaria cases treated within 24 hours was found after 2 years of project implementation which alarmed the lower motivation of VHWs. It also coincided with low season of incidence. It could be due to possible emotional swing of VHWs after 2 years period.



**Figure 3: Number of Bed-nets Impregnated by 60 VHWs (2007 Nov – 2011 Oct)**

Source: Survey

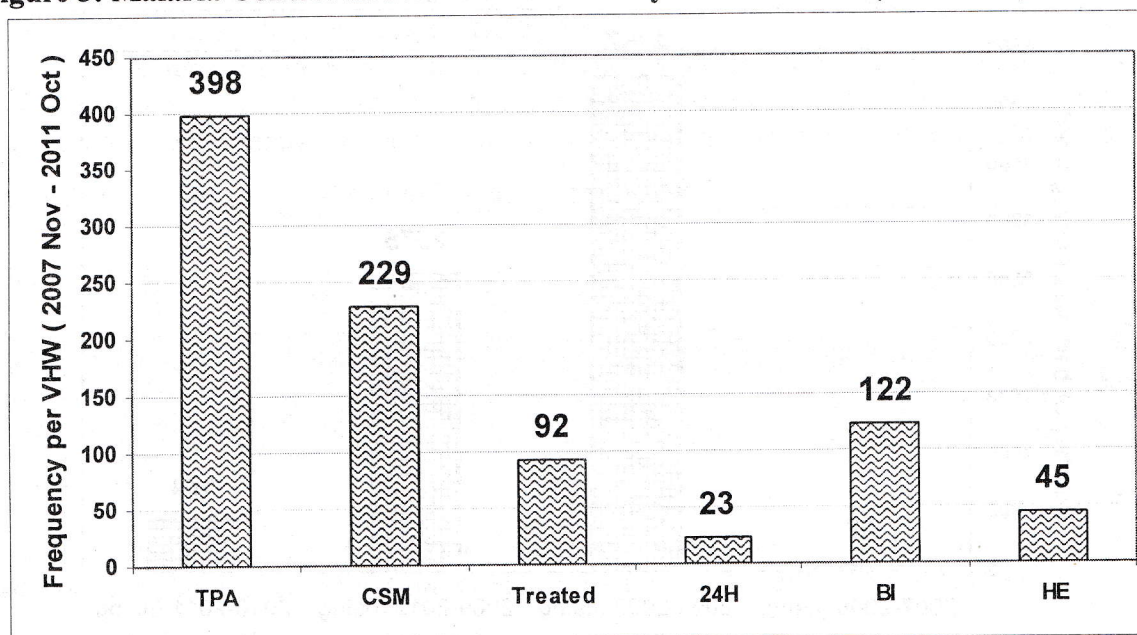
Number of bed-nets impregnated was higher especially in second project year and it might reflect great contribution and performance of VHWs. Lesser number of bed-nets impregnated in the following two successive years was due to the use of long lasting insecticide tablets, which efficacy lasted for 2 years.

**Figure 4: Number of Health Education Sessions by 60 VHWs (2007 Nov – 2011 Oct)**

Source: Survey

Over 800 sessions on health education had conducted annually except in 2009-2010. This reduction of activity in 2009 and 2010 coincided with election period.



**Figure 5: Malaria Control Activities Performed by one 60 VHWs (2007-2011)**

(TPA = Total patients attended, CSM = clinically suspected malaria cases, Treated = total number of malaria cases treated, 24H = number of malaria cases within 24 hour of onset of symptoms, BI = number of bed nets impregnated with insecticide, HE = number of health education sessions conducted)

**Source: Survey**

On average, 398 patients attended to utilize each VHW, where 229 clinically suspected malaria cases were detected and 92 cases were given malaria treatment. Moreover, each VHW could treat 23 malaria cases within 24 hours, impregnated 122 bed-nets and delivered 45 health education sessions.

Performance of VHWs was assessed by interviewing 72 villagers for their subjective perception. The questions asked include whether their income increased or not after project implemented with VHWs, whether their houses and buildings became better or not after the project, whether village roads became better or not, whether there are more traditional donation ceremonies in the village or not, whether their health status improved or not, whether there were many malaria cases or not before the start of this project, whether the malaria situation was the same or not after VHW work, whether there were less malaria cases or not after VHW work, whether there was no malaria after VHW work, whether their health education status improved or not, whether their knowledge on malaria improved or not, whether having a VHW is beneficial or not, whether they like VHWs or not, and whether they want to support VHWs or not on completion of the project to continue their functions.

Community showed satisfaction on highly improved health status (94%), mark reduction in number of malaria cases observed during project period, (over 90%), improved health education (96%) and improved malaria knowledge (93%).

The answer was cross checked by asking if there was any difference in malaria situation after VHW activities and (11%) responded no difference. Validity was counter checked by disappearance of malaria in their villages after VHW was answered yes by (40%). That contributed as good impact indicator and malaria was not anymore a major health problem.

Community attitudes towards the work of VHWs revealed that (97%) of community liked VHWs and (99%) want to support VHW. Respect gained from villagers during and after working as VHWs was greatly increased (45% before to 97% during and after). Most of the VHWs enjoyed being a VHW and their families were also proud of them.



VHWs were also interviewed to know their own perception on their volunteer work. The questions being asked are whether they are relied by the villagers or not, whether they are respected by the villagers before, during and/or after they started to work as VHW, whether mutual relationships with the villagers and village leaders had improved after being a VHW, whether they like VHW work, and whether they were supported by their families for VHW work or not.

Focused group discussions (one male group, one female group and one mixed group) were conducted to VHWs and each group consisted of 8 participants. Researcher as a facilitator and two project staffs as note takers tried to explore strengthening and sustainable mechanism of volunteers in malaria control. The main issues were focused on factors that affect the performance of VHWs and motivating factors that sustain the volunteers in health care works. Following factors were discovered.

**Table 3: Factors Affecting the Performances of VHWs**

Number	Factors affecting the performance of VHWs
1	Level of education
2	Use of simple training methods (Participatory approach)
3	Equipped with guideline manual
4	On job training (During supervision)
5	Personal workload (Usually seasonal relating to their agricultural, educational and economic situations)
6	Diverting of interest during festival period
7	Travelling for various reasons

Source: Survey

**Table 4: Motivating Factors that Sustain the Volunteers**

Number	Motivating factors that sustain the volunteers
1	Community acceptance, appreciation and support
2	Training, refresher training (Other health care training)
3	Regular logistics support (RDTs, ACTs, KO tabs)*
4	Regular supportive supervision and monitoring
5	Annual evaluation and planning meeting
6	Incentive in cash/kind (Watch, T shirt, Bed net, Bag, Hat, Umbrella and Water proof rain coat)
7	Rewards based on performance
8	Excursion with health staff
9	Encouraged by health staff or local authorities

Source: Survey

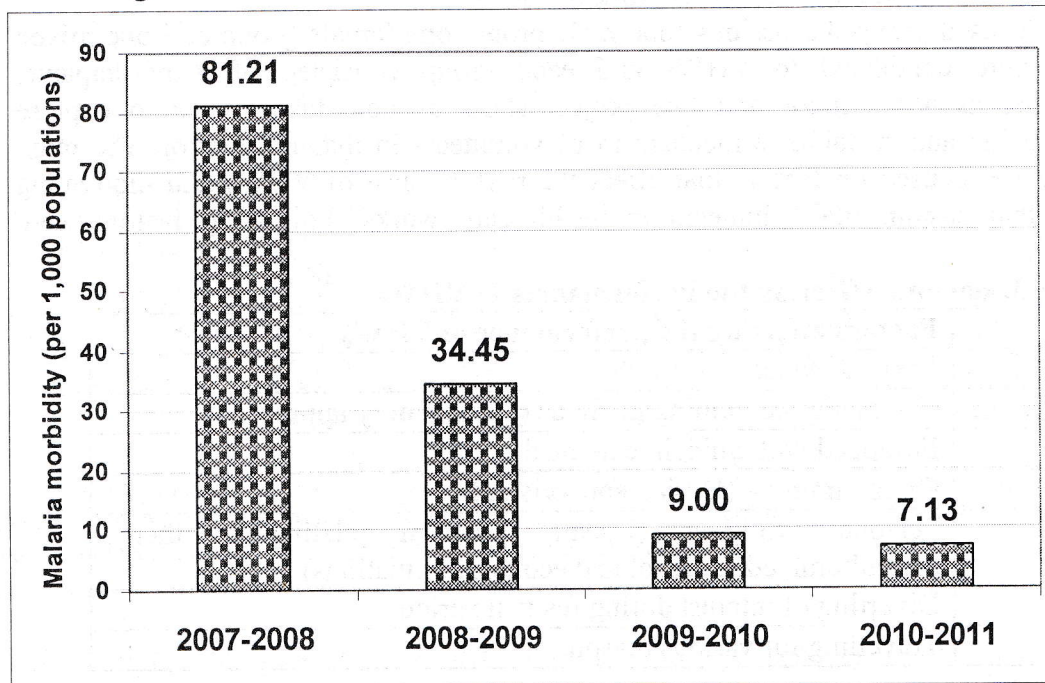
\* RDTs = Rapid diagnostic tests, ACTs = Artemisinin Combination Therapy (Anti-malaria treatment), KO tabs = KO tablets (Used for bed-nets impregnation)

Detail check to the characteristics of VHWs on attrition reveals that, greater risk of attrition was found with aged 30 and younger, female, single, farmer and laborer. General laborers were temporary type of workers and farmers were very busy with their field especially during the time of seedling and ploughing. No attrition was found with university and graduated education level. Cause of attrition was inquired by in-depth interview to voluntary health workers or their family members. During 4 years period, 52 VHWs (86.7%) had adhered to their work. The reasons of attrition were asked to their family members, relatives and neighbors. Main cause of attrition was migration



for primary work to fulfill their basic needs. Other reasons included time mostly needed for house work, and lost of interest on volunteer work.

**Figure 6: Impact on Malaria Morbidity (cases per 1000 populations) of 60 Project Villages**



**Source: Survey**

The project impact was assessed by malaria morbidity indicator and found that more than 50% reduction was seen after first year. Nearly 90% reduction after two years and more than 90% reduction after three years of project implementation was observed.

The malaria morbidity data of project villages were compared with that of national figures and it was found that malaria morbidity of Myanmar was around 10 per 1,000 populations while that of project villages was 81 per 1,000 populations in 2007-2008.

The change in socio-economic status due to VHWs performance was inquired to 72 villagers and they noticed that there was marked increased in their income (81%), could build their houses better (79%), could construct better village road (82%) and could make more activities on religion and donations in their village (78%).

## 5. DISCUSSION

In Myanmar health care system, there are well designed health care structure, clear description of National Health Policy, long term development plan (Myanmar Health Vision 2030), short term National Health Plan (2006-2011) and legal provision of health laws (MOH, 2011).

Peripheral level health care was well organized down to Rural Health Sub Center in which midwife is primary health care staff. It shows that there had been still uncovered villages but health care system made effort to cover these under-served areas through production of voluntary health workers. Naungcho Township Health Department (THD) statistics revealed only 41% of VHWs trained were functioning in the township (THD, 2011).

Primary health care is a system-wide approach to design health services based on primary care, which is regarded as a means to reduce medical expenditures and provide



more effective and equitable care to populations. As developing countries are more likely to have inequitable access to health services, it is important to assess the extent to which health policies improve the situation.

Regarding malaria control indicator, malaria morbidity of the country was around 10 per 1,000 populations whereas malaria morbidity of villages in Naungcho Township was 81 per 1,000 populations.

Equity in health could also be analyzed by checking health man power distribution. Health financing is an important part of broader efforts to ensure social protection in health. Health financing in South East Asia Region (2009) described Myanmar as the lowest percentage of health expenditure contributed by government (only 10%) and 90% of health care expenditure comes out of pockets of the people.

Percentage of gross domestic product (GDP) used for total health expenditure was only 2% during 1998 to 2007 period. Spending by Ministry of Health as a financing agent constitutes the major share in the public spending on health and also taken into account the availability of data, estimates on public expenditures on health by financing entities were based solely on spending by the ministry. Analyzing on Public expenditures on health by functions, it was found out that health administration and health insurance accounted only around 3% to 4% in 2009-2010 (MOH, 2011).

According to demand for health theories, nations' health budget constraints can be eased by reducing budget on other consumption, or efficient use on current health budget.

There is a need to strengthen the rural health systems.

Community participation is crucial to better understanding and discussing the future of VHW programmes. Integrating VHWs into its health services and institutionalized community health committees as part of health services can sustain social participation. So that community participation does not become an alternative but an integral part of the state's responsibility for health care system.

More and more cases of clinically suspected malaria were detected from 2007 to 2010 with seasonal fluctuation might reveal better performance in malaria case detection

From this study, it was proved that voluntary health workers could perform well on their malaria control activities by checking objective indicators and performances of individual workers. It was also found that performance of VHWs perceived by community in positive aspects showed satisfactorily high revealing improved health status, lesser malaria cases after project and improved health education and malaria knowledge of villagers. As project villages were selected according to their higher morbidity, reduction of malaria burden in project area could contribute a great fraction in reducing malaria morbidity and mortality of whole Naungcho Township. Malaria profile of Naungcho Township Health Department also supported on consistent finding and positive impact on malaria burden by the effort of voluntary workers.

According to the performances, VHWs had provided a valuable contribution to community development and can improve an access to and coverage of communities with basic health services. It is evident that VHWs can undertake actions that lead to improved health outcomes, especially, but not exclusively, in the field of malaria control.

Although there were positive impacts by VHWs, there still were issues and challenges to maintain the activities of VHWs. The attitudes and interactions of health personnel in the formal health services with VHWs have an immediate impact on critical aspects of VHW programme management, such as selection, continuing training and supervision. Furthermore, many health personnel lack the background and orientation to provide a supportive environment for VHW programmes.

Proportion of malaria cases treated within 24 hours could be assumed as responsiveness of VHWs in malaria control. Responsive in health care was directly related



with performance of health care provider. The reality is that VHWs as a rule and by their very nature provide services in environments where formal health services are inaccessible and people are poor. Attrition was attributed to multiple causes in addition to inadequate income, including family reasons, lack of community support, and upgrading of health posts (Chevalier et al., 1993). High attrition rates cause several problems. Frequent turnover of VHWs means a lack of continuity in the relationships established among a VHW, community, and health system. In some villages VHWs "discontinued their work due to lack of time, lack of 'profit', and family's disapproval. Focused group discussions disclosed that motivating factors that sustain the volunteers were community recognition, capacity building trainings, regular logistics support, periodic and supportive supervision, close monitoring, incentives in cash or kind, reward based on performance, excursion with health staffs and encouraged by health staff.

Health professionals often perceive VHWs as lowly aid (WHO, 1990; Walt, 1992). The curricula of the medical and other health science teaching institutions often do not equip health professionals to undertake priority tasks that must be performed to deal with the health problems of communities (WHO, 1985). A study of Nigerian medical students found that community health was one of the subjects that students disliked most. Attitudes to VHWs inevitably suffer as a result.

Country level VHW systems required substantial increases in support for training, management, supervision and logistics.

VHW programmes are neither an alternative of weak health systems nor a cheap option to provide access to health care for underserved populations.

In Naungcho, malaria morbidity of the initial priority project villages (total 30 villages) was 81.2 per thousand populations in the project year one and the last project year three's morbidity data (2010-2011) was 7.13 per thousand populations. Village health workers in the area greatly contributed to this dramatic reduction of malaria morbidity.

Reducing malaria burden is a cost effective strategy as malaria is not only health problem but it can also affect productive force and had much higher effect on socio-economic impact. It could be agreeable that malaria control activities performed by VHWs in high malaria had resulted reducing malaria burden and which in turn might have contributed in some share on socio-economic impact.

## 6. CONCLUSION

Critical review on Health Care System of Myanmar highlighted that even though there were clear statements of Health Policy, a well specified National Health Plan and a well, health status in the rural areas was still low according to the health impact indicators. designed Health Care Organization. It indicated that structural coverage did not mean functional coverage to rural population especially in grass root level. It should not be pleased with structural coverage in health care, but it is still necessary to improve functional capacity and capability. There is definitely a need to strengthen rural health systems.

As VHWs represent an important health resource to cover underserved area, their potential in providing and extending a reasonable level of health care to underserved populations must be fully tapped. To make the performance of VHWs to be better, appropriate selection, effective capacity building, encouragement of health service staff and improvement in supervision and motivation are essential requirements.

Although VHWs have been trusted and recognized by the community in fulfilling social needs, in fulfilling social needs the community would be frustrated by the lack of the basic needs. Capacity building and motivation is the key to strengthening and sustaining voluntary works.

Community had very high positive attitudes towards the work of VHWs and VHW which could be assumed as a role model and an entry point for community mobilization in



health care. From community participation and involvement to community empowerment is the proper approach for strengthening rural health services and rural health development.

Risk of attrition was high with young people, single, and unstable economic condition with temporary work. Main cause of attrition was struggling for primary income generation work or related to earn their livelihood. International donors and organization should understand the needs of voluntary health workers. Charitable, altruistic, non self oriented volunteers are ideal for the community based projects, yet it is hardly pragmatic especially in developing countries.

Public sector should be willing to encourage voluntary health workers not technically only, but also psychologically and there should have clear supervision and monitoring mechanisms with proper logistics supply systems.

Reducing high prevailing disease burden is the cost benefit strategy for community development. Malpractices can be developed with voluntary health workers and they should follow their roles accordingly and community should not expect beyond their capacity.

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# ဒဂုံတောင်နယ်မြေအတွင်းရှိ ပြောင်းလဲနေသော ဘာသာစကား ဝေါဟာရများ လေ့လာချက်

ခင်သော်<sup>၁</sup>

## စာတမ်းအကျဉ်း

ဒဂုံတောင်နယ်မြေအတွင်းရှိ တက္ကသိုလ်ကျောင်းသား၊ ကျောင်းသူများ၊ ရပ်ကွက်သူ၊ ရပ်ကွက်သားများ၊ ယာဉ်မောင်းနှင့် ယာဉ်နောက်လိုက်များ၊ စားသောက်ဆိုင်များမှ ဈေးရောင်းသူနှင့် စားပွဲထိုးများ၏ နေ့စဉ် ဘာသာစကားပြောဆိုသုံးနှုန်းမှုများမှ လူမှုဘာသာဗေဒဆိုင်ရာ ဝေါဟာရစကားလုံး အသစ်အဆန်းများ တီထွင်အသုံးပြုနေကြပုံကို ဗဟုသုတအဖြစ် လေ့လာနိုင်ကြရန် တင်ပြထားပါသည်။

## သော့ချက်စကားလုံး

တီထွင်၊ ဖန်တီး၊ လူမှုကိစ္စ၊ ဗန်းစကား။

## ရည်ရွယ်ချက်

ဤစာတမ်းတွင် လေ့လာတင်ပြထားသော စကားလုံးအသစ် တီထွင်ဖန်တီးရာမှ နေ့စဉ်ပြောဆို ဆက်သွယ်နေသော လူမှုဝန်းကျင်တွင် လွယ်ကူ၍ အဆင်ပြေချောမွေ့စေနိုင်ကြောင်း သိရှိနိုင်စေရန် ရည်ရွယ်ပါသည်။

## အချက်အလက်နှင့် အသုံးပြုသည့်နည်းစနစ်

ဤစာတမ်းတွင် အချက်အလက်နှင့်ဝေါဟာရများ ကောက်ယူရာ၌ သက်ဆိုင်ရာနယ်မြေများသို့ ကွင်းဆင်း၍ လေ့လာသုတေသနပြုတင်ပြထားပါသည်။

## နိဒါန်း

ဤစာတမ်းသည် ဒဂုံတောင်နယ်မြေအတွင်းရှိ ဘာသာစကား စကားလုံးသစ်များ၏ ပြောင်းလဲခဲ့ပုံကို လူမှုဘာသာဗေဒရှုထောင့်မှ လေ့လာတင်ပြထားသော စာတမ်းဖြစ်သည်။ လေ့လာရာတွင် ရန်ကုန်စီးပွားရေးတက္ကသိုလ်(ရွာသာကြီး)စားသောက်ဆိုင်များ (ကမ္ဘာသစ်၊ နေခြည်၊ Hay Day၊ ပြည့်စုံ၊ လက်ရာမွန်၊ Seven Star 1,2၊ ချယ်ရီမြိုင်၊ အရုဏ်ဦး၊ Hi-Boss) ခရီးသည် ပို့ဆောင်ရေးယာဉ်များ ယာဉ်အမှတ် (၂၁၀၊ ၂၀၉၊ ၃၉၊ ၁၉၇၊ ၂၂၉)၊ (၁၄၀)ရပ်ကွက်တို့ကို အခြေပြု၍ အချက်အလက် ကောက်ယူမှုများပြုလုပ်ပါသည်။ မြန်မာဘာသာစကားသည် နေ့စဉ် လူတို့သုံးစွဲနေသဖြင့် အပြောင်းအလဲရှိသည်။ နေ့စဉ်သုံးစကားများသည် ရှင်သန်နေသော စကားများဖြစ်သည်။ ရှင်သန်နေသောစကားများသည် ပြောင်းလဲမှုရှိသည်။ ထို့ကြောင့် ဒဂုံတောင်နယ်မြေအတွင်းရှိ လူမှုအသိုင်းအဝိုင်း၏ နေ့စဉ်သုံး စကားများကို လေ့လာတင်ပြထားခြင်းဖြစ်သည်။ နေ့စဉ်သုံးစကားများကို လူမှုအခြေအနေအဆင့်ဘက်မှ ကြည့်၍ လေ့လာတင်ပြထားခြင်းဖြစ်သည်။ လူမှုအခြေအနေတွင် အလုပ်သမား၊ ဈေးသူဈေးသား၊ မော်တော်ယာဉ်သမားနှင့် ကျောင်းသူကျောင်းသားတို့ ပါဝင်သည်။ ဤသို့ လူမှုအခြေအနေရှုထောင့်မှ ကြည့်ခြင်းအားဖြင့် ဘာသာစကားပြောင်းလဲမှု သဘောကိုလေ့လာတွေ့ရှိရပါသည်။

<sup>၁</sup>Lecturer, Department of Myanmar Language, Yangon Institute of Economics



## ၁။ လူမှုဘာသာဗေဒနှင့် ဘာသာစကားပြောင်းလဲမှုသဘော

လူမှုဘာသာဗေဒသည် ဘာသာစကားနှင့် လူ့အဖွဲ့အစည်းကြား အပြန်အလှန်ဆက်စပ်မှုကို လေ့လာခြင်း ဖြစ်သည်။<sup>၁</sup>

လူ့အဖွဲ့အစည်းတစ်ခုတွင်း နေ့စဉ်အသုံးပြုလျက်ရှိသည့် ဘာသာစကားတိုင်းသည် ရှင်သန်သည့် ဘာသာ စကား<sup>၂</sup> များဖြစ်ကြသည်။ ရှင်သန်သည့် ဘာသာစကားမှန်သမျှသည် ပြောင်းလဲမှုရှိသည်။ ဘာသာစကားပြောင်းလဲမှု<sup>၃</sup> သည် အချိန်ကာလကွာဟမှုကြောင့်လည်းကောင်း၊ ဘာသာစကားထိတွေ့မှု<sup>၄</sup> ကြောင့်လည်းကောင်း၊ စကားပြောဆိုရာ တွင် ပင်ပန်းငြီးငွေ့လာမှုကို ပြေပျောက်စေရန် ပြုပြင်ပြောဆိုမှုကြောင့်လည်းကောင်း၊ အတွေးအခေါ်အသစ်၊ လူမှုကိစ္စသစ်တို့အတွက် ဘာသာစကားလိုအပ်ချက်တို့ကြောင့်လည်းကောင်း၊ လူမှုဂုဏ်သိက္ခာလိုအပ်ချက်တို့ကြောင့် လည်းကောင်း၊ လူမှုအဖွဲ့အစည်းတစ်ခုအတွင်း အချင်းချင်း လျှို့ဝှက်ပြောဆိုမှုကြောင့်လည်းကောင်း စသည့် အကြောင်းများကြောင့်ဖြစ်နိုင်သည်။<sup>၅</sup>

ဘာသာစကားပြောင်းလဲမှုသည် စကားသံအဆင့်တွင်လည်းကောင်း၊ စကားလုံးအဆင့်တွင်လည်းကောင်း၊ ဝါကျအဆင့်တွင်လည်းကောင်း၊ အဓိပ္ပာယ်အဆင့်တွင်လည်းကောင်း အသီးသီးဖြစ်နိုင်သည်။<sup>၆</sup> ဘာသာစကား ထိတွေ့မှုနှင့် အခြားသောလူမှုအကြောင်းများကြောင့် ဖြစ်ပေါ်လာသော ဘာသာစကားပြောင်းလဲမှုကို လူမှု ဘာသာဗေဒကလေ့လာသည်။<sup>၇</sup>

လူမှုဘာသာဗေဒရှုထောင့်မှ ဘာသာစကားပြောင်းလဲမှုအမျိုးအစားကို လေ့လာရာတွင် ပြင်ပပြောင်းလဲမှု<sup>၈</sup>နှင့် အတွင်းပြောင်းလဲမှု<sup>၉</sup>ဟူသည့် ပြောင်းလဲမှုနှစ်မျိုးရှိသည်။<sup>၁၀</sup> ဘာသာစကားထိတွေ့မှုကဲ့သို့ ပြင်ပအကြောင်း တစ်စုံ တစ်ရာကြောင့် ဘာသာစကားပြောင်းလဲမှုဖြစ်ပေါ်ခြင်းကို ပြင်ပ ပြောင်းလဲမှုဟုခေါ်သည်။ အခြားလူမှုအကြောင်း များကြောင့် ဘာသာစကားအတွင်း ပြောင်းလဲမှုဖြစ်ပေါ်ခြင်းကို အတွင်းပြောင်းလဲမှုဟုခေါ်သည်။

ဘာသာစကားပြောင်းလဲမှုတွင် ဘာသာစကားတစ်ခုအတွင်း ပင်ကိုအားဖြင့် ပြောင်းလဲမှုဖြစ်ပေါ်ခြင်းကို အတွင်းပြောင်းလဲမှုဟုခေါ်သည်။<sup>၁၁</sup>

(၁)အသစ်တီထွင်ခြင်း<sup>၁၂</sup>

(၂)ပေါင်းစပ်ခြင်း<sup>၁၃</sup>

(၃)အတိုကောက်အသုံးပြုခြင်း<sup>၁၄</sup>

(၄)အနက်ချဲ့ထွင်ခြင်း<sup>၁၅</sup>

ဟူသည့်နည်းလမ်းများဖြင့် ပြောင်းလဲမှုဖြစ်ပေါ်နိုင်သည်။ ယခုဖော်ပြမည့် စာတမ်းသည် ဒဂုံတောင်နယ်မြေရှိ စကားလုံးများ၏ ဘာသာစကားအတွင်း ပြောင်းလဲမှုသဘောကို တင်ပြမည့် စာတမ်းတစ်စောင်ဖြစ်သည်။ စကားလုံး အားဖြင့်လည်းကောင်း၊ အနက်အဓိပ္ပာယ်အားဖြင့်လည်းကောင်း၊ အသစ်တီထွင်ဖန်တီးအသုံးပြုခြင်းကို အသစ်တီထွင် ခြင်းဟုခေါ်သည်။ ဒဂုံတောင်နယ်မြေတွင် လူမှု အခြေအနေအရ အသစ်တီထွင်ဖန်တီး အသုံးပြုသော ဝေါဟာရများစွာ ရှိပါသည်။

<sup>၁</sup> အောင်မြင့်ဦး၊ ဒေါက်တာ ၂၀၀၃၊ ၉

<sup>၂</sup> living language

<sup>၃</sup> language change

<sup>၄</sup> language contact

<sup>၅</sup> အောင်မြင့်ဦး၊ ဒေါက်တာ၊ ၂၀၀၃၊ ၁၁၇

<sup>၆</sup> အောင်မြင့်ဦး၊ ဒေါက်တာ၊ ၂၀၀၃၊ ၁၁၇

<sup>၇</sup> အောင်မြင့်ဦး၊ ဒေါက်တာ ၂၀၀၃၊ ၁၁၉

<sup>၈</sup> external change

<sup>၉</sup> internal change

<sup>၁၀</sup> အောင်မြင့်ဦး၊ ဒေါက်တာ ၂၀၀၃၊ ၁၂၄

<sup>၁၁</sup> coining

<sup>၁၂</sup> combining

<sup>၁၃</sup> abbreviation

<sup>၁၄</sup> extending

<sup>၁၅</sup> တင်လှ၊ ၁၉၇၀၊ ၅၃



ယဉ်ကျေးသည့်လူမျိုး၏ ဘာသာစကားများတွင် စကားလုံးသစ်များ တိုးပွားလျက်ရှိပါသည်။ စကားလုံးအသစ်တိုးပွားလာစေရန် အခြေအနေပေးလျှင် ပေးသည့်နှင့်အမျှ တိုးပွားသည့်အရှိန်အဟုန်သည်လည်း မြင့်မားလာတတ်သည်။ တိုးပွားသည့်အရှိန်အဟုန် မြင့်မားနေချိန်တွင် တိုးပွားရန် အခြေအနေမှာလည်း အထူးကောင်းမွန်နေတတ်သည်ကို တွေ့ရသည်။<sup>၁</sup>

#### ၂။ ဒဂုံတောင်နယ်မြေအတွင်းရှိ ဘာသာစကားအတွင်းပြောင်းလဲမှု

မြန်မာဘာသာစကားသည် နေ့စဉ်လူတို့သုံးစွဲနေသဖြင့် အပြောင်းအလဲရှိပြီး၊ ရှင်သန်နေသောဘာသာစကားဖြစ်သည်။ ရှင်သန်နေသော ဘာသာစကားသည် ပြောင်းလဲမှုရှိသည်။ ယခု ဒဂုံတောင်နယ်မြေအတွင်းရှိ မြန်မာဘာသာစကားကိုကြည့်လျှင် ပြောင်းလဲမှု (၄)မျိုးတွေ့နိုင်ပါသည်။ လူတို့၏ အမြင်သစ်၊ အတွေးသစ်၊ ပစ္စည်းသစ်ကြောင့်လည်းကောင်း၊ လူ့အသိုင်းအဝိုင်း၊ လူနေမှုအဆင့်အတန်းနှင့်အခြေအနေကြောင့် ဘာသာစကားစကားလုံးများ တိုးပွားပြောင်းလဲလာခြင်းဖြစ်သည်။ ဒဂုံတောင်နယ်မြေအတွင်းရှိ ပြောင်းလဲမှု (၄)မျိုးမှာ အသစ်တီထွင်ခြင်း၊ ပေါင်းစပ်ခြင်း၊ အတိုကောက်အသုံးပြုခြင်းနှင့် အနက်ချဲ့ထွင်ခြင်းတို့ဖြစ်သည်။

#### ၂-၁။ အသစ်တီထွင်ခြင်း

ဘာသာစကား စကားလုံးအသစ်တီထွင်ခြင်းမှာ လူတို့၏ အမြင်သစ်၊ အတွေးသစ်၊ ပစ္စည်းသစ်များကြောင့် စကားလုံးအသစ်များ တီထွင်တိုးပွားလာသည်။ စကားလုံးအားဖြင့်လည်းကောင်း၊ အနက်အဓိပ္ပာယ်အားဖြင့်လည်းကောင်း၊ အသစ်တီထွင်ဖန်တီးအသုံးပြုခြင်းကို အသစ်တီထွင်ခြင်းဟု ခေါ်သည်။<sup>၂</sup> အသစ်တီထွင်ခြင်းတွင် စားသောက်မှုဆိုင်ရာ အသစ်တီထွင်ခြင်း၊ လုပ်ဆောင်မှုဆိုင်ရာ အသစ်တီထွင်ခြင်း၊ သယ်ယူပို့ဆောင်ဆိုင်ရာ အသစ်တီထွင်ခြင်းနှင့် အခြားလူမှုဆိုင်ရာအသစ်တီထွင်ခြင်းတို့ပါဝင်သည်။ ဒဂုံတောင်နယ်မြေတွင် ခေတ်နှင့်ဆီလျော်သော အောက်ပါအသစ်တီထွင်ထားသည့် စကားလုံးဝေါဟာရများကို တွေ့ရှိရသည်။

#### ၂-၁-၁။ စားသောက်မှုဆိုင်ရာ အသစ်တီထွင်ခြင်း

လူမှုကိစ္စတစ်ခုနှင့် ပတ်သက်၍ ပေါ်ပေါက်လာသောစိတ်လှုပ်ရှားခံစားမှုသည် ထိုလူမှုကိစ္စကို ရည်ညွှန်းခေါ်ဝေါ်သော စကားလုံးကိုပါ အရှိန်အငွေ့ဟပ်သွားတတ်သည့် သဘောရှိပါသည်။<sup>၃</sup> စားသောက်မှုနှင့် ပတ်သက်၍ ဆန်းသစ်သောအရာဝတ္ထုများကို အမည်ပေးတီထွင်ခဲ့ပုံကို တွေ့ရသည်။ ဒဂုံတောင်နယ်မြေရှိ စားသောက်မှုနှင့် ပတ်သက်၍ အသစ်တီထွင်ပြောဆိုကြသော စကားများကို အောက်ပါအတိုင်း တွေ့ရှိရပါသည်။ သာဓကပြရသော်-

ရင်ကို အေးမြအောင် သောက်ရသော

ရေခဲရေ - ရုံးဆင်း(အေးချမ်းမေ)

အသားနှင့်အသီးအနှံကြော်ပြီး ထမင်းဖြူပေါ်

တင်ပေးသောအရာ - စိုးမြင့်ကြော်၊

သံပုရာရည်ချဉ်ချဉ် - တိုက်ကြီးဂိတ်ဆုံ

ထမင်းဖြူ - လေးဖြူ

လက်ဖက်ရည်နို့စိမ်းပေါက် - စပေါ့ရိုက်

<sup>၁</sup> အောင်မြင့်ဦး၊ ဒေါက်တာ၊ ၂၀၀၃၊ ၁၂၄

<sup>၂</sup> အောင်မြင့်ဦး၊ ဒေါက်တာ၊ ၂၀၀၃၊ ၁၂၄

<sup>၃</sup> ခင်မင်၊ ၂၀၀၄၊ ၇၇



အာလူးချောင်းကြော်	- အာကြီး
သင်္ဘောသီးထောင်း	- လျှာရွှမ်းပြန်
နက်(စ်)ပလိန်း	- ကိုကြီးကျော်
ကော်ဖီအအေး	- အိုင်စီ
ကြက်သွန်ဖြူ/ငရုတ်သီးစိမ်း	- ကျောင်းစိမ်း/ကျောင်းသူလေး
	(အဖြူ၊ အစိမ်း)

ထမင်းသုပ်ပေါ်ကြက်ဥမကျက်တကျက်တင် - ထမင်းသုပ်ဟတ်ဖ်မိုး  
စသည့် စကားလုံးတို့သည် လူမှုစားသောက်မှုအခြေအနေတွင် စကားလုံးသစ်အနေဖြင့် တီထွင်ပြောဆို အသုံးပြုနေသော ဝေါဟာရများဖြစ်သည်။ ရပ်ကွက်တွင်သာမက တက္ကသိုလ်ကျောင်းသူ၊ ကျောင်းသားများလည်း ပြောဆိုသုံးစွဲသည်ကိုတွေ့ရသည်။ ထို့ကြောင့် မြန်မာဘာသာစကားတွင် လူမှုကိစ္စအသီးသီးအတွက် အသစ်တီထွင်အသုံးပြုသော ဝေါဟာရအများစုသည် ဗန်းစကားအဆင့်ပင်ရှိသေးသည်။ သို့ပါ၍ ဘာသာစကားတိုင်းတွင် စကားလုံးအသစ်များ တိုးပွားလျက်ရှိနေသည်။

#### ၂-၁-၂။ လုပ်ဆောင်မှုဆိုင်ရာ အသစ်တီထွင်ခြင်း

စကားလုံးအသစ်တီထွင်ရာတွင် ဒဂုံတောင်နယ်မြေ၌ လုပ်ဆောင်မှုဆိုင်ရာ စကားလုံး အသစ်များကိုလည်း တွေ့ရသည်။ လုပ်ဆောင်မှုဆိုင်ရာတွင် ကျောင်းသား၊ ကျောင်းသူလုပ်ဆောင်မှု၊ ရပ်သူရပ်သားလုပ်ဆောင်မှု၊ အလုပ်သမားနှင့်ကားသမား လုပ်ဆောင်မှုတို့ပါဝင်ကြသည်။ လုပ်ဆောင်မှု ဆိုင်ရာ စကားလုံးများကို အောက်ပါအတိုင်းတွေ့ရှိရသည်။ သာဓကပြရသော်-

ကျောင်းမတက်ဘူး၊ ကိစ္စရှိတယ်	- လမ်းကြောင်းရှိ
သည်းခံစိတ်မရှိ၊ ပြဿနာချက်ချင်းတက်နိုင်	- ရှေ့ရှိ
ပိုက်ဆံ (သို့) ငွေရှင်းမည်	- သွားကြားထိုး
ပြဿနာကြီးကြီးရှာ	- ကွိုင်
သူများပစ္စည်းအပိုင်ယူ၊ ပြန်မပေးခြင်း	- ကျော်တယ်
ကျွမ်းကျင်တယ်(လုပ်ငန်း)	- စွမ်းတယ်
မခံချင်အောင်စခြင်း	- ညော်တယ်(သို့)လေတိုက်တယ်
သွားတော့	- ဒိုးတော့၊ လိမ့်တော့
ခေတ်ဆန်ပြီး အမြင်ဆန်း၊ အမြင်ဆိုး	- လန်ထွက်
စိတ်ဆိုးသည်၊ စိတ်တိုသည်၊ မခံမရပ်နိုင်အောင်ဖြစ်	- တင်းတယ်
အိပ်ချင်တယ်	- ကျိုးပြီ

စသည့် စကားလုံးများသည် လုပ်ဆောင်မှုနှင့် ဆိုင်သောအကြောင်းအရာပေါ်၌ အသစ်အဆန်းတီထွင်ဖန်တီးထားသော စကားလုံးများဖြစ်ပါသည်။ ဤစကားလုံးများ ဖန်တီးတီထွင်ခြင်းကြောင့် လူမှုအသိုင်းအဝိုင်း၌ သုံးစွဲရာတွင် ပိုမိုလွယ်ကူ ထိရောက်စေသော သဘောရှိပါသည်။ လူမှုအသိုင်းအဝိုင်းကြောင့် ဘာသာစကား ပြောင်းလဲလာသော သဘောကို တွေ့ရှိရပါသည်။



### ၂-၁-၃။ သယ်ယူပို့ဆောင်မှုဆိုင်ရာ အသစ်တီထွင်ခြင်း

သယ်ယူပို့ဆောင်ရာတွင်လည်း လူမှုဝန်းကျင်ကြောင့် ဘာသာစကားပြောင်းလဲအသစ်တီထွင်လာမှုကို တွေ့ရပါသည်။ ယာဉ်မောင်းသူနှင့် ယာဉ်နောက်လိုက်၊ ယာဉ်နောက်လိုက်နှင့်ခရီးသည်၊ ယာဉ်နောက်လိုက်နှင့် ကျောင်းသား၊ ကျောင်းသူတို့ အချင်းချင်းပြောဆိုသုံးနှုန်းရာမှ ဘာသာစကားတိုးပွားလာမှုကို တွေ့ရပါသည်။ ဒဂုံတောင်နယ်မြေ၌ သယ်ယူပို့ဆောင်မှုဆိုင်ရာ စကားလုံးများကို အောက်ပါအတိုင်း တွေ့ရပါသည်။ သာဓကပြရသော်-

ကားတစ်စီးက ကားတစ်စီးကို ကျော်တတ်ခိုင်း	- ဝိုက်
သွားမည့်ခရီးကို ပုံမှန်မသွားဘဲ ဖြည်းဖြည်းမောင်း	- အိကြာကွေး
နောက်ကားမလာ၍ ကြားမှတ်တိုင်မှာ ကြာကြာရပ်ခိုင်း	- ဥမယ်/ထိုင်မယ်
ယာဉ်ထိန်းရုံ	- ဘဲဥ/ကိုလှရွှေ
အငှားကား၊ ကက	- ဆိုင်းဘုတ်
မော်တော်ယာဉ်လိုင်းအမှတ်(၂၁၀)ကား	- (၁၀) ပြား
ရှေ့ကားနှစ်စင်းလိုင်းတူမောင်း	- နှစ်ပင်လိမ်
လိပ်ခုံးဘတ်စ်ကား	- အဖိုးကြီး/ဗိုက်ပူကား
ဆင်းရန်ကလေးငယ်ပါ	- လိုက်ပွဲ
ဝိုက်ဆံငါးဆယ်ကျပ်	- ဂေါ်ဇယ်
စိတ်ကျန်းမာရေးဆေးရုံအထိလိုင်းဆွဲပေးသည့်ကား	- ကောက်ရိုးကား

စသည့်စကားလုံးတို့သည် ခေတ်အလျောက်လူမှုဝန်းကျင်တွင် ပို့ဆောင်ရေး၌ အသစ်တီထွင် အသုံးပြုသောဝေါဟာရ များဖြစ်သည်။ ယင်းအသုံးများကြောင့် ဘာသာစကားပြောင်းလဲမှု၊ တိုးပွားမှု၊ ရှင်သန်မှုသဘောများကိုတွေ့ရသည်။

### ၂-၁-၄။ အခြားလူမှုဆိုင်ရာအသစ်တီထွင်ခြင်း။

ဒဂုံတောင်နယ်မြေ၌ အခြားလူမှုဆိုင်ရာ အသစ်တီထွင်သုံးစွဲသော စကားလုံးများကိုလည်း တွေ့ရသည်။ အခြားလူမှုဆိုင်ရာတွင် ကျောင်းသူ၊ ကျောင်းသား၊ အလုပ်သမား၊ ဈေးသည်၊ ရပ်သူရပ်သား တို့အသုံး များသည်။ အခြားလူမှုဆိုင်ရာ အသုံးများမှာ အောက်ပါအတိုင်းဖြစ်သည်။ သာဓကပြရသော်

အရူး	- ဂေါက်သီး
မျက်မှန်	- ဂလဲ
ငွေပေါများ	- ရေလျှံ
ငွေပိုက်ဆံတစ်သိန်း	- တစ်ပုံ
အရက်သမား	- ဇိုးသမား
အသုံးမကျသူငယ်	- အာပီတူ
သူငယ်ချင်း	- ဘော်ဒါ
ကုန်ပစ္စည်းများရရှိခြင်း	- အခေါက်ကြီး
မျက်နှာပြုံးရွှင်ပျော်	- အဆီတက်



- |                           |              |
|---------------------------|--------------|
| ဆတ်ကျော့လတ်ကျော့မိန်းကလေး | - ဖလန်းဖလန်း |
| ကြည့်သည်                  | - ရှိုး      |
| မလှဘူး                    | - ပဲ့        |
| လှတယ်                     | - လန်း       |
| ရှိုးထုတ်                 | - ရှိုင်း    |

စသည့်စကားလုံးတို့သည် ခေတ်အလျောက်အခြားလူမှုဆိုင်ရာ အသစ်တီထွင်သုံးစွဲသော စကားလုံးများဖြစ်သည်။ တက္ကသိုလ်ကျောင်းသား၊ ကျောင်းသူများသုံးစွဲသလို ရပ်ကွက်သူ၊ ရပ်ကွက်သားများလည်းသုံးစွဲသည်။ အထက်ပါ စကားလုံးများကို ကြည့်ခြင်းအားဖြင့် ဘာသာစကားသည် ရပ်တန့်မနေဘဲ အမြဲပြောင်းလဲနေသည်ကိုတွေ့ရပါသည်။ လူမှုကိစ္စအသီးသီးအတွက် အသစ်တီထွင်အသုံးပြုသော ဝေါဟာရအများစုသည် ဗန်းစကားအဆင့်ပင်ရှိသည်။ “ဗန်းစကားသည် ပျော်ရွှင်သော သွက်လက်သော ငွေအသက်ရှိသည်။ လှောင်စရာ၊ ထေ့စရာ၊ သောစရာများကို ဗန်းစကားဖြင့်ပြောလျှင် ထိထိမိမိရှိပြီး အသက်ဝင်သည်။”<sup>၁</sup> ထို့ကြောင့် ခေတ်အလျောက်ဝှက်၍၊ တင်စား၍၊ အကြောင်းစွဲ၍ အသစ်ပြည့်သွင်းတီထွင်ပြောဆို သုံးနှုန်းသဖြင့် ဘာသာစကား ကျယ်ပြန့်လာမှု သဘောတွေ့ရပါသည်။

### ၂-၂။ ပေါင်းစပ်ခြင်း

ဘာသာစကားတစ်ခု၏ အတွင်းပြောင်းလဲမှုတွင် ပေါင်းစပ်ခြင်းသည် အတွေ့ရများသော နည်းလမ်း တစ်ခုဖြစ်သည်။ အတွေးအခေါ်သစ်၊ လူမှုကိစ္စအသစ်တို့အတွက် လိုအပ်သော ဝေါဟာရဖန်တီးရာတွင် လွယ်ကူသော နည်းလမ်းမှာ စကားလုံးများကို ပေါင်းစပ်ခြင်းနည်းပင်ဖြစ်သည်။ စကားလုံးတစ်လုံး စီ၏ အနက်အဓိပ္ပာယ်တစ်ခုစီကို ပေါင်းစပ်ကာ လိုအပ်သော အနက်ရောက်အောင်သုံးစွဲသောနည်းသည် ပေါင်းစပ်ခြင်းနည်းပင်ဖြစ်သည်။ ပေါင်းစပ်ရာ တွင် ရောနှောပေါင်းစပ်ခြင်းနှင့် တွဲဖက်ပေါင်းစပ်ခြင်း နှစ်မျိုးတွေ့နိုင်သည်။ မြန်မာဘာသာစကားတွင် ရောနှောပေါင်း စပ်ခြင်းမျိုးကို မတွေ့ရသော်လည်း တွဲဖက်ပေါင်းစပ်ခြင်းကိုမူ များစွာတွေ့နိုင်သည်။<sup>၂</sup> ဒဂုံတောင်နယ်မြေအတွင်းရှိ လူမှုဘာသာစကားများတွင် ရောနှောပေါင်းစပ်ခြင်းကို မတွေ့ရသော်လည်း တွဲဖက်ပေါင်းစပ်ခြင်းကိုမူ တွေ့ရှိရပါသည်။ ပေါင်းစပ်ခြင်း ဝေါဟာရများတွင် စားသောက်မှုဆိုင်ရာ ဝေါဟာရများကိုတွေ့ရသည်။

### ၂-၂-၁။ စားမှုသောက်မှုဆိုင်ရာ ပေါင်းစပ်ခြင်း

စားမှုသောက်မှုဆိုင်ရာ ပေါင်းစပ်ခြင်းမှာ တွဲဖက်ပေါင်းစပ်ခြင်းပင်ဖြစ်သည်။ ဒဂုံတောင်နယ်မြေတွင် လူမှုဆိုင်ရာ၌တွဲဖက်ပေါင်းစပ်ထားသော ဝေါဟာရစကားလုံးများ သုံးစွဲမှုသဘောကိုတွေ့ရသည်။ လူမှုဆိုင်ရာမှ စားမှုသောက်မှု တွဲဖက်ပေါင်းစပ်ခြင်း စားလုံးများကို အောက်ပါအတိုင်းတွေ့ရှိရပါသည်။ သာကေပြရသော်

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|------------|--|
| ထမင်း      | - ထမင်းကြော်၊ ကြက်ထမင်းကြော်၊ ဝက်ထမင်းကြော်၊<br>ထမင်းပေါင်း၊ ကြက်ထမင်းပေါင်း၊ ဝက်ထမင်းပေါင်း။        |
| အာလူး      | - အာလူးခြောက်စပ်ကြော် (အားလူးအရှည်+ ငရုတ်)၊<br>အားလူးအပြားကြော်၊ အားလူးချောင်းကြော်။                 |
| သင်္ဘောသီး | - သင်္ဘောသီးထောင်း၊ သင်္ဘောသီးသုပ်။  |
| ခေါက်ဆွဲ   | - ရှမ်းခေါက်ဆွဲ၊ မလေးရှားခေါက်ဆွဲ၊ ခေါက်ဆွဲကြော်၊<br>ခေါက်ဆွဲပြုတ်၊ ခေါက်ဆွဲသုပ်၊ အုန်းနို့ခေါက်ဆွဲ။ |
| အအေး       | - ကော်ဖီအအေး။  |
| သံပုရာ     | - သံပုရာရည်ချဉ်ချဉ်။   |

<sup>၁</sup> ခင်မင်၊ ၁၉၉၇၊ ၄၄  
<sup>၂</sup> အောင်မြင့်ဦး၊ ဒေါက်တာ၊ ၂၀၀၃၊ ၁၂၆-၁၂၇



ကြက်ဥ	-ကြက်ဥမွေကြော်၊ ပေါင်မုန့်ကြက်ဥကြော်၊ ထမင်းဆီစမ်းကြက်ဥကြော်။
ဖျော်ရည်	-နာနတ်ဖျော်ရည်၊ ထောပတ်သီးဖျော်ရည်၊ စတော်ဘယ်ရီဖျော်ရည်၊ သစ်ခွဖျော်ရည်၊ သီးစုံဖျော်ရည်။
လက်ဖက်	-လက်ဖက်ရည်၊ လက်ဖက်ရည်ဖုံးကြို၊ လက်ဖက်သုပ်၊ လက်ဖက်ရည်ကြမ်း။
ရေ	-ရေခဲရေ၊ ရေသန့်။
ဆရာ	-အဖျော်ဆရာ၊ အကြော်ဆရာ၊ မုန့်ဆရာ၊ အသုပ်ဆရာ။
အကြော်	-ခေါက်ဆွဲကြော်၊ ပေါင်မုန့်ကြော်၊ ကြာဆန်ကြော်၊ ကြက်ဥကြော်၊ ထမင်းကြော်၊ အာလူးချောင်းကြော်၊ စိုးမြင့်ကြော်၊ ကော်ပြန့်ကြော်၊ ကြက်ပေါင်ကြော်။
ဘူး	-ရေသန့်ဘူး၊ ထမင်းဘူး၊ မုန့်ဘူး။
ပလိန်း	-နက်စ်ပလိန်း၊ ကန်စွန်းပလိန်း၊ ပလိန်းကိတ်။
ဖြူ	-ထမင်းဖြူ (လေးဖြူ)
ဖုံးကြို	-တိုက်ကြီးဖုံးကြို (သံပုရာချည်ချည်)၊ နို့စိမ်းဖုံးကြို။
ကော်ဖီ	-ကော်ဖီနို့စိမ်းပေါက်၊ ကော်ဖီခါးခါး။
ကန်စွန်း	-ကန်စွန်းပလိန်း၊ မှိုကန်စွန်းချည်စပ်၊ ကန်စွန်းရွက်ခမောက်ဆောင်း (မှိုကန်စွန်း)။
ကော်ပြန့်	-ကော်ပြန့်ကြော်၊ ဘောဘီကော်ပြန့်။

စသည့်စကားလုံးတို့သည် ခေတ်အလျောက်စားမှုသောက်မှုဆိုင်ရာ တွဲဖက်ပေါင်းစပ်ထားသော စကားလုံးများဖြစ်သည်။ ရပ်ကွက်သူ၊ ရပ်ကွက်သားသာမက တက္ကသိုလ်ကျောင်းသူ၊ ကျောင်းသားများလည်း အများဆုံးဖန်တီးသုံးစွဲမှုကိုတွေ့ရသည်။ တွဲဖက်ပေါင်းစပ်ရာတွင် မူလစကားလုံးများသည် ပေါင်းစပ်စကားလုံး၏ ရှေ့မှသော်လည်းကောင်း၊ နောက်မှသော်လည်းကောင်း ပေါင်းစပ်ဖွဲ့စည်းထားပုံကို တွေ့ရသည်။ ပေါင်းစပ်ခြင်းဖြင့် မြန်မာဘာသာစကားရှိ စကားလုံးသစ်များပွားများလာရသည်။

## ၂-၃။ အတိုကောက်အသုံးပြုခြင်း။

ဒဂုံတောင်နယ်မြေအတွင်း၌လည်း အတိုကောက်ပြုလုပ်အသုံးပြုသော ဝေါဟာရများစွာရှိ ပါသည်။ ဘာသာစကား၏ အတွင်းပြောင်းလဲမှုတွင် အတိုကောက်အသုံးပြုခြင်းကိုလည်းများစွာ တွေ့နိုင်သည်။ စကားပြောဆိုရာတွင် လေးဖင့်ခြင်း၊ ပျင်းရိခြင်းကို ပြေပျောက်စေရန်အတွက် စကားလုံး အစိတ်အပိုင်းကို အတိုကောက်အသုံးပြုခြင်း ဖြစ်လာနိုင်သည်။ အတိုကောက်အသုံးပြုရာတွင် ဘာသာစကားကိုလိုက်၍ အတိုကောက်အသုံးပြုပုံကို လေ့လာနိုင်သည်။<sup>၁</sup> မြန်မာအဘိဓာန်အကျဉ်းချုပ်တွင် “အတိုကောက်” ဟူသော စကားလုံးသည် “နည်းနိုင်သမျှ နည်းအောင် ချဲ့ထားသောစကားလုံး(သို့)စာ”ကို ဆိုလိုသည်။<sup>၂</sup> အတိုကောက် စကားလုံးနှင့် အခြားအတိုကောက် စကားလုံးတို့ကို တွေ့ရပါသည်။

<sup>၁</sup> အောင်မြင့်ဦး၊ ဒေါက်တာ၊ ၂၀၀၃၊ ၁၂၈

<sup>၂</sup> မြန်မာအဘိဓာန်အကျဉ်းချုပ်၊ ၁၉၈၀၊ ၅၇



### ၂-၃-၁။ စားသောက်မှုဆိုင်ရာ အတိုကောက်အသုံးပြုခြင်း။

ဒဂုံတောင်နယ်မြေတွင် စားမှုသောက်မှုဆိုင်ရာ အတိုကောက်စကားလုံးသုံးစွဲမှုကို တွေ့ရသည်။ အတိုကောက် စကားလုံးသုံးစွဲမှုမှာ လူမှုဆက်သွယ်ရေးကို လျှင်မြန် ထိရောက်စေသည်။ စားသောက်မှုဆိုင်ရာ အတိုကောက်အသုံးများမှာ-

ရှမ်းခေါက်ဆွဲ(ကြက်)	- ကြက်ရှမ်း
ကြာဆန်ချက်(၁)	- ချက်(၁)
ကြာဆန်ချက်(၂)	- ချက်(၂)
ပေါင်မုန့်ကြော်	- ပေါင်ကြော်
ခေါက်ဆွဲကြော်	- ခေါက်ကြော်(သို့) ကြက်ခေါက်
မိုက်ကန်စွန်းရွက်ကြော်	- မိုက်ကန်စွန်း
ခေါက်ဆွဲသုပ်	- ခေါက်သုပ်
ထမင်းကြော်ပေါ် ကြက်ဥမွှေးအုပ်	- မွှေးကြော်မိုး(သို့)မွှေးကြော်အုပ်
မလေးရှားခေါက်ဆွဲ(ကြက်)	- ကြက်မလေး
မလေးရှားခေါက်ဆွဲ(ဝက်)	- ဝက်မလေး
ကြက်ဥပေါင်မုန့်ကြော်	- ကြက်ပေါင်
စားသောက်သူကိုရှေ့ထွက်ကြိုဆိုသူ	- ရှေ့ထွက်

စသည်တို့သည် မူလဝေါဟာရမှ အစိတ်အပိုင်းအချို့ကို အတိုကောက် အသုံးပြုခြင်းဖြစ်သည်။

### ၂-၃-၂။ အခြားသော အတိုကောက်အသုံးများ

စားမှုသောက်မှုအတိုကောက်အသုံးအပြင် အခြားသော အတိုကောက်အသုံးများကိုလည်း လူမှုဘဝ သုံးစွဲမှုတွင် တွေ့ရသည်။ အခြားအတိုကောက်အသုံးများမှာ-

မြန်မာ့မီးရထား	- မမ
ကုန်းလမ်းပို့ဆောင်ရေး	- ကပရ
လူဝင်မှုကြီးကြပ်ရေး	- လဝက
ပါမောက္ခချုပ်	- ပါချုပ်
ဒုတိယပါမောက္ခချုပ်	- ဒုပါချုပ်(သို့)ဒုချုပ်
အခြေခံမူလတန်းကျောင်း	- အမက
အခြေခံပညာအထက်တန်းကျောင်း	- အထက
တက္ကသိုလ်ဝင်တန်း	- (၁၀) တန်း

စသည့်စကားလုံးများသည် အခြားအတိုကောက်စကားလုံးများဖြစ်သည်။ ထိုအတိုကောက် စကားလုံး သုံးစွဲခြင်းဖြင့် လူမှုဆက်သွယ်ရာတွင် လျှင်မြန်ထိရောက်စေသည်။



## ၂-၄။ အနက်ချဲ့ထွင်ခြင်း။

ဘာသာစကားကိုဆက်သွယ်ရေးစနစ်တစ်ခုအဖြစ် ရှုမြင်လျှင် တစ်ဦးနှင့်တစ်ဦးပြောဆို ဆက်သွယ်သော အကြောင်းအရာသည် အနက်အဓိပ္ပာယ်ဖြစ်သည်။<sup>၁</sup> အဓိပ္ပာယ်ကို ဂျက်ပရီလီချ်က ခုနှစ်မျိုးခွဲခြားပါသည်။<sup>၂</sup> ဘာသာစကားကို လူ့အဖွဲ့အစည်းနှင့် ဆက်စပ်လေ့လာသောအခါတွင် ထိုအဓိပ္ပာယ် အမျိုးမျိုးတို့သည် အစဉ်သဖြင့် သီးခြားပြတ်သားစွာရှိနေခြင်းမဟုတ်ဘဲ စကားတစ်ရပ်တည်းမှာပင် တစ်ပြိုင်တည်းရှိနေနိုင်သဖြင့် တစ်သားတည်းဖြစ် နေသော အဓိပ္ပာယ်အလွှာများဖြစ်ကြောင်း တွေ့ရပါသည်။<sup>၃</sup> ဘာသာစကား၏အတွင်းပြောင်းလဲမှုတွင် အနက်ချဲ့ထွင် ခြင်းလည်းတွေ့နိုင်သည်။ လူမှုကိစ္စတစ်ခုပေါ်လာတိုင်း စကားလုံးအသစ်တီထွင်ခြင်းသည် လွယ်ကူသောကိစ္စရပ် မဟုတ်ပေ။ ထိုသို့ကိစ္စရပ်တစ်ခုပေါ်တိုင်း စကားလုံးအသစ်တစ်ခုပေါ်နေလျှင် စကားလုံးများ အလွန်များပြားလာပြီး မှတ်သားရန်ခက်ခဲလာမည်ဖြစ်သည်။ ထို့ကြောင့် အချို့ကိစ္စရပ်များတွင် ရှိပြီးသားစကားကို အနက်ချဲ့ထွင်ကာ ဆန်းသစ်အသုံးပြုလာသည်။<sup>၄</sup> ဒဂုံတောင်နယ်မြေတွင် မူလအနက်အဓိပ္ပာယ်မှ အနက်ချဲ့ထွင် အသုံးပြုသောဝေါဟာရ များရှိသည်။ အနက်ချဲ့ထွင်သော ဝေါဟာရများတွင် လုပ်ဆောင်မှုဆိုင်ရာ ဝေါဟာရများကို အောက်ပါအတိုင်း တွေ့ရှိရသည်။

## ၂-၄-၁။ လုပ်ဆောင်မှုဆိုင်ရာအနက်ချဲ့ထွင်ခြင်း

လူမှုဆိုင်ရာ အသုံးများတွင် လုပ်ဆောင်မှုဆိုင်ရာ အနက်ချဲ့ထွင်ခြင်းဖြင့် သုံးစွဲသောဝေါဟာရများ ကို တွေ့ရသည်။ ထိုလုပ်ဆောင်မှုဆိုင်ရာ အနက်ချဲ့ထွင်ခြင်းစကားလုံးများကြောင့် ဘာသာစကားပြောဆိုရာတွင် လွယ်ကူထိရောက်မှုရှိခြင်း၊ အနက်အဓိပ္ပာယ်လည်း ထင်းကနဲသိလွယ်စေပါသည်။ ဒဂုံတောင်နယ်မြေရှိ လုပ်ဆောင်မှုဆိုင်ရာ အနက်ချဲ့ထွင်ခြင်း စကားလုံးများမှာ အောက်ပါအတိုင်း ဖြစ်ပါသည်။

ကုန်ကျစရိတ်ဂရုမစိုက်ခြင်း (ငွေကြေး)	- ပါးပါးလေး၊
ပြဿနာရှာဖွေသည်	- ကျွိုင့်
အရှက်တကွဲအကျိုးနည်းအောင်လုပ်	- ထောက်ဖြုတ်
အပြင်မထွက်ဘဲ အိမ်မှာနေသူများ	- ဥမယ်
လေများသည်၊ လေကြီးသည်	- ဖောတယ်၊
သူတစ်ပါးကို လူလည်ကျခြင်း	- အချဉ်ဖောက်
ယောက်ျားနှင့်မိန်းမကားပေါ်မှဆင်း	- ဘယ်/ညာဆင်း
ဈေးရောင်းမကောင်းဖြစ်	- ငုတ်တုတ်မေ့
အများတကာနှင့် ဆန့်ကျင်ပြောသူ	- ဖိုက်တာ
လိုအပ်သည့်အတိုင်းအတာထက် ပိုမိုများ	- ဗုံးကြဲ
လိုအပ်သည့်စကားကို ပိုမိုနားမခံသောအောင်ပြောဆိုခြင်း	- ဂျပန်မူလီ

စသည့် စကားလုံးတို့သည် မူလအဓိပ္ပာယ်မှ ချဲ့ထွင်ကာ အသုံးပြုသော ဝေါဟာရများဖြစ်သည်။ ဤနည်းအားဖြင့် ရှင်သန်လျက်ရှိသော ဘာသာစကားတိုင်းသည် ပြောင်းလဲမှုများ ဖြစ်ပေါ်နေသည်။ ယင်းသည် ဝေါဟာရအဆင့်တွင် ပြောင်းလဲမှုပင်ဖြစ်သည်။

<sup>၁</sup> ခင်အေး၊ ဒေါက်တာ ၂၀၀၄၊ ၃၄

<sup>၂</sup> Leech, Geaffrey.

<sup>၃</sup> Leech, 1974, 10

<sup>၄</sup> သိန်းနိုင်၊ ဒေါက်တာ၊ ၂၀၀၇၊ ၁၈

<sup>၅</sup> အောင်မြင့်ဦး၊ ဒေါက်တာ၊ ၂၀၀၃၊ ၁၂၉-၁၃၀



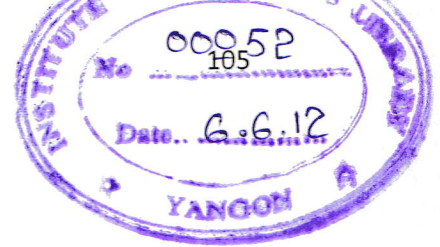
### ခြုံငုံသုံးသပ်ချက်

ဘာသာစကားဖွံ့ဖြိုးမှုတွင် ဝေါဟာရ ပြောင်းလဲရပ်တည်မှုသည်လည်း အရေးပါသော ကဏ္ဍတစ်ရပ် ဖြစ်သည်။ လူမှုအဖွဲ့အစည်း၏ ဝေါဟာရစကားလုံးတို့သည် အသုံးပြုသည့် လူမှုအခြေအနေအမျိုးမျိုးကြောင့် ခေတ်အဆက်ဆက်ပြောင်းလဲဖွံ့ဖြိုးလာတတ်သည်။ ထိုသို့ ပြောင်းလဲဖွံ့ဖြိုးလာမှသာ ဘာသာစကားသည် ကျယ်ပြန့်လာ ပါသည်။ ပြောင်းလဲဖွံ့ဖြိုးလာသော ဝေါဟာရများသည် အကြောင်းမဲ့ ခေါ်ခြင်းမဟုတ်ဘဲ ကြောင်းကျိုးဆက်နွယ်ကာ ဖန်တီးအသုံးပြုထားခြင်းဖြစ်သည်။ သုံးစွဲသည့် လူမှုအခြေအနေအမျိုးမျိုးကြောင့် ဘာသာစကားအတွင်းပြောင်းလဲမှု သဘောများကို ဤစာတမ်းတွင် အပိုင်းလေးပိုင်းခွဲ၍ တင်ပြထားခဲ့သည်။ စကားလုံးအသစ်တီထွင်ခြင်းနှင့် ပတ်သက်၍ စားသုံးသူနှင့် ရောင်းသူတို့၏ လူမှုအခြေအနေကြားစကားလုံးအသစ်သုံးစွဲမှုကို ဖော်ပြခဲ့သည်။ ဥပမာပြရသော် “သံပုရာရည်ချဉ်ချဉ်”ကို “တိုက်ကြီးဂိတ်ဆုံး”ဟု စကားလုံး အသစ်ဖန်တီးခဲ့သည်။ တိုက်ကြီးဆိုသည်မှာ သံပုရာထွက်ရှိရာဒေသကို ဆိုလိုသည်။ ဂိတ်ဆုံးဆိုသည်မှာ နောက်ဆုံးရောက်ရှိရာဒေသ၊ အမြင့်ဆုံးဖြစ်ပါသည်။ ယခုသံပုရာရည်လည်း အချဉ်ဆုံးဟု ယူဆထားသည်။ ထို့ကြောင့် လူမှုအခြေအနေကြောင့် စကားလုံးများကို ကြောင်းကျိုးဆက်နွယ်ကာ ဘာသာစကားပြောင်းလဲဖန်တီးထားပုံကို တွေ့ရပါသည်။ ထို့ပြင် ပို့ဆောင်ရေးအခြေအနေ တွင်လည်း ယာဉ်နောက်လိုက်နှင့် ခရီးသည်ဖန်တီးလုပ်ဆောင်မှုများကို တွေ့ရပါ သည်။ ဥပမာပြရသော် ယာဉ်နောက် လိုက်က မိန်းမကြီးတစ်ဦးနှင့် ကလေးတစ်ယောက် ယာဉ်ပေါ်မှဆင်းမည်ဆိုရာတွင် ယာဉ်မောင်းအား “လိုက်ပွဲပါတယ်”ဟု ပြောဆိုဆက်သွယ်မှုကို တွေ့ရပါသည်။ ထိုသို့ “လိုက်ပွဲ”ဟု သုံးသဖြင့် ယာဉ်မောင်းသူ နားလည်ခဲ့ပုံကို တွေ့ရပါသည်။ ထို့ပြင် အခြားလူမှုအခြေအနေအရပ်ရပ်ကြောင့် ဘာသာစကားအတွင်း ပြောင်းလဲမှု သဘောကို တင်ပြထားပါသည်။ ထို့ကြောင့် ဘာသာဗေဒ၏ အကိုင်းအခက်တစ်ခုဖြစ်သော လူမှုဘာသာဗေဒသည် ဘာသာစကားနှင့် လူ့အဖွဲ့အစည်းကြားရှိ အပြန်အလှန်ဆက်စပ်မှုကဏ္ဍတွင် အလွန်အရေးပါသော အခန်းကဏ္ဍတစ်ရပ် ဖြစ်ပါသည်။

### နိဂုံး

ဤစာတမ်းသည် စာတမ်းငယ်တစ်စောင်သာဖြစ်သည့်အတွက် ပြီးပြည့်စုံနိုင်မည်မဟုတ်ပါ။ ဒဂုံတောင် နယ်မြေအတွင်းရှိ စကားလုံးအသစ်များ ပြောင်းလဲပုံကို လူမှုဘာသာဗေဒရှုထောင့်မှ တင်ပြထား ခြင်း ဖြစ်ပါသည်။ ဘာသာစကားဖွံ့ဖြိုးမှုတွင် ဝေါဟာရပြောင်းလဲမှုသည်လည်း အဓိက ပါဝင်နေကြောင်း သိရှိနိုင်စေရန် လေ့လာတင်ပြ ထားခြင်းဖြစ်ပါသည်။ ထို့ပြင် နေ့စဉ်သုံး မြန်မာဘာသာစကားသည်လည်း အမြဲတမ်းအထိုက်အလျောက် ရှင်သန် ပြောင်းလဲနေသည်ကို သိရှိစေရန် ရည်ရွယ်ပါသည်။ ထိုသို့ ရှင်သန်နေသောအရာအားလုံးသည် ပြောင်းလဲမှု ဖြစ်ပေါ်နိုင်သည်။ ထိုပြောင်းလဲလာသော ဘာသာစကား၏ ဝေါဟာရစကားလုံးများကြောင့် ဘာသာစကားသည် ပိုမိုကျယ်ပြန့်လာသည်။ ထို့ကြောင့် မြန်မာဘာသာစကားကိုလည်း လူမှုပတ်ဝန်းကျင်တွင် ကျွမ်းကျင်စွာ အသုံးပြု နိုင်ကြလိမ့်မည်ဟု ယူဆမိပါသည်။





### ကျမ်းကိုးစာရင်း

#### မြန်မာဘာသာ

၁။ ခင်မင်၊ မောင်(ဓနုဖြူ) (၁၉၉၇)

၂။ ခင်မင်၊ မောင်(ဓနုဖြူ) (၂၀၀၄)

၃။ ခင်အေး၊ ဒေါက်တာ

၄။ တင်လှ၊ ဦး

၅။ မြန်မာစာအဖွဲ့

၆။ သိန်းနိုင်၊ ဒေါက်တာ

၇။ အောင်မြင့်ဦး၊ ဒေါက်တာ

စကားသမုဒ္ဒရာစာသမုဒ္ဒရာ၊ ရန်ကုန်၊ မြေမြင်းပုံနှိပ်တိုက်။

မြန်မာစကား၊ မြန်မာစာရုပ်ပုံလွှာ၊ ဒုတိယအကြိမ်၊ ရန်ကုန်၊  
ပုံနှိပ်တိုက်။

(၂၀၀၄)၊ အတ္ထဗေဒနိဒါန်း၊ ရန်ကုန်၊

ပညာတန်ဆောင်ပုံနှိပ်တိုက်။

(၁၉၇၀)၊ တက္ကသိုလ်ပညာပဒေသာစာစောင်၊ အတွဲ ၅၊

အပိုင်း-၃၊ ရန်ကုန်၊ ဘာသာပြန်နှင့် စာအုပ်ထုတ်ဝေရေး၊

(၁၉၈၀)၊ မြန်မာအဘိဓာန်အကျဉ်းချုပ်၊ ရန်ကုန်၊

ပညာရေးဝန်ကြီးဌာန

(၂၀၀၇) အမျိုးသား၊ အမျိုးသမီးတို့၏ ဘာသာစကား၊

အပြုအမူ ပါရဂူဘွဲ့အတွက် တင်သွင်းသောကျမ်း၊

မြန်မာစာဌာန၊ ရန်ကုန်တက္ကသိုလ်၊

(၂၀၀၃)၊ လူမှုဘာသာဗေဒမိတ်ဆက်၊ ရန်ကုန်၊

ပညာတန်ဆောင်ပုံနှိပ်တိုက်။

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