



TABINAJ INVESTIGATION REPORT ON

Zarda and Gul: Smokeless Tobacco Products in Bangladesh



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Supported by



Campaign for Tobacco-Free Kids (CTFK)

*November, 2013
Dhaka, Bangladesh*

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Acknowledgement

We acknowledge with great appreciation the cooperation of tobacco control group, particularly those of Bloomberg Initiative grantees for giving their valuable comments and encouragement at different stages, particularly at the beginning of the study. We, however, would like to mention the contribution of Taifur Rahman, Advocacy and Media Coordinator (Bangladesh) of CTFK, Eva Naznin, Program Manager of CTFK; Iqbal Masud, Assistant Director, Dhaka Ahsania Mission; Ruhul Amin Rushd, Convener, Anti -Tobacco Alliance; Ibnul Sayeed Rana, Chairman, Nirapad Development Foundation; Dr. Hasan, National Heart Foundation; Rabiul Islam, Action in Development (Aid); TABINAJ members; Ubinig and Narigrantha Prabartana.

We are responsible for all the errors and weaknesses in the report.

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Introduction

Bangladesh is one of the 11 countries in South and South East Asia Region, which comprises 90 percent of global smokeless tobacco users. Given the high number of users and the serious health consequences of tobacco use, these countries have set a target to reduce 30 percent in prevalence among persons over 15 years of age. In terms of number, almost 250 million adults consume smokeless tobacco in these 11 countries. These countries are Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste (primenews.com.bd, Accessed on September 11, 2013)

As women are the major users of smokeless tobacco products, this investigative study carried out by Anti-Tobacco Women's Alliance called the *Tamak Birodhi Nari Jote* (TABINAJ) is very significant. Twenty two TABINAJ member organizations in 38 districts of 7 divisions of the country got directly involved in the study under the guidance of its secretariat, *Narigrantha Prabartana*. They took two very commonly used smokeless products Zarda and Gul, for which the production factories could be identified. It became at the same time an action research for generating information for awareness building and for developing policy issues. There is hardly any information available on the production of the smokeless tobacco products. This study is limiting itself into production and its economic aspects at this stage, with information on labours. The study on users has been done in a limited way. However, this study is a first of its own kind in the country.

1.1 The Consumers of Smokeless Tobacco

Smokeless tobacco includes a significant and growing portion of global tobacco use, especially in South Asia. Over 25 distinct types of smokeless tobacco products are used worldwide, including both commercialized and local or home-grown products, used orally and nasally. Some products combine tobacco with substantial amounts of chemical additives and other plant materials that may confer additional risk to the user [Tobacco ATLAS].

In some countries, like Finland and Egypt, men use smokeless tobacco products in much greater numbers than women because such products are perceived as masculine; in countries like South Africa, Thailand, and Bangladesh, women use smokeless tobacco products more than men because they are seen as a discreet way to consume tobacco [Tobacco ATLAS].

Over 13 million women in Bangladesh consume tobacco products in smokeless forms that cause various diseases, particularly oral cancer. The number is higher than that of men using smokeless tobacco. Around 700,000 to 750,000 women in the country are smokers [Daily Sun, 1 January, 2011]. Studies in Bangladesh, India, Indonesia, Sri Lanka and Thailand have revealed that both smoking and smokeless tobacco use are more prevalent among less educated and illiterate population, poor in general [primenews.com.bd , Accessed on September 11, 2013].

The concerns and the campaign against tobacco use are until now centred around the tobacco use in general which according to ITC National Report, 2010¹ has "increased considerably compared to 5 years ago." The number of people using tobacco in Bangladesh is 41.1 million. According to the Global Adult Tobacco Survey (GATS)² in Bangladesh (2009) there are 43.3% of adults (41.3 million) are using tobacco in smoking and/or smokeless form. The gender disaggregation shows that 44.7% of men and 1.5% of women are using smoking tobacco. On the other hand, among the 25.9 million adults (27.2%) of

¹ ITC, Project (April 2010). ITC Bangladesh National report University of Waterloo, Ontario, Canada; University of Dhaka, Bangladesh

² Fact Sheet Bangladesh: 2009 Global Adult Tobacco Survey, GATS, by the Government of Bangladesh, NIPSOM, WHO, CDC, mpower and GTSS

smokeless tobacco users, there are more women (27.9%) than men (26.4%). The percentage is higher among rural women (29%), i.e. over 14 million.

1.2 The smokeless tobacco products

People are familiar with different smoking and smokeless tobacco products. There are many different ways of applications of smokeless tobacco products including chewing, sniffing, placing the product between the teeth and gum, and application to the skin.

According to Smokeless Tobacco Fact Sheet, smokeless tobacco products have been in existence for thousands of years among populations in South America and Southeast Asia. Over time, these products have gained popularity throughout the world. These are consumed without burning the product, and can be used orally or nasally. Oral smokeless tobacco products are placed in the mouth, cheek or lip and sucked (dipped) or chewed. Tobacco pastes or powders are used in a similar manner and placed on the gums or teeth. Fine tobacco powder mixtures are usually inhaled and absorbed in the nasal passages.³

1.3 Types of smokeless tobacco & different ways of consumption

There are many types of smokeless tobacco found and used in different countries of the world as found in Smokeless Tobacco Fact Sheet. In this report we are giving examples of those that are found and used in Bangladesh as well.*

i. Gul

BRAND NAMES: None, Bangladesh has brand names

COMMON NAMES: Gadakhu, In Bangladesh called Gul.

GEOGRAPHIC LOCATION OF USE: Central and Eastern India, Bangladesh

PRODUCT CONSTITUENTS: tobacco powder, molasses, other ingredients

HOW USED: Often used for cleaning teeth.

WHO USES: Primarily women. In Bangladesh men also use gul.

PROCESSING / MANUFACTURING: Commercially manufactured. Since 1986, gul has been machine produced and sold in toothpaste-like tubes.

ii. Khoini

BRAND NAMES: Raja, Kuber

COMMON NAMES: None

GEOGRAPHIC LOCATION OF USE: Bihar (India), Western and central states of India, Maharashtra (India), Bangladesh

PRODUCT CONSTITUENTS: tobacco, slaked lime paste, 3 sometimes areca nut

HOW USED: Held in the mouth, in a similar manner to moist snuff. The product is kept in the mouth for 10 to 15 minutes and sucked from time to time.

³Smokeless Tobacco Fact sheet, 3rd International Conference on Smokeless Tobacco, Advancing Science and Protecting Public Health, 22-25 September, 2005, Stockholm, Sweden]

* Information on Bangladesh is added by Tobacco researchers

WHO USES: Most common among men but used by women as well.

PROCESSING / MANUFACTURING: Powdered tobacco and slaked lime paste are combined by the user in his/her palm and formed into a ball. Areca nut is sometimes added.

Usually prepared by a user from basic ingredients at the time of use.

iii. Pan Masala (betel quid)

BRAND NAMES: Manikchand, Mahak, Pan Parag #1, Vimal, Crane, Rajdarbar, Kuber, Yamu, Badshah, Tulsi, Rahat, Pan King, Jubilee, Kanchan, Pan Mashla

COMMON NAMES: betel quid

GEOGRAPHIC LOCATION OF USE: India, Sri Lanka, Pakistan, Bangladesh, Myanmar,

Thailand, Cambodia, Malaysia, Singapore, Indonesia, Philippines, New Guinea, Taiwan, China

PRODUCT CONSTITUENTS: Tobacco, areca nuts, slaked lime, betel leaf. Flavoring agents such as menthol, camphor, sugar, rosewater, aniseed, mint, or other spices are sometimes added in different regions.

HOW USED: A quid is placed in the mouth (usually between the gum and cheek) and gently sucked and chewed. Pan masala is sometimes served in restaurants after the meal.

WHO USES: Most common among women, but used by men as well.

PROCESSING / MANUFACTURING: Commercially prepared, vendor prepared or assembled at home. 5 Areca nut is boiled, roasted, or sun-dried. 3 Tobacco may be used raw, sun-dried, and roasted, then finely chopped, powdered and scented. Alternatively, the tobacco may be boiled, made into a paste and scented with rosewater or perfume. To assemble, slaked lime and catechu are smeared on a betel leaf. The betel leaf is folded into a funnel shape and tobacco, areca nut and any other ingredients are added. The top of the funnel is folded over, resulting in a quid, which is placed in the mouth for use.

iv. Zarda

BRAND NAMES: Baba, Bharat, Gopal, Hakimpuri, Veeja pati

COMMON NAMES: None

GEOGRAPHIC LOCATION OF USE: India, Arab countries, Bangladesh

PRODUCT CONSTITUENTS: tobacco, lime, spices, vegetable dyes, areca nut

HOW USED: Often used as ingredient in betel quid. Chewed.

WHO USES: Men and women in middle to upper socio-economic groups.

PROCESSING / MANUFACTURING: Tobacco leaves are broken up and boiled with lime and spices. The mixture is dried and coloured with vegetable dyes, then mixed with finely chopped areca nuts.

The Smokeless tobacco fact sheet does not mention Bangladesh as users for these products. This is perhaps due to lack of information about the type of products produced and used by people in Bangladesh.

For Bangladesh, the smokeless tobacco products include the following:

Table 1: Zarda and Gul Common brand names & production set up

Common Name	Brand names	Production
Zarda	Ratan, Hakimpuri, Baba, Akij etc	Factory/home setup
Gul	Shahi eagle Gul, Mustafa Gul Special Bag gul etc.	Factory/home setup
Sada Pata (plain tobacco leaves)	No brand name,	Tobacco farmers/traders keep for a year
Alapata or Gundi	No brand name	Plain tobacco leaves with roasted rice, & flavour spice ingredients
Khoini	No brand name	Information not available
Pan Mashla	Pan Parag, Bilash Parag, Pan Mashla	Produced in Zarda factory without using tobacco directly

1.4 Harmful effects of the use of smokeless tobacco

There are already known harmful effects of smokeless tobacco consumption. According to the World Health Organization (WHO), oral cancer is the most common cancer caused by smokeless tobacco and the SE-Asia Region carries the highest burden of oral cancer with over 95,000 cases each year. According to International Agency for Research on Cancer (IARC) over half of all oral cancers in Asia are caused by tobacco. Oral cancer affects the poor, who have a greater exposure to smokeless tobacco.

Smokeless tobacco is associated with a 2–4 times increase in risk for cardiovascular diseases. Asian studies indicate that mortality risk for women who consume smokeless tobacco is higher than that for men. Use of smokeless tobacco in pregnancy is linked to stillbirths and has 2–3 times higher risk of low birth weight babies [DNA, September 11, 2013].

Other health effects of smokeless tobacco use include caries of tooth, receding of gums, high blood pressure, a debilitating condition known as oral sub-mucous fibrosis (OSF), and cancers of the mouth and food pipe.

These, however, add burden of medical costs. In India, according to a study, the direct medical costs of treating smokeless tobacco-related diseases in India amounted to US\$ 285 million, while the indirect costs of smokeless tobacco use amounted to US\$ 104 million in 2004 [primenews.com.bd, Accessed on September 11, 2013]. In Bangladesh, such cost calculations are not made, but this is a silent and ignored disease suffered by men and women among the poorer section of the population.

1.5 Inclusion of smokeless tobacco in the law amendment – gaps and needs

According to the WHO Framework Convention on Tobacco Control (FCTC) “tobacco products” means products entirely or partly made of the leaf tobacco as raw material which are manufactured to be used for smoking, sucking, chewing or snuffing.

Bangladesh was the first signatory of the FCTC in 2003. After ratifying it in 2004, Bangladesh introduced the 'Smoking and Tobacco Products Uses (Control) Act 2005' and developed Rules under this law in 2006. One of the biggest weaknesses of the earlier law was that it didn't include smokeless tobacco products. So, it was difficult to apply legal provisions to the products consumed by a majority of Bangladeshis, including powdered tobacco (gul) and chewing tobacco (Zarda and khoini). The new law "Smoking & tobacco products uses (Control) (Amendment) Bill 2013" passed parliament on 29 April 2013. Under the new amendment, all kinds of smokeless tobacco came under law. Accordingly leaves, roots, branches and other parts of tobacco or such plants should be treated as intoxicants. In addition to smoking tobacco, tobacco powder (gul), aromatic tobacco (Zarda), processed tobacco (khoini) and plain leaves (Sada pata) of tobacco will be considered as tobacco products. It means, the amendment has brought the smokeless tobacco products under the purview of the law so that all regulations will equally be applied to control of smokeless tobacco products.

This investigative study will help implement the law for control of use of the smokeless tobacco products as well as to raise awareness about the existence of the law. Through this the anti-tobacco movement will achieve significant progress in raising awareness against both smoking & smokeless tobacco products.

So far the Anti-tobacco campaign was mostly focused on smoking and thereby did not take into account the use of smokeless products, which is more prevalent among the poor men and particularly among women. The health complaints are becoming more and more visible when the doctors being conscious of such hazards are taking the history of patients coming with oral cancer and other diseases.

TABINAJ and its role in protecting women from harmful effects of tobacco

Women are victims of tobacco production and consumption. The harmful effects of tobacco from smoking are well documented for men as users but little for women as being involved in production and consumption of those products. In addition, women are victims of smokeless tobacco not only through its consumption but also through their involvement in the process of tobacco cultivation, processing and production.

The involvement of women at the production level of tobacco products starting from cultivation of tobacco leaves, processing of zarda, gul etc. and bidis are already visible in the respective areas. However, the effects on women's health and their social condition have been less focussed in the tobacco control advocacy and campaign activities for lack of information and because of non-involvement of women in the movement. Tobacco cultivation is expanding in agricultural lands. During 2009 to 2010, over 74,000 hectares of agricultural land were used by the persuasion of the Tobacco companies in six districts and expanding in many others⁴. Women and children are involved in tobacco cultivation works as unpaid family labours. Similarly in the areas where bidi factories are operating, women along with children are engaged as cheap labour. According to a study⁵, there is an overestimate of actual number of bidi workers often hidden under direct and indirect or associate labourers in the bidi factories. While the direct labourers are paid by the factories, indirect or associate labourers generally include the family members, relatives and neighbours of the direct workers and are paid from the wage of the direct factory workers. For each direct factory worker there is 3.5 associate workers and therefore receive a little share of the Tk. 140 – 200 per day (highest level of productivity). The study shows an earning of Tk. 9 to 20 per day by the indirect worker who are often women and children.

⁴UBINIG, "Extensive cultivation of tobacco is creating food crisis in Bangladesh" by Farida Akhter, April, 2010

⁵Amin Al Rashid & Sushanta Sinha Bidi in Bangladesh: Myths and Reality: The Bidi producing sector in Bangladesh, Campaign for Tobacco Free Kids, Bloomberg Global Initiative to Reduce Tobacco, April 2012

These unpaid labour cost and the subsequent impact on their health are not counted in the tobacco production calculations and thereby show huge profit.

'Tamak Birodhi Nari Jote' in short TABINAJ is the Bengali name for Anti-Tobacco Women's Alliance which was formed in 2010 by women's organisations around the country with its secretariat in Narigrantha Prabartana, a women's resource centre affiliated with UBINIG. Besides working on the issues of anti-smoking campaign, TABINAJ had to concentrate on smokeless tobacco products, which includes products like Zarda, Gul, Sadapata, etc. For smokeless tobacco production, TABINAJ focussed on the production process in the factories because of the involvement of women and children as cheap and exploited labour.

Since its formation, TABINAJ has so far created a huge support base of women for the advocacy for law amendment with the members of Parliament (Reserve Seats) especially to include the smokeless tobacco into the definition of tobacco products. As victims of smokeless tobacco women have played a very important role in strengthening the tobacco control law and can help in the implementation of the laws and policies related to tobacco control.

TABINAJ is also taking actions to create awareness about the effects of smokeless tobacco among women users and to stop advertisements of Zarda, Gul etc. and to provide information on the packets about the harmful effects. Currently, as these smokeless tobacco products were not recognized in the law, the regulations including the advertising bans and pack warnings did not apply to these products. So it was important that the efforts of law amendment put sufficient emphasis in including the smokeless tobacco in the law and apply all regulations to those products. TABINAJ participated and lobbied at relevant policy making bodies for amendment. Finally the amended law recognises the "smokeless tobacco products" for regulation. TABINAJ will continue advocating for greater protection of women from harms of tobacco through enforcement of stronger laws and policies

Smokeless Tobacco Products in Bangladesh

This study was carried during April to September, 2012 by TABINAJ members with coordination by Narigrantha Prabartana with the sponsorship of Campaign for Tobacco Free Kids (CTFK). It was done in the context of the process of tobacco control law amendment. It was found that there is very little information on the smokeless tobacco products. A lot of samples of smokeless tobacco products could be found in the market and the users are there for these products. However, very little information is available on its production, sale and distribution. This is an investigative study rather than a full research.

Objectives of the study:

The main objective of the investigation was to assess the implementation of existing laws in the light of amendment and to collect information on production, sale and use of smokeless tobacco products.

Specific objectives were to collect information on smokeless tobacco products and to provide those to activists involved with tobacco control and work on policy level.

However, in this study, the objective was narrowed down to focus more on the production (that is the supply side) of the smokeless tobacco products in order to understand the extent and nature of the supply side and therefore assess the use of these products. Also in order to understand the application of the tobacco control law (as amended) this study will help in developing the rules to protect the users from its harmful effects.

Methodology

Very few literature and formal studies are available on the smokeless tobacco products. Developing research design and methodology in this area is new and challenging. After some initial discussions, it was decided to focus on the supply of smokeless products. However, as use of smokeless tobacco is higher among women than men, and also it happens at a “private sphere” i.e. on the households settings, it is difficult to have data on its extensive use. Among the various types of smokeless tobacco products, two most commonly used products Zarda and Gul were selected as these are found to be most commonly used. No one is hiding the fact about the use of zarda and Gul, as these are not “prohibited” under the law and also socially and culturally accepted. It is still not seen as “addiction” or “harmful” and socially offensive behaviour. The consumption of betel-leaf (pan) is associated with the consumption of Zarda. So this has some relation with “food” because it is consumed right after eating of a meal.

Zarda and Gul are found in any shop of pan (Betel leaf) without any restriction and has not been considered as “tobacco product” under the law. It is interesting to note that the small shop selling cigarettes, bidi and pan with Zarda are together, often called “Pan-bidi dokaan” i.e. shops selling smoking and smokeless products. These two products are produced in factories that can be identified through the printed information on packets. As a first step of knowing about the extent of production of smokeless tobacco products, Zarda and Gul seemed to be most suitable.

TABINAJ members decided to carry out a country-wide information collection on the production of Zarda and Gul. However, the factories are spread over in different parts of country. But they are also not quite easily identified. The steps followed for information collection were the following:

1. Selection of TABINAJ members for Field level investigation

As the secretariat of TABINAJ, Narigrantha Prabartana, coordinated the field information collection by TABINAJ members in 38 districts of 7 divisions of the country. Twenty two TABINAJ member organizations were involved with the collection of information on Zarda/Gul factories. In most cases it was Zarda factory and few cases of both Zarda and Gul factory. The district covered in the research include Narshingdi, Gazipur, Lakshmipur, Noakhali, Jessore, Lalmonirhat, Mymenshigh, Patuakhali, Barguna, Khulna, Bagerhat, Jalokati, Sirajganj, Manikganj, Kurigram, Bogra, Chapainabganj, Tangail, Moulavibazar, Feni, , Rajshahi, Brahmanbaria, Comilla, Chandpur, Naogaon, Gaibandha, Pabna, Kushtia, Madaripur, Shariatpur, Khagrachori, Rangpur, Nilfamari, Chittagong, Kishorgonj, Jamalpur, Netrokonaand Dhaka.

2. Training Workshop on field information collection

- a. A day long training-workshop was held on 24 March 2013 at UBINIG office in Dhaka for planning the research on smokeless tobacco (Zarda, gul, sadapata, Khoini) involving the TABINAJ members in 36 districts and Tobacco control organisations. Prior to joining the workshop the TABINAJ members had collected information from the respective location on list of Zarda, brand of guls, type of use, Zarda used with betel leaf, type of shops for availability of those items, consumption adapted as a part of life-style and associated problems. Preparatory information for discussion in the workshop was received from 10 districts. Questionnaire for information collection was developed on the basis of workshop discussion. In May, the primary findings by TABINAJ members were shared in a meeting held in National Press Club, Dhaka.
- b. A day long workshop was held at UBINIG office on 16 June 2013. The workshop was to strengthen the research methodology in terms of following a uniform method for focus group discussion (FGD), how to organize the discussion, how many districts will be covered, time schedule and most importantly to finalize the guiding questionnaire. Before coming to the workshop, TABINAJ members had collected some information through group discussion. Finally general discussion for the workshop were held at Joypurhat, Narshingdi, Mymensingh, Narayanganj, Jamalpur, Sirajganj, Madaripur, Moulavibazar, Faridpur, Rajshahi, Gaibandha, Lalmonirhat, Feni, Patuakhali, Lakkhipur, Rangpur and Chapainabganj. Focus Group Discussions were held in eight districts with the factory workers.
- c. Interviews were conducted by TABINAJ members themselves. They are the Executive Directors and project coordinators of respective organisations. They received training in Dhaka on information collection methodology and were in touch with Narigrantha Prabantana for any change or addition in the questions they needed to ask. There was a pre-test in April, 2013 before the final survey. Fifteen member organisations were involved in the pre-test based on which the final questionnaire was developed.
- d. For information on labours, the Focus Group discussion method was used. The labours working in Zarda and Gul factories were involved in the discussion. It was ensured to have male, female and child labours in the discussions and it was also ensured that the labours were working in this kind of work for a considerable time. In every FGD, 10 – 12 labours were present. About 17 FGDs were held 17 districts.

3. Questionnaire development

- i. Questionnaire for factory: Information posted on the body of the containers of Zarda and guls were taken into account. A sample questionnaire was prepared including the address of the factory; contents, quantity, price and other information needed for this research (see Appendix). The sample questionnaire was checked 3-4 times to make it more suitable for collecting information. After finalization the questionnaire was sent to the members of TABINAJ at District level on April 10, 2013 through e-mail. A set of questionnaire was filled in for each of the factory. Domestic level production was also covered through questionnaire survey where there was no formal address for factory. Questionnaire/format were filled separately for all the factories.
- ii. Information on the families of workers: Questionnaire /format for workers was prepared based on the information of factory, name of the factory, address of the factory, period of activities, wage, health problems of the workers and such other information of the factory.

- iii. Information on the smokeless tobacco users: A questionnaire was prepared for collection of information about the smokeless tobacco users. The questionnaire included about the type of smokeless tobacco used, length of the period of utilization, any health problems encountered, name, address and other pertinent information.

4. Focus group discussion

Focus Group Discussions (FGD) were held in nine districts of five divisions (Khulna, Rajshahi, Dhaka, Sylhet and Rangpur). In addition FGDs were held in other 17 districts. The participants in the FGD were workers of Zarda and gul factories. Eleven FGDs were held (9 for Zarda factory workers and 2 for Gul factory workers) with 129 workers. For Zarda factory, 112 workers (62 women, 44 men and 6 children) and 17 gul factory workers (17 women and 1 man) participated in the FGDs. The collaborating organizations included NICE Foundation from Khulna; Janoni Mahila Unnayan Sangstha from Jessore; Pradip Mahila Unnayan Sangstha from Mymensingh; Program for Women Development from Sirajganj; Nikushimaj Shamaj Kalyan Prothisthan from Kushtia; Institute for Social Advancement from Moulavibazar; Souhardho Nari Kalyan Foundation from Madaripur; Mahiganj Chawkbazar Mahila Kalyan Samity from Rangpur and UBINIG centre in Pabna.

The workers of the factories could not be contacted directly for the FGDs. The workers were contacted through the owner or the manager of the factories for the FGDs before 2/1 days of the event. The discussions were held inside the premise of the factory.

Problems encountered in information collection:

There were some problems encountered during collection of information in the factories. These were the following:

1. Non-cooperation from the factory owners and workers. They stop activities and lock the door and leave the locality just to avoid interaction with research team.
2. The factory owners and workers prefer to provide information over telephone just to avoid the factory visit by the researchers.
3. The researchers had to go to visit the factory several times for collection of information.
4. The factory owners and workers followed different tactics just to avoid meeting and visit of the researchers.
5. The factory owners and the workers did not sometimes behave properly with the female researchers.
6. The factory owners, managers and workers tried their best to avoid sharing information.
7. It was not possible to collect information from factories at Dhaka.

However, these issues were handled by talking to the local community leaders, journalists, tried to convince the owner by visiting the factory several times and also followed the workers to the factory. So the problems could be handled to get the reliable information.

Major Findings

- Information was collected from 38 districts (38 for Zarda and 11 for Gul factories) for 225 brands of Zarda and 18 brands of Gul.
- The brand names of Zarda had three distinct trend: 1. names after the owners, 2. Names suffixing Puri and 3. other names. For Gul, there are some names of Gul which indicate power and action of the product. These included the names of some powerful bird (Eagle), colour, light etc. (see Appendix)
- There are two levels of production: 1. below 10 thousand per month production which constitutes 62% of all the factories, 2. over 40 thousand packet/containers per month only 16%
- Zarda is marketed 38% in whole sale and 37% in retail. Gul is also mainly marketed in whole sale (40%) and retail (30%) and 16% is marketed through the agents.
- In case of Zarda it was observed that on monthly average the income per factory ranged from BDT 11 to 25 thousands in 31% factories and more than BDT 1 lakh (one hundred thousand) in 37% factories. In 33% gul factories the monthly average sale was less than BDT 10 thousand and in other 33% factories the average monthly sale ranged from BDT 11-25 thousand. In this case exact information was not available because many of them mentioned about the number of pieces of packets sold but did not mention the figure of BDT earned. They, however, mentioned about marketing of the quantity of whatever was produced.
- There are 3443 workers found in the factories investigated, out of these 78 workers (30 female and 48 male) were involved in Focus group discussion. There is provision for 8 hours work when there is regular work. In such situation a worker gets Tk. 150-250 a day. Sometimes there is work for 2-3 days a week. The rate of wage per day remains same. A regular worker may get Tk. 3000-3500 a month and an irregular worker may earn Tk. 1500-2000 a month. This income is not enough to meet the barest minimum needs. However, a family can manage some how if husband, wife and the children work in the factory.
- About 293 child labour (below age of 15 years) were found in the factories interviewed, out of the 248 were in Zarda factory and 46 were in Gul factory.
- The focus group discussion with 63 male headed workers' and 28 female headed workers families of Zarda and gul factories in 30 districts showed that they have been engaged in the factories for more than five years. They have been using mask, gamcha, hand gloves, saline and molasses as a preventive measure while working in the factory. The male workers were more careful in case of taking the preventive measure. Majority of the worker have been earning less than Taka 200 a day.
- Information about 205 users including 105 female and 100 male belonging to different occupational categories in 34 districts was collected.

Detailed Findings

A. Factory related information:

Information on two items of smokeless tobacco including Zarda and Gul were covered in this report. These two items are mainly produced at factory level. These are also known to be popular among the consumers. Information were collected from 146 factories (123 for Zarda and 23 for gul) in 38 districts. There were 243 brands (225 Zarda and 18 gul).

Table 2: Number of brands of Zarda and Gul in different district and division

Division	Zarda producing district	No. of factories	No. brands	Gul producing district	No. of factories	No. brands
Dhaka	11	35	65	3	5	5
Rajshahi	6	20	37	2	5	4
Khulna	4	28	64	2	9	6
Rangpur	5	18	32	2	1	3
Chittagong	8	15	17	1	2	-
Barisal	3	6	9	1	1	-
Sylhet	1	1	1	-	-	-
Total	38	123	225	11	23	18

B. Brand Names of Zarda and Gul

The Zarda and Gul are more known by their brands. The brand names of Zarda had three distinct trends: 1. names after the owners, 2. Names suffixing Puri and 3. other names. For Gul, there are some names of Gul which indicate power and action of the product. These included the names of some bird, color, light etc.

Table 3: Trends of Zarda brand names by geographical region

Divisions	Districts covered	Number of brand names
Dhaka	11	65 brands including Hakimpuri, Vijapata, Shahzadi Zarda, Shukna Zarda, Ratan, Akij, and Baba Zarda as more common
Rajshahi	6	37 brands including Vija pata, Shurovi, Aminpuri as more common
Khulna	4	64 brands including Vijapata, Pan Parag, Amin Zarda, Surovi etc.
Rangpur	5	32 brands including Vijapata, Hakimpuri, Shova etc.
Chittagong	8	17 brands including Shova Zarda Pan parag, Shantipuri etc.
Barisal	3	9 brands including Vijapati, Ratanpuri, Ashal Shurovi etc.
Sylhet	1	1 brand i.e. Shukna Zarda

Although each district and region has many local brands, some brands are found to have factories in different region to cater to the demand of local consumers. Vijapati is one such brand which is found in 5 divisions.

However, Gul brands are mostly local and are not found to have the same brand in different regions. [For more detailed information on names, see Appendix]

C. Factory Environment:

Zarda and gul are produced at domestic level factory in most of the places. These were being produced in a single hired room or in own house. In most of the cases there was no sign board. In some cases there were sign boards but it was difficult to understand what was going on inside? The major activities inside the room included pounding of tobacco leaves, mixing of chemicals, packing and labelling. Some factories engage experienced workers while others provide training during work. The workers are paid on the basis of number of containers filled or the weight of tobacco leaves packed although the workers are employed on monthly wage basis. In most of the factories hardly there is any system of preventive measures. In few factories there is work for 30 days in a month. In relatively bigger factories there is work up to 22 days in a month. The income earned by the workers in tobacco factories is not enough to meet their basic needs. Side by side they do any job whenever there is any chance.

D. Worker related information:

There is provision for 8 hours work in cases of regular work at a wage of Tk. 150-250 a day. Sometimes there is work for only 2-3 days a week. The rate of wage per day remains same.

“No worker works for long time in the same factory”

There is a general feeling that the workers are not working for a long time in the same factory. The workers are fired any time for any faults. A regular worker (i.e. if there is work for all the working days in a month) may get Tk. 3000-3500 a month and an irregular worker may earn Tk. 1500-2000 a month. The workers interviewed have reported that this income is not enough for them to meet the barest minimum needs. However, a family can manage if husband, wife and the children work in the factory and earn a combined income. The workers encounter different types of health problems including headache, vomiting, lack of appetite, heart disease, lesion on gums, lesion inside the mouth and coughing. So often they change their job.

E. Child labourers are engaged

The child labours are engaged in Zarda and gul factories at a very low wage Tk. 50-80 a day. In some cases they get one third of wage of an adult. The child workers are generally affected by coughing, lack of appetite, disability, headache vomiting and skin disease. In general they are compelled by situation of family poverty.

One direct impact of child labour engagement is that they cannot go to schools. They work 6 days a week, even on Fridays if there is more demand. During a day, they work 9 hours (e.g. in Narsingdi), 8 – 12 hours (e.g. Jessore). In the family based factories, children are used as unpaid family labours.

Steps of smokeless tobacco production (Zarda & gul)

Method of making Zarda with 10 kg of tobacco leaves

- Step 1. Tobacco leaves are cut into pieces after complete drying in the sun. The cut pieces are again cleaned by winnowing. The bigger leaves and stems are separated during winnowing. The stems are again crushed in the machine.
- Step 2: Two kilograms of Motihar Variety of tobacco leaves stems, 200 grams of molasses and water are mixed together and dried in the sun for a day.
- Step 3: Ten kilograms of tobacco leaves mixed with other ingredients, one kg of glycerine, 500 grams of paraffin, 150 gm saccharin, 150 gm jestho madhu 150 gm cinnamon + trifola, 200 gm of varieties of scent, 150 gm menthol kept with covered lid for 2-7 days.
- Step 4: After prescribed period of storage of the mixed ingredients the prepared Zarda will be packed in containers.

Steps for making gul

- Step 1: Motihar variety of tobacco leaves are dried in the sun for a day.
- Step 2: Dried tobacco leaves are cut into small pieces in fine machines and saved in drums.
- Step 3: The cut pieces of tobacco leaves are sieved and dried in the sun for a day, mixed with lime stone powder, menthol and wood ash.
- Step 4: The prepared gul is packed in containers and labelled.

Information on factories

Information on names of the factories, address, years of establishment, production, etc were collected.

Table 4: Type of factory (names and addresses)

Tobacco products	Factories with names and address	Factories with no name and address	Total
Zarda	117 (98%)	3 (2%)	120
Gul	20 (95%)	1 (4%)	21
Total	137 (98%)	4 (2%)	141

Names and addresses of the most of the Zarda and Gul factories are available. The data collector took information from the area and also the smell of the Zarda was there in the surroundings. On the basis of prior information the factories could be identified. The rest of the products are produced at domestic level and others may be counterfeiting the labels of other products. In some cases the names and addresses given in the labels of the packet do not match any sign board in the specific location. Moreover, the sign boards of the factories do not specifically mean what items are made inside. This is because the names generally suffix chemical works, chemical company, perfumery, factory, chemical industry, etc. Chemical Works is suffixed with the names of 10 Zarda factories out of the 123 Zarda factories. These included Sabiha Chemical Works, Messers Razaque Chemical Works, Messers Shankot Chemical Works, Jalil Chemical works, Sabbir Chemical Works and Labal Chemical Works. In addition there are other names like Amin Chemical Company. Shaf Ali Chemical Company, Rokeya Factory, Barisal Perfumery, Amin Chemical Industry, Selim and Company, Monica Chemical, M. Amzcad and Sons and Rahim Varsha Company.

Table 5: Period of establishment of factory

Period	Zarda	Gul	Total
Before 1971	3 (2%)	1 (4%)	4
1972 – 1980	13 (11%)	4 (18%)	17
1981 – 1990	11 (10%)	7 (32%)	18
1991 – 2000	33 (27%)	5 (23%)	38
2001 – 2010	38 (33%)	2 (9%)	40
2011 – 2013	17 (15%)	2 (14%)	19
No information	5	0	5
Total	120	21	141

Majority of the Zarda factories (75%) was established after 1991 and the Gul factories were established after 1981.

Table 6: Packet and containers of tobacco products

Tobacco products	Packet	Container	No response	Total
Zarda	53 (36%)	80 (55%)	13 (9%)	146
Gul	8 (33%)	13 (54%)	3 (12%)	24
Total	61 (35%)	93 (55%)	16 (9%)	170

Zarda and Gul are mainly packaged in containers (55%) and Gul (54%). There are containers of three sizes, big, medium and small. Small containers are of 10 gm. medium containers are of 25 gm and large containers are of 50 gm. The price ranges from BDT 10, 20 and 45, respectively. Naturally the price varies with the quantity, like 10 gm container BDT 5-6, 40 gm container BDT 10-22 and 50 gm container between BDT 14-50. Some companies fix the price of Zarda and gul based on weight while others fix the same as they desire.

In addition to packets, Zarda is also sold loose, 10 gm for BDT 4. It is sold in polythene packets 25 gm for BDT 10, 40 gm for BDT 40, 20 gm for BDT 10-25. Nine sizes of containers are generally used for packing Zarda including 100, 75, 50, 40, 30, 25, 20, 15, 10 gm.

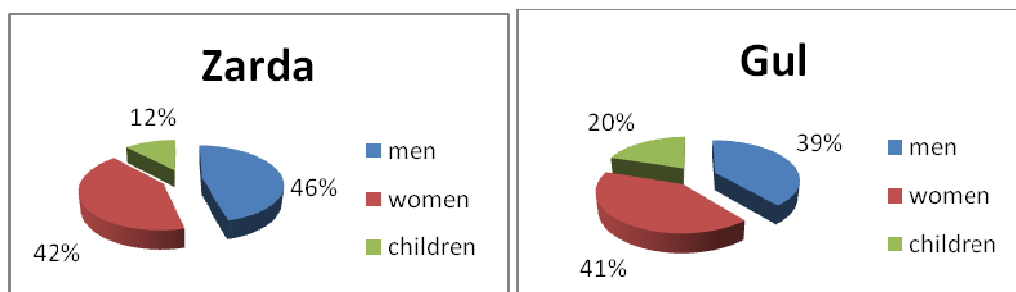
25 containers of gul are packed in one packet. In these packets health warnings for hazards of tobacco on human health are inscribed in tiny small letters.

Table 7: Type of workers in the factories

Tobacco products	Children	Women	Men
Zarda	24 (11%)	98 (43%)	105 (46%)
Gul	10 (19%)	20 (39%)	21 (41%)
Total	34 (12%)	118 (42%)	126 (45%)

The ratio of women (42%) and men (46%) are almost the same. However, there are 12% children. In the gul factories also the ratio of women and men are almost same. There are men 39% and women 41%. In addition there are 20% children as shown in the figure below:

Figure 1: Labour workforce ratio in different factories



In the 141 factories investigated, there are 4590 children, 15,525 women and 16,605 men. That is, the total number of workers is 36,690. On an average there are 272 workers per factory. However, the workers cannot work continuously for long time. It was learnt that the workers change after every six months. In fact they cannot work regularly for six months even. This is mainly because the workers become sick. In some cases the factory management did not cooperate in providing information about

the workers. Some factory management mentioned that the workers are called in when there is required supply of raw materials in the factory. Based on the available information it may be inferred that Zarda and gul factories are not dependable source of employment for the workers.

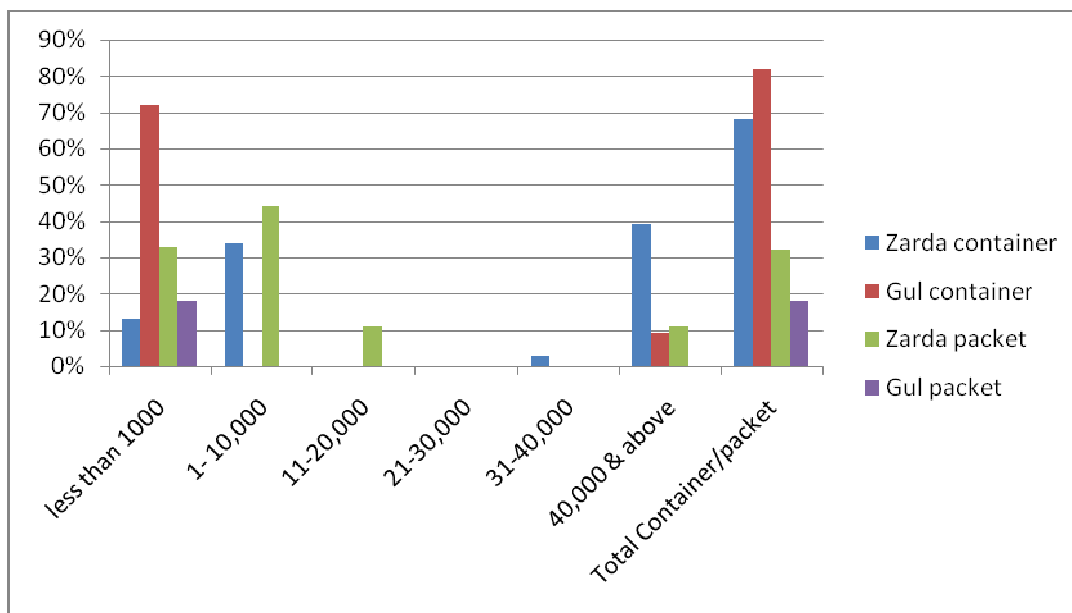
The workers are not formal workers and no appointment letters or contract is provided.

Information on production and production capacity of the factories were provided by the workers, factory managers and owners.

Table 8: Production in Zarda and gul factories, packet/containers (monthly production)

Zarda- Gul/production	Zarda		Gul		Total	
	Container	Packet	Container	Packet	Container	Packet
less than 1000	5 (13%)	6 (33%)	8 (72%)	2(18%)	13	8
1- 10,000	13 (34%)	8 (44%)	0	0	13	8
11-20,000	4 (10%)	2 (11%)	0	0	4	2
21-30,000	0	0	0	0	0	0
31-40,000	1(2.6%)	0	0	0	1	0
40,000 & above	15 (39%)	2(11%)	1 (9%)	0	16	2
Total	38 (68%)	18 (32%)	9 (82%)	2 (18%)	47	20
Grand Total	56 (100%)		11 (100%)		67	

Figure 2: Production in Zarda and gul factories, packet/containers



There are two levels of production scale: 1. below 10 thousand packets/containers per month production which constitutes 62% of all the factories, 2. over 40 thousand packet/containers per month only 16%. Productions are based on sales status, and demands and so the amount of productions is not fixed. Some factories gave information in terms of kilograms or mounds. At present gul is produced in packets, for example 20 gm for BDT 10, 10 gm for BDT 5 and 5 gm for BDT 3. However, the producers prefer trading in containers.

Table 9: Monthly Income of Zarda Factory in relation to production by packet/container (42 Factory)

Production/ Packet & container	<25,000	26,000– 50,000	51,000– 75,000	7,000– 100,000	100,000- 150,000	1,50,000– 200,000	200,000+	Total
<5000	19	1	1	1	-	1	1	24
5001-25000	1	1	2	1	-	-	-	5
25,001-50,000	-	-	2	-	-	-	-	2
50,001-75,000	-	-	-	-	-	-	3	3
75,001-100,000	-	-	1	-	2	-	3	6
100,000 +	-	-	-	-	-	-	2	2
Total	20	2	6	2	2	1	9	42

Table 10: Monthly Income of Zarda Factory in relation to production (13 Factory)

Production/ KG	<25,000	26,000- 50,000	51,000- 75,000	76,000- 100,000	100,000- 150,000	1,50,000- 200,000	200,000- 700,000	Total
<100 kg	4	-	-	-	-	-	1	5
101-500	2	-	-	-	1	1	-	4
501-1,000	-	-	-	-	-	2	-	2
1,100-1,500	-	-	-	-	-	-	2	2
Total	6	-	-	-	1	3	3	13

This table shows that there are more smaller factories with less production capacity, while few big factories dominate the market.

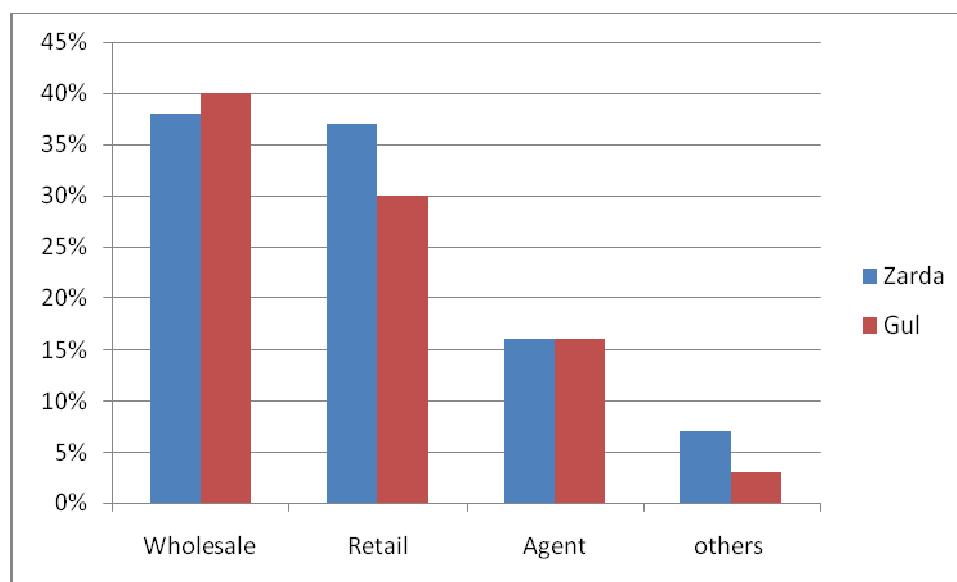
Marketing of Zarda and Gul

Zarda and Gul productions are dependent on market demand and usually these are locally produced and sold at wholesale, retail and through agents.

Table 11: Selling points of Zarda and Gul

Tobacco products	Whole sale	Retail	Agent	Others	No information available	Total
Zarda	70 (38%)	69 (37%)	29 (16%)	12 (7%)	3 (1%)	183
Gul	12 (40%)	9 (30%)	5 (16%)	1 (3%)	3 (10%)	30
Total	82 (38%)	78 (36%)	34 (16%)	13 (6%)	6 (3%)	213

Figure 3: Selling points of Zarda and Gul



Zarda is marketed 38% in whole sale and 37% in retail. Gul is also mainly marketed in whole sale (40%) and retail (30%) and 16% is marketed through the agents.

Table 12: Locations for marketing Zarda and Gul

Tobacco products	Local market	Outside the district	Outside Bangladesh	No information available	Total
Zarda	99 (64%)	52 (34%)	1 (0,66%)	2 (1%)	154
Gul	18 (66%)	5 (18%)	0	4 (15%)	27
Total	117 (64%)	57 (31%)	1 (0.56%)	6 (3%)	181

Zarda and gul are mainly sold in the local market, 64% and 66% respectively. Outside the district Zarda is marketed 34% and gul 18%.

Figure 4: Locations of Marketing of Zarda and Gul

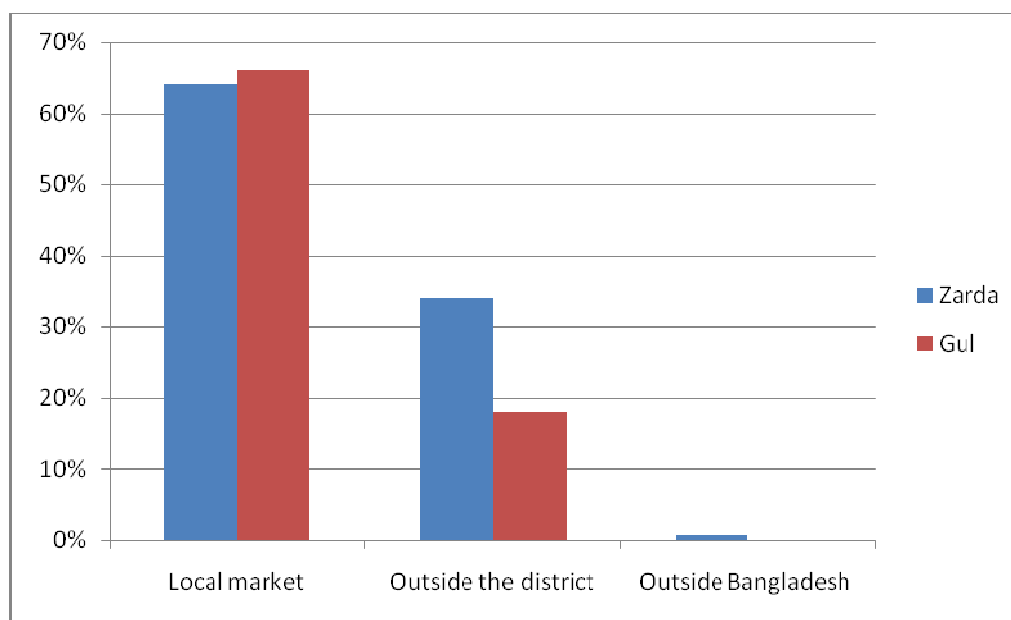
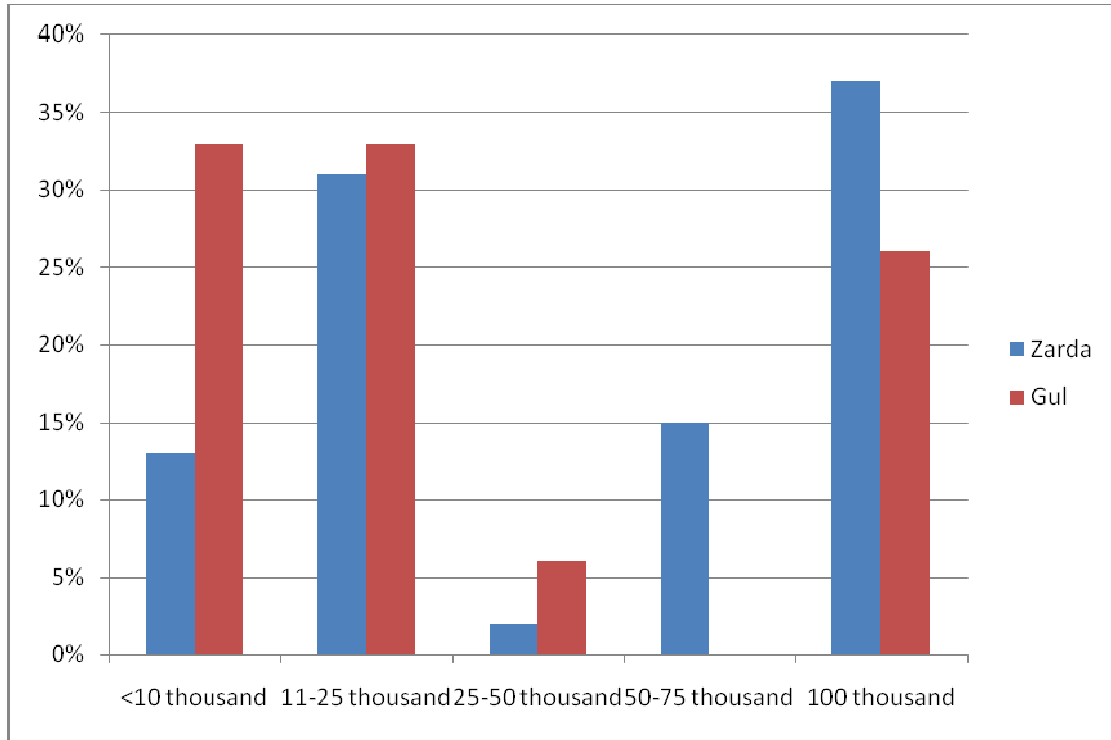


Table 13: Monthly average sale of Zarda and gul (BDT)

Tobacco products	<10 thousand	11-25 thousand	25-50 thousand	50-75 thousand	1 lakh +	No information available
Zarda	7 (13%)	17 (31%)	1 (2%)	8 (15%)	20 (37%)	57
Gul	5 (33%)	5 (33%)	1 (6%)	0	4 (26%)	15
Total	12 (17%)	22 (32%)	2 (3%)	8 (11%)	28 (34%)	72

(IUSD = Tk. 75)

Figure 5: Monthly average sale of Zarda and gul (BDT)

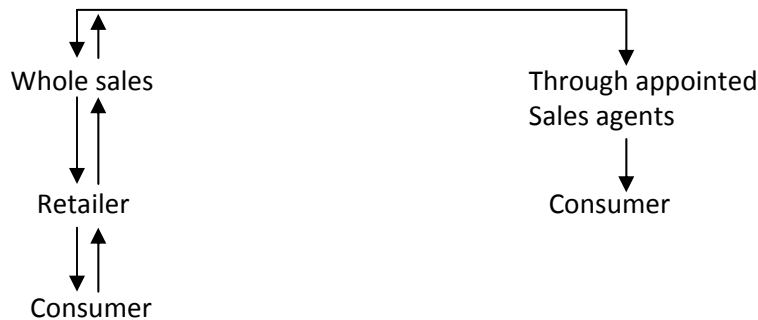


In case of Zarda it was observed that the monthly average income per factory ranged from BDT 11-25 thousand in 31% factories and more than BDT 1 lakh (one hundred thousand) in 37% factories. In 33% gul factories the monthly average sale was less than BDT 10 thousand and in 33% factories the average monthly sale ranged from BDT 11-25 thousand. In this case exact information was not available because many of them mentioned about the number of pieces of packets sold but did not mention the figure of BDT earned. They, however, mentioned about marketing of the quantity whatever those produced.

Supply chain of Zarda and Gul marketing

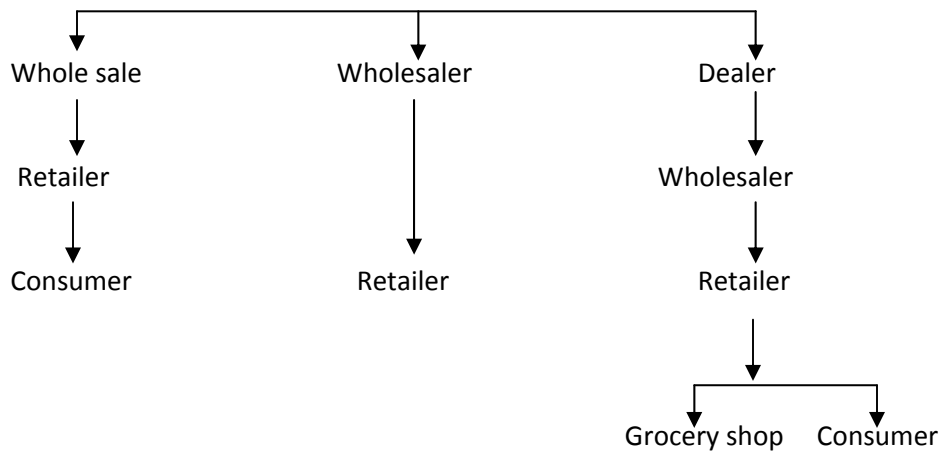
Channel for disbursement of Zarda from factory to customer:

Zarda Factory



In addition, sales agents from some companies visit the locality and distribute Zarda. The wholesalers also deal in Zarda and get 3-10% commission.

Channel for distribution of gul from factory to consumers



The wholesalers also employ salesmen who are engaged in spot supply of gul to shop keepers.

Discussion

The significance of this study is that it is first of its kind in Bangladesh in terms of its methodology where TABINAJ as a network has been formed as a research team and carry out information collection on Zarda and Gul production. Since there are hardly any literature and formal study in Bengali and very few academic research papers it was difficult to have prior information that could be used for development of questionnaire and methodology. So basically it was a study carried out completely on its own with first hand and primary basis of information. However, at the methodology development meeting, BI supported tobacco control group members and Campaign for Tobacco Free Kids (CTFK) staff in Bangladesh provided very useful inputs in developing the questionnaire and methodology of information collection.

Narigrantha Prabartana, as the secretariat of TABINAJ network conducted some pre-research information collection and purchased all kinds of smokeless tobacco products, particularly Zarda, Gul,

Sadapata etc. to get the names, brands, and factory information. This was very helpful because although use of smokeless tobacco is higher among women it was found that users have information of the particular brand that they use. Some brands are known to most women such as Baba Zarda, or Hakimpuri Zarda. Particular brand names also have local use, so women from particular district knew of the brand produced and used in that district only e.g. Ratan Zarda in Tangail.

This study is primarily on the production of Zarda and Gul. The users' information was collected in a limited way. The use of Zarda happens at a "private sphere" i.e. on the households settings. It will need a different methodology. It is difficult to have a control measure without having data on its extensive use. Among the various types of smokeless tobacco products, two most commonly used products Zarda and Gul were the focus in this study. It was interesting to observe that no one is hiding the fact about the use of Zarda and Gul, as these are not "prohibited" under the law and also socially and culturally accepted. It is still not seen as "addiction" or "harmful" and socially offensive behaviour. The consumption of betel-leaf (pan) is associated with the consumption of Zarda. So this has some relation with "food" because it is consumed right after eating of a big meal. Poor women use it as a control of 'hunger' particularly when they have no option of eating lunch. Middle class women complain that house-maids demand supply of Zarda in addition to their monthly wages/salary. So this is very much part of household affair that is happening among women in different social classes.

Because of the weakness of the law, Zarda and Gul are found in any shop of pan without any restriction and has not been considered as "tobacco product" under the law. However, under the amended law this is part of the definition, which is also unknown to the producers, sellers and users. Zarda and Gul are produced in factories that can be identified through the printed information on packets. As a first step of knowing about the extent of production of smokeless tobacco products, Zarda and Gul seemed to be most suitable.

The information available about Zarda and Gul shows that these are produced locally and depends on local demands. So according to the local conditions of the users, the quality and brand of Zarda is determined. They are spread all over the country in different brand names. All the owners are not necessarily from the major tobacco industry group, but gradually the owners of bidi factories and other tobacco products are getting involved in the production of the smokeless products, such as Akij.

The important finding of the study is the absence of sign boards of the Zarda factory. The factories are still known in the area for their long term presence and the smell of Zarda. So even though there is no signboard, the factories can be located by visiting the area several times. That means the owners want to keep the production hidden either for evading taxes or for avoiding factory rules for hiring of workers. Sometimes, they are using misleading and deceptive signboards such as chemical or perfumeries. In those cases they get a license. They give taxes on their production of perfumeries, but not on Zarda. Since the smokeless tobacco products were outside the definition of tobacco products in the tobacco control before the amendment such unregulated production was possible. It did not follow any labour law even for engaging workers for ensuring fair wages, creating safe working conditions. The child labour is used without any restriction. Tax estimation on smokeless tobacco products was not possible due to lack of data, but a 70% increase of tax was proposed in the budgets. However, after budget announcement of tax increase some price increase was observed on Zarda.

It is hoped that this study will provide some light on the application of amended law at production sale and on use.

For users, there is lack of awareness about its harmful effects. Therefore it is proposed that a separate study is carried out on users and their health related problems.

Conclusion

The study was conducted at a very significant time when the “Smoking & tobacco products uses (Control) (Amendment) Bill 2013” has been passed and the rules are being developed. The study shows that the harmful effects of production and use of smokeless products, particularly those of Zarda and Gul, are not much known to the producers, workers and the users. It is time to carry out awareness raising programme for policy makers for the implementation of the amended law, as the smokeless tobacco products are part of the definition. It should also be an important issue at the time of budget preparation for imposing taxes on cigarette, bidi as well as Zarda, Gul etc.

Appendixes

Appendix 1:

List of TABINAJ member organisations involved in information collection

District level TABINAJ members involved with information collection for smokeless tobacco factories are the following:

1. Lalmonirhat- Manoshika Mohila Shangshta.
2. Narshingdi-Mother Development Society.
3. Noakhali-Ananya Bohumukhi Kalyan Sangtha.
4. Jessore-Janoni Mohila UnnayanSangtha.
- 5.Mymenshigh- Pradip Mohila UnnayanSangtha.
6. Patuakhali- Adarsha MohilaSangtha..
7. Khulna- Nice Foundation.
8. Sirajganj- Program for Women Development .
- 9.Kurigram- Association for Alternative Development
- 10.Bogra- Venture Foundation..
- 11.Chapainabganj-Mohila Karmashahyak Sangstha
- 12.Tangail- Sharoni and UBINIG center
13. Jamalpur- Jhumka
14. Moulavibazar- Institute for Social Development
15. Feni- Shahpur Dustha Mohila Unnayan Songtha
16. Cox'sbazar- Jago Nari Unnayan Songtha.
17. Brahmanbaria-Association for Rural Development.
18. Comilla-Human Development Organization.
19. Naogaon- Janonir Chaya Samaj Unnayan Songtha.
20. Madaripur- Shouhardo Nari Kalyan Foundation.
21. Kushtia- Nikushimaj Samaj kalyan Prothisthan
22. Pabna- UBINIG center
23. Rangpur- Narigrantha Prabartana
24. Nilfamari-Narigrantha Prabartana
25. Chittagong-Narigrantha Prabartana
26. Kishorgonj-Narigrantha Prabartana
27. Dhaka-Narigrantha Prabartana

Appendix 2:

Topics for discussion for Focus Group Discussion (FGD)

Factory related information:

- Name and address of the factory.
- Work environment of the factory.
- Description of Workshop/Room.
- Signboard, the contents.
- Type of activities of the factory.
- Previous experience of the workers.
- Monthly output of the factory.
- Type of preventive measures used in the factory
- How the market demand is estimated?
- What other things are produced in the factory?
- How many working days are there in a month?
- Does it run regularly or seasonally?

Worker related information:

- Working hours of the workers and type of wage.
- Health condition of the workers.
- How the workers are employed in the factory?
- Does the work appear risky for the workers?
- Number of workers in the factory including women, men and child workers.
- How long a worker can work in the factory?
- Is there any chance of addiction in course of working?
- Does a worker feel any form of problem?
- The amount of medical allowance per month.
- Monthly income of a worker.
- Is the salary good enough to meet personal needs?

Child labor related information:

- What is the wage of a child labor?
- What is the reason behind employing child labor?
- What type of health problem faced by the child labor?
- Why the child labor comes to work (collected through interview of child labor)?

Appendix 3:

Zarda factories and brands in 7 divisions of the country

Division	District	Name and addresses of factories	Brands of Zarda
Dhaka (11 directs covered)	1. Narshingdi	1. Iqbal Chemical Works, Chondompur, Monohordi, Narshingdi 2. Vai Vai Vejapata Zarda, Ali Tek, Ghorashal, Narshingdi 3. Chadpuri Zarda Factory, Hajipur Narshingdi 4. Vai Vai Chemical Tripti Zarda Factory, Tripti Super Ghorashal, Narshingdi 5. Amir Chemical Company Belabo, Ghorashal, Narshingdi 6. Shahjadi Zarda Factory, Volanagar, Narshingdi 7. Shah Ali Chemical Company, Kamrab, Shibpur, Narshingdi	1. Chadpuri, 2. Badsha, 3. Hakimpuri type Sarda, 4. Shukna Zarda, 5. Vejapata, 6. Pagla Shukna Zarda, 7. Pati Zarda, 8. Shahjadi Zarda
	2. Gazipur	1. Rabeya Factory, Islam Market, Gazipur 2. Shahider Chemical Company, Kaliganj, Gazipur 3. Sabbir Chemical Works Purba Chandona, Gazipur Sadar	1. Shukna and Veja Zarda 2. Shukna Zarda 3. Pati Zarda
	3. Shariatpur	1. Monika Chemical, Koneshwar Bazar, Damudya, Shariatpur	1. Shariatpuri Zarda 2. Tripti Zarda
	4. Madaripur	1. Shapno Shova, Shibchar Bazar, Madaripur 2. Lakmipuri, Jahangir Chemical Kalkini, Madaripur 3. Quamrul, Golabari, Judge court adjacent, Madaripur 4. Thantoli, Madaripur, 5. Chowrasta, Madaripur 6. Samad Chemical Co. D.C. Road, Shibchar, Madaripur 7. Jakir Zarda, Raj Chemical works, Kalkini, Madaripur, 8. Selim and Company, Daipara, Buzimar Bot Tala, Jagoir, Madaripur	1. Misti Zarda 2. Nomana Pata Zarda 3. Noman Zarda 4. Momin Shova Zarda 5. Jakir Zarda 6. Selim Zarda
	5. Tangail	1. Kastori Zarda Factory, Kagmari, Pardarpara, Tangail 2. Hasan Pati Zarda, Alenga,	1. Moynamoti, 2. Special Moti Zarda, 3. Ratna Zarda, 4. Loose Zarda, 5. Hasan Pati ,

	Tangail 3. Roman Chemical, Rajbari, Alenga, Tangail 4. Shahi Zarda Factory, Kagmari, Kalipur, Tangail	6. Roman Pati Zarda, 7. Shoj Masla, 8. Vojon Bilash, 9. Vija Pati, 10. Shukna Pati
6. Jamalpur	1. Sardar Zarda, Jamalpur 2. Wajkorni Zarda, Iqbalpur, Jamalpur 3. Kohinor Zarda, Sharifpur Bazar, Jamalpur	1. Mixture, 2. Shahjadi, 3. Lalpati, 4. Sardar Zarda, 5. Wajkorni Zarda, 6. Kahinur Zarda, 7. Pan parag, 8. Dil Mohini Dilip Zarda
7. Kishoreganj	1. Gurudeb Zarda, Pachimpara, Kotiadi, Kishoreganj	1. Iva Zarda, 2. Gurudeb Zarda
8. Mymensingh	1. Nurani Zarda Factory, Golpukur Par, Mymensingh 2. Ms Joydeb Pal No. 5 Ramesh Sen Road (Shadshi bazar) Mymensingh 3. Mymensingh Zarda Factory, Makanda 4. Hero Zarda Makanda, Nayapara, Mymensingh	1. Lalpati, 2. Shurovi, 3. Mixture, 4. Kima, 5. Kishori, 6. Lalbaba, 7. Special Ananda Mixture, 8. Vijapati, 9. Ratan, 10. Kalababa, 11. Chamon Bahar, 12. Dulal, 13. Dilip, 14. Kora Mixture, 15. Hero Tambul Kashoni, 16. Shachi Moni Pati Zarda, 17. Kalopali, 18. Amin Shahimixture, 19. Shachi Moni, 20. Amin tir Pati Zarda
9. Manikganj	1. Shapon Zarda Factory, Jhitka Bazar, Manikganj	1. Shapon Zarda, 2. Akij Zarda, 3. Monipuri Zarda, 4. Akij Zarda Special Pata
10. Dhaka	1. 87/2, Patlakhan Lane, Dhaka 1100 2. 55/A Kaptan Bazar, Dhaka	1. Ratan Pati Zarda 2. Baba Zarda
11. Netrokona	1.	1.
Rajshahi (6 districts covered)	12. Sirajganj 1. Aminpuri Zarda, 2. Bagabari, Rayganj, Sirajganj 2. Habib Zarda, Sayadhanpara, Sirajganj 3. Happypuri Zarda, Dhangora Ranthita, Rayganj, Sirajganj 4. Shantapuri, Masumpur Natunpara, Sirajganj 5. Shantopuri Zarda, Dakhin Minpur, Sirajganj	1. Aminpuri Zarda 2. Habib Zarda 3. Happypuri Zarda 4. Shantapuri Zarda 5. Shantopuri Zarda
13. Pabna	1. Asad Zarda Factory, Pyarpur, Ishwardi, Pabna	1. Hasanpuri, 2. Surovi, 3. Vijapati, 4. Chamon Bahar
14. Chapai Nababganj	1. M.A. Salam and Sons Zarda Factory, Mistripara, Chapai Nababganj 2. Aziz Zarda Factory, Velurmer, Chapai Nababganj	1. Salam Pati Zarda 2. Aziz Zarda 3. Dhiren Zarda

		3. Dhiren Zarda Factory, Huzrapur, Chapai Nababganj	
15. Rajshahi		1. M. Amjad & Sons, Veripara Mor, Rajpara, Rajshahi 2. Banarashi Zarda Factory, Veripara Mor, Rajpara, Rajshahi	1. Banarashi Surovi 2. Rokib Pati
16. Naogaon		1. Ranjit Zarda Factory, Kalitala, Naogaon Sadar 2. Bijli Chemical Works, Hat Naogaon, Naogaon 3. Roni Factory, Khash Naogaon 4. Shapan Factory, Anando Nagor, Naogaon 5. Palashpuri, Anando Nagor, Naogon	1. Hashinpuri Zarda 2. Aminpuri Zarda 3. Roni Zarda 4. Nepal Zarda 5. Palashpuri Zarda
17. Bogra		1. Jalil Chemical Works, Kamarpara, B-block, Shahjahanpur, Bogra 2. Nasimbhai Nadimbhai Zarda Factory, Chowklokman, Bogra 3. Bulbul Factory, Mahasthan, Bogra 4. Ms. Shawkot Chemical Works, Mahasthan, Shibganj, Bogra	1. Hashempuri Zarda 2. Jalilpuri Zarda 3. Jamirpuri, 4. Kanaipuri, 5. Al Aminpuri Zarda 6. Kanpati, 7. Nasimpuri, 8. Mohonpuri, 9. Bulbulpuri, 10. Vijapati, 11. Heanypuri Zarda, 12. Sathi Sova Zarda, 13. Hakhimpuri, 14. Kalapati, 15. Panbahar, 16. Kamini, 17. Aloron, 18. Rotan Pati Zarda
Khulna (4 districts covered)	18. Kushtia	1. Junaid Biswas Zarda Fctory, Allahr Darga, Kushtia 2. Bangla Tobacco Company Industries Ltd, Veramara, Kushtia 3. N.S. Chemical Works, Allahr Darga, Kushtia 4. K.S. Biswas Chemical Allahr Darga, Kushtia 5. Sinka Agro Industries Ltd. Baromail, Veramara, Kushtia 6. Amin Chemical Industries, Veramara, Kushtia 7. Zakir Zarda Factory, Veramara, Kushtia 8. Mizan Zarda Factory Veramara, Kushtia 9. Biswas Zarda Factory, Allahr Darga, Kushtia	1. Shova Zarda, 2. Nabab Pan Parag, 3. Lalbaba, 4. Ruby Zarda, 9. Shurovi Zarda, 6. Diamond Pati, 7. Amin Shova, 8. Aminpuri, 9. Zakir Zarda, 10. Vejapali, 11. Pan masla, 12. National Zarda, 13. Mizan Zarda, 14. Pan Parag, 15. Bilash Pan Parag, 16. Nur Zarda, 17. Rajdhani Zarda
	19. Jessore	1. Arman Zarda Co., Muroli Mor, Jessore 2. Ms Ruby Zarda Factory,	1. Pan Masla, 2. Pan Zarda, 3. Vijapata, 4. Vija Kondu, 5. Gundi, 6. Pan Maju, 7. Shova,

		Chasra Bazar, Mor, Jessore 3. Panshahi Zarda Factory, High Court Mor, Jessore 4. Al Amin Zarda Fctory KP Road (Zarda Patty), Jessore 5. Ma Zarda Chemical Works, Boro Bazar, Jessore	8. Kundu, 9. Shurovi, 10. Guru, 11. Panporag, 12. Kanpur, 13. Shahipan maja, 14. Keshori, 15. Chomonbahar, 16. Lalbaba, 17. Kabir, 18. Shib dada, 19. International Kurdu Zarda, 20. Al Amin Masla, 21. Rabi Pan Pachando, 22. Jafrani Pati Zarda
20. Khulna		1. Turag Zarda, Gobor Chaka, Khulna 2. Amin Zarda, Shiromoni, Khulna 3. Formal Chemical Works, 124 Khalishpur 4. Khanpuri Zarda Facory, Sheikhpara, Khulna 5. Ms Shantipuri Zarda, Sheikhpara, Khulna 6. Ms Kader Zarda Factory, Poipara, Khulna 7. Barisal Perfumary, Sheikhpara 8. Runi Zarda Factory, Goborchaka, Khulna 9. Laboni Chemical Works, Haji Uslam Road, Banergati, Khulna 10. Shohag Zarda, Chitralli Bazar, Khalispur, Khulna 11. Ms Dula Vejapati Zarda, Madhyabhanga, Daulatpur, Khulna 12. Mojo Zarda, New Market, Khulna 13. Ms Rajib Zarda, Daulatpur, Khulna 14. Babul Zarda, Daulatpur, Khulna	1. Shafipuri, 2. Dulal Veja, pati Zarda, 3. Mojo Zarda, 4. Nishat Rotan Pati Zarda, 5. Amin Kundu Zarda, 6. Joyful Red Leaf Zarda, 7. Kabir Silver Zarda, 8. Khanpur Zarda, 9. Laboni Zarda, 10. Shajib Pati Zarda, 11. Sheikpuri Zarda, 12. Babul Vejapali Zarda, 13. Dulale Special Vija Kurdu, 14. Shurovi, 15. Joyful Bawa Zarda, 16. Monipuri Zarda, 17. Amin Zarda, 18. Joypuri Zarda, 19. Shohag Shova Zarda, 20. Chomon Bahar, 21. Kabir Silwer Zarda, 22. Dula Surovi Zarda, 23. Amin Vija Kundu Zarda, 24. Khaleshpuri Zarda, 25. Mojahid Shova Zarda
	21. Bagerhat	1. Sadhonar Mor, Barobazar, Bagerhat	-
20. Ranpur (5 districts Covered)	22. Gaibandha	1. 555 Minar Zarda, Bridge Road, Bali Bari, Gaibandha 2. 655 Shahid Minar Zarda, Ballanyhar, Gaibandha 3. Raihan Chemical Works, Gobindaganj, Gaibandha 4. Ms. Razzak Chemical Works, Gobindaganj	1. 55 No. Minar Zarda, 2. Rasho Pati Zarda, 3. Hashuripuri Zarda 4. Apurba, Vijapati 5. Hagimpuri Zarda 6. Tasty Pan Masla 7. Raj Zarda, 8. Mayapuri Zarda

		5. Madhya Gobindapur, Majhi para, Gaibandha 6. Ms Monir Zarda Factory, Khanka Sharif (Borobari) Gaibandha 7. Maya Zarda Factory, Baidge Road, Purba Gaibandha	
	23. Rangpur	1. Menaj bazar, Haragach, Rangpur	1. Hakimpuri Zarda, 2. Sonali Pati Zarda, 3. Anandapuri Zarda 4. Shahidpuri Zarda 5. Hakimpuri Zarda
	24. Nilphamri	1. Bankmari, Darwani Textile Nilphamri 2. Astanarhat, Syedpur, Nilphamri	1. Siam Shova Zarda, 2. Naym Siam Pati Zarda, 3. Kapla Anjad Shurovi Zarda, 4. Kanpur Zarda
	25. Kurigram	1. Erfadpuri Zarda, Shariferhat, Chilmari, Kurigram 2. Vai Vai Zarda Factory, Boraitala, Ulipur, Kurigram	1. Erfadpuri Zarda, 2. Ershadpuri Zarda, 3. Mahanpuri Zarda, 4. Dulalpuri, 5. Bullenpuri, 6. Vijapati, 7. Rotonpati, 8. Loosepati Zarda, 9. Shova Zarda, 10. Loose Ershadpuri, 11. Dulalpati Zarda
	26. Lal monirhat	1. Shumon Zarda, BDR hat, Sadar Lalmonirhat 2. Monpuri Zarda, BDR Gate, Lalmonirhat 3. New Monipuri Zarda, BDR hat, Sadar, Lalmonirhat 4. New Hakimpuri Zarda, BDR Gate, Lalmonirhat 5. Nazirpuri Zarda, Tushbandar, Kaliganj, Lalmonirhat 6. Khamatpuri Zarda, Vullarhat, Kaliganj Lalmonirhat	1. Shukrapati and Vijapati 2. Monpuri Zarda 3. Shumon Zarda 4. Hakimpuri Zarda
Barisal (3 districts covered)	27. Jhalokathi	Sabiha Chemical Works, Kumar Patti, Jhalokathi	1. 99 Jafrani, 2. 99 Shahi Special, 3. 99 Shahi Vijapati, 4. Ashol Shurovi 99 Zarda
	28. Barguna	1. Ms Ujjal Chemical Works, Barguna Sadar 2. Hoque Chemical Works, Barguna Sadar, Bot tala	1. Dhaka Zarda 2. Hoque Zarda
	29. Patuakhali	1. Panna Zarda Factory, Kalikapur Kalam Mridhar Culvert 2. Nababpuri Zarda, Lohalia, Patuakhali, 3. Sarkar Chemical works, Kamlapur, Patuakhali	1. Shantipuri Zarda 2. Nababpuri Zarda 3. Rotanpuri Zarda

Chittagong (8 districts)	30. Barhmanbaria	1. Babul Chemical, Puniada, Bralmanbaria	1. Umpuri Zarda 2. Sabu Shova Zarda
	31. Comilla	1. Shahjadi, Debidar, Comilla 2. Kosturi Zarda, Laksham, Comilla	1. Shahjadi 2. Kosturi Zarda
	32. Chandpur	1 Shantipuri Zarda, Puran Bazar, Batasha Patti, Chandpur 2. Ashik Zarda, Nitaiganj, Puranbazar Chandpur 3. New Shantipuri Zarda, Harishava Road, Puran Bazar, Chandpur	1. Shantipuri Zarda 2. Ashik Zarda 3. New Shantipuri Zarda
	33. Feni	1. Manik Zarda, Ms Alamgir & Sons, Birinchi, Feni	1. Pati Zarda 2. Manik Zarda
	34. Noakhali	1. Baba Zarda Factory, Bashurhat, Companyganj, Noakhali 2. Nijampuri Factory, Basurhat, Companyganj Noakhali	1. Misti Zarda 2. Nijampuri
	35. Lakshmipur	1. Shahajadi Factory, Lakshmipur	1. Misti Zarda and Shugandhi Zarda
	36. Chittagong	1. Eusuf Chemical Works and Company, Shah Samia Nogor, Char Patharghata, Karnafuli, Chittagong 2. Saudia Aflatun Chemical Company, Shegun Bagan, Road No. 4 Khulshi, Chittagong	1. Eusuf Shova Zarda 2. Shahi Madina Zarda 3. Eusuf Pan Parag 4. Royal Pan Parag 5. Five Star Zarda
	37. Khagrachari	1. M/S Aonshipru Jarda Factory Maischari, Mahalchari, Khagrachari	-
Sylhet (1 district covered)	38. Moulavi bazar		1. Shukna Zarda

A total of 18 brands of Gul in 23 Gul Factories were surveyed in 11 districts.

Gul Factories in 11 districts

No.	Districts	Name and address of the factories	Brands of gul
1	Bogra	1. Raju Gul, Colony, Bottala, Bogra 2. Bagh (Tiger) Brand Gul, Puran Bogra 3. Biddut kalo Gul, Sultanganj para, Bogra 4. Sperial Bagh (Tiger) Gul, Ashogola, Baghopara, Bogra	1. Biddut Kalo Gul 2. Special Bagh Gul 3. Bagh Marka Gul 4. Raju Gul
2	Rangpur	1. Millat Gul Factory, Thakurdas, Haragach, Rangpur	1. Millat Gul 2. Ghora Marka Gul
3	Lalmonirhat		1. Badsha Gul
4	Narshingdi	1. Shahi Ali Chemical Company, Kamartek, Kamrab, Narshingdi 2. Rafiguls House, Syed Nogar, Narshingdi 3. Nazimuuddin House, Kumradi Shibpur, Narshingdi	1. Ghugu Palhi (Dove) 2. Shahi Ali Gul
5	Khulna	1. Lacial Gul, Shia Mosque Khalishpur, Khulna 2. Quamrul Gul, 1/8 Housing Bazar, Khalishpur, Khulna 3. 111 No. Rahmat & Rahman Gul, Ferryghat, Khulna	1. Local Gul (No name) 2. Rahmat and Rahman Gul
6	Jhalakatti	1. Sabiha Chemical Works Ltd. Kumar Patty, Jhalokathi	
7	Mymenshingh	1. Jotsna, Chukaitola, Boro Bari, Mymenshingh	1. Shahjada Guk 2. Jatsna Gul
8	Kushtia	1. Chakka Gul, Bazarhat Mor, Lotni 2. Gani Gul Factory, Palpara, Jugia, Barokhada, Kushtia 3. Rothtola, near Womens Collage, Veramara Kushtia 4. Chaka Gul Factory, Udlbari, Kushtia 5. Badrunessa Chamical Company, Jugia, Kushtia 6. Thakur Gul Factory, Aruapara, Kushtia	1. Chakha Gul 2. Goni Gul 3. Choka Gul 4. Lalbaba Shahi Gul
9	Lakshmiripur	1. Mobarak Colony, Word No.8, Lakshmiripur 2. Shaystho Nogar, Senbag	
10	Sirajganj	1. Hafez M. Quamrul Islam, Dattabari, Sirajganj	
11	Dhaka	1. Section 12, Block – D, Lane – 2, House – 17, Mirpur, Dhaka	Shahi Eagle Gul

Appendix 4

Brand names of Zarda

Information on smokeless tobacco was collected from 35 districts. A total of 130 brand names of Zarda were obtained.

1. Names of the owner producer:

Naming of 18 brands of Zarda was done based on the name of the producer. These are Nasir Zarda, Akij Zarda, Hasan Pati Zarda, Habib Zarda, Amin puri, Zakir Zarda, Mizan Zarda, Selim Zarda, Roni Zarda, Dulal Zarda, Aziz Zarda, Dhiren Zarda, Roman Pati Zarda, Shapon Zarda, Nijam Puri, Jalil Puri Zarda, Bulbul Puri Zarda and Ashik Zarda. These are linked with names of male persons. It is worth mentioning in this context that big tobacco companies like Akij, Nasir are also involved with manufacturing of Zarda.

2. Names suffixing Puri:

Some brands of Zarda are named by suffixing Puri. A total of 33 names suffixing puri were obtained. These are Hakimpuri, Nababpui, Stratopuri, Aminpuri, Chandpur, Happipuri, Nozampuri, Shanatpuri, Umpuri, Hashempuri, Jalilpuri, Jamilpuri, Kamalpuri, Hashimpuri, Hakimpuri, Mayapuri, Hashirpuri, Palashpuri, Monpuri, Erfadpuri, Hasanpuri, Nasempuri, Mohonpuri, Alaminpuri, Heavypuri, Shantipuri, New Shantipuri, Bulbulpuri, Mahanpuri, Ershadpuri, Loose Ershadpuri, Shafipuri and Ratanpuri. The photograph of the owner is inevitably imposed where there is name of the owner of the factory.

3. Other names:

Other names were there in 79 brands. These included Misti Zarda, Shugandi Zarda, Shukna Zarda, Pati Zarda, Tripti Zarda, Nomanpata Zarda, National Zarda, Panparag, Panmasla, Vejapati, Diamondpati, SuroviZarda, RubiZarda, Lalbaba, Nabab panparag, ShovaZarda, Dhaka Zarda, Hoque Zarda, Shuknapati, Vojonbilash, Roman PatiZarda, Moynamoti, Kundu, Guru, Special Moti Zarda, Ratna Zarda, Loose Zarda, Hasanpati Zarda, Pan Zarda, Vijakonda, Gundi, Panmoja, Kanpur, Shahi Panmaja, Chomonbahar, Kabing Shivdada, Keshori, Shah Zarda, Kosturi Zarda, Bannerni Shurovi, Salma Pati Zarda, Shapon Zarda, Dulal Zarda, Vejapati Zarda, Mojo Zarda, 99 Jafrani, 91 Shahi special, 99 Shahi Vijapati, Lalpati, Mixture, Kima, Kishori, Special and mixture Zarda, Lalpati, Kalababa, Kora mixture, Aminpur Zarda, Nepal Zarda, Minar Zarda, Roshopati Zarda, Apurba vijapati, Testipanmasla, Kanpati, Shukia and Veja Zarda, Badsha, Hakimpuri, Type Zarda, Pagla shukna Zarda, Monin Slova Zarda, Raton, Dilip, Amin Shova, Noman Zarda, RajZarda, Rakib Zarda, Shova Zarda, Shuknapati Zarda and Sardar Zarda. Baba Zarda is prepared with tobacco leaves, herbal medicine, spices and sweet flavor. Special pati Shurovi is prepared with tobacco leaves, scent and menthol. Kostori Lalpati Zarda is prepared with tobacco leaves, scent, spicy herbs, glycerine and menthol. Golapi powder chomon bahar is prepared with rice starch, pulp of wood apple, menthol, saccharin, artificial flavor and perfume.

The Gul names included 1. Biddut kala Gul, 2. Special Bogh Gul, 3. Bogh Marka Gul, 4. Raju Gul, 5. Badsha Gul, 6. Ghugupakhi, 7. Shahi Ali Gul, 8. ShanZarda, 9. Jatona Gul, 10. Chakka Gul, 11. Gani Gul, 12. Hukka Gul

There are some names of Gul which indicate power and action of the product. These included the names of some bird, color, light etc.

PHOTOS: BRANDS OF ZARDA& GUL



PHOTOS:PRODUCTION IN FACTORIES OF ZARDA & GUL

