OPERATIONAL ENVIRONMENT IN A SLAUGHTER HOUSE:
A MACRO-LEVEL CASE STUDY

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ABSTRACT

The paper is an outcome of an exploratory case study of slaughterhouse which was made to identify and study those extension factors which affect productivity of slaughterhouse. Non-participant observation was the major tool for the data collection and it was substantiated by personal interviews wherever required. Based on the available literature and initial observations all those factors which can reflect on the efficiency and productivity of the slaughterhouse were identified and studied. The findings of the study have been discussed under four heads namely, infrastructure and physical environment, social structural, administrative, workers, and consumers. Findings of this study have brought forth many factors which are important to be addressed for effective extension interventions aimed at bringing desired changes for the better productivity of the organisation and better quality of produce.

INTRODUCTION

In India, slaughterhouse are the only organised centres where slaughtering of animals for meat production is done. Today there are 3,631 licensed slaughterhouses (Singh, 1994) however, barring a few, these centres are in very bad shape. According to Ramaswamy (1984), thirty million cattle and buffaloes, 100 million sheep, goats and pigs and 300 million poultry birds are slaughtered every year in city-based abattoirs and six million tonnes of meat, valued at more than Rs. 16,000 crore are thus produced. Export of buffalo meat, processed meat, and poultry products bring considerable amount of foreign exchange to the country. During the year 1997-98 country expected to earn more than 850 crore from the export of meat and meat based products. In spite of its great importance, most of the slaughterhouses are in dilapidated buildings constructed more than 50 years ago and lack of even basic amenities like light, ventilation, water and sanitation. The condition in and around the slaughterhouses are unhygienic. The condition of butchers is also miserable and people who eat meat from these slaughterhouses have chances of getting infected. Moreover, about ten crore of population are affected by the pollution caused by these slaughterhouses (Singh, 1994) and these altogether affect the productivity of slaughterhouse and quality of meat. Extension intervention to bring about changes for better in the present status of slaughterhouse requires identification and study of factors affecting productivity of the slaughterhouse and quality of meat produced.

The study was made to know those extension factors which affect productivity of the organisation. Although above introductory section does throw some light

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on the factors like, infrastructure and administrative, but for effective and efficient extension interventions a holistic approach of research to identify entire spectrum of possible factors is necessary. For example, a slaughterhouse is a social organisation also, and an organisation can be better understood by studying the individuals, their interactions, laws, population characteristics and set of social relationships that form the environment of the organisation (Stinchcombe, 1965). The social structure of any organisation affect the motivation of workers, work style, work environment and ultimately the performance and productivity of the organisation (Bavelas, 1950; Leavitt, 1951; Torrance, 1954; Donald, 1959; Shaw, 1964; Shaw, 1978; Kaul, 1981; Vansell et al., 1981; Cooke and Rousseau, 1984; Jackson and Schuler, 1985; Greenberg and Baron, 1993). Besides these social structural factors those related to workers and consumers also need to be examined. At the outset it is important to mention that findings and consequent discussions are based on the study of one slaughterhouse; so it can not be generalised. However, it is expected that detailed case study of one organisation will bring forth many issues which are important for other slaughterhouses as well.

MATERIAL AND METHODS

As the study intended to have a detailed study of a slaughterhouse case study approach, considered to be most suitable approach for such study (Cartwright and Zander, 1968; Greenberg and Baron, 1993), was followed. Non-participant observation was the major tool for the data collection and it was substantiated by personal interviews wherever required. Based on the available literature and initial observations all those elements, which can affect productivity of the slaughterhouse, were identified and studied. The slaughterhouse of Bhopal, which had medium capacity and considerable slaughter-rate was purposively selected some where in north India.

Observation was made for 120 days and 20 days (total 140 days) were utilised for personal interviews. Out of 120 days, 90 days were used to have observation of different events inside the slaughterhouse (where actual slaughtering took place), and the rest 30 days were devoted to observe the outside of the slaughterhouse. Various activities and communication in different parts of slaughterhouse were recorded for 60 days. The rest 30 days were spent in observing different individuals, their activities and communication. Similarly, 20 days were used in studying various events at different places outside the slaughterhouse (mainly auction ground), and 10 days were used in taking note of different individuals and their respective activities. However, for convenience, after the initial observation, observation-sheets were prepared and data were collected accordingly. The findings of the study are presented under four heads:

A. Infrastructure and physical environment
B. Social structural
C. Administrative
D. Workers
E. Consumers

RESULTS AND DISCUSSION

A. Infrastructure and physical environment

The slaughterhouse had a sprawling campus of about 15 acres in the heart of the city and was situated on the roadside. About eight acres of area was covered by roofed construction and the rest was open space. The entire campus
had a pucca boundary wall which had fallen from four different places. All the roofed constructions had pucca walls and floors but the floorings were broken and cracks were obvious in floors. From the walls plaster was leaving the bricks and bricks were visible from different places. These holes and cracks were houses of many insects and micro-organisms and the former were visible as well. Soil, blood and waste materials got stuck in those cracks and when it soaked water or blood they came up and got stuck to cut meat. Dust particles, brick powder and plasters coming out from the walls always got mixed with cut meat.

Most of the roof was pucca but there were tin sheds at few places. Pucca roof was in tact but tin sheds had many holes and from one place it had completely blown off. Except roofed construction entire campus did not have any flooring. Because of regular movement of animals the soil was quite loose which resulted in mud whenever there was even small rain or due to urination by animals. Animals used to walk and sit in same mud and were taken for slaughtering without any cleaning. On inquiry it was reported that these buildings have never undergone any major repair work since initial construction and only few patch works had been done here and there.

The building was built in 1950 with the capacity of slaughtering 35 animals. Afterwards, no expansion or modification has been made in the structure. Originally, the stable had the capacity of maximum 50 animals but during observation period on an average 100 animals were found in the stable (Table 1). According to the doctor there should not be more than 20 men in the slaughterhouse main premises but at peak time (6.30 a.m.) the number went up to fifty. Originally, slaughterhouse had the in-built capacity of accommodating slaughtering of 35 animals but the number of animals being slaughtered (during the observation period) had gone up to 80 to 90 (on normal working days) and up 120 on some specific days. Because the space available per animal in the slaughterhouse had gone down there was overcrowding in the slaughterhouse. Because of this overcrowding butchers slaughtered animals and stacked them one above another. While doing so cleanliness was never considered. Further, usually stack was made in a corner which was not washed properly by either cleaners or butchers themselves. Because of the space problem the space between two animals was minimum and hence, while grounding, animals fell on next animal and it was soiled with spilling water. Butchers used to bring two or three animals out of stable and slaughter them one after another. So, while butchers worked on one animal free animals roamed here and there and sometimes

<table>
<thead>
<tr>
<th>Units considered</th>
<th>Maximum capacity (in numbers)</th>
<th>Present status (in numbers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>To accommodate individuals at slaughtering place</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td>To slaughter animals</td>
<td>35</td>
<td>85</td>
</tr>
<tr>
<td>To accommodate animals in stable</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>
walked on cut meat. As space was limited workers too had to move through same places where animals were slaughtered.

Water supply, ventilation, and daylight were found sufficient. However, lighting during nights was less than adequate. There was one electric bulb each in four corridors where slaughtering used to take place and there was one bulb in churning room. The intensity of light was quite low and it was found that workers were in stress while working in such light. The remaining open area had only two tubelights and it was difficult for an outsider to move at night.

Originally, platforms meant for slaughtering animals were sloped towards a drain in such a way that all the fluid waste had to go in the drain. But, as the platforms were not smooth and number of cracks were there in the flooring, smooth flow of fluid wastes was not possible. The drain too was in dilapidated condition. These all resulted in collection of wastes in the courtyard. With the passage of time as the slaughtering proceeded the courtyard used to be completely covered with all waste material including solid waste which butchers used to throw while working.

Central drain had pucca outlet up to just outside the slaughterhouse. Beyond this, the outlet was not well managed which resulted in spill off of the waste in large area. The wastes finally went into a bigger drain that carried wastes from the nearby areas including that of one wax factory. At the end of slaughtering process cleaners first transferred all the solid waste to a trailer standing just outside the slaughterhouse and flushed the rest of the waste with water. Some of the water (mixed with waste) which could not go in the drain remained spilled near the gate. However, small particles of waste and blood clottings remained stuck in the cracked parts of the floor. The condition of the stable and the area where animals were auctioned was found worse. The dung, soil unearthed by animal’s hoofs, and animal’s urine used to make a stinking mud. These were never cleaned during the period of observation. After rain the condition further worsened and the animals had to live with those worse situations.

There was negligible vegetarian in the slaughterhouse campus. There were three trees and a very small patch of ground flora. Ground flora included grasses and some shrubs which had come up on their own. The slaughterhouse was surrounded by buildings from two sides. The rest two sides had an open field having few plantations and a road having considerable traffic, respectively. Out of the two buildings one was of wax factory and another was godown. Across the road there was railway track and after that there were residential colonies. Above explained surroundings were just next to the slaughterhouse and if considered a little farther it was found surrounded by residential houses and market along the road side.

B. Social structural:

Understanding the importance of social structural elements in productivity of any organisation those elements were studied which can reflect upon the present status of the slaughterhouse. It may be noted that these elements have been discussed briefly (to the extent which served the purpose of the present subject under study only).

Communication: Study of content of the communication among workers it was found that workers were least concerned
Table 2. Classification of communication episodes according to their contents.

<table>
<thead>
<tr>
<th>Content of communication</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work (continued) related</td>
<td>331 (40.81)</td>
</tr>
<tr>
<td>Work (Past/Future) related</td>
<td>57 (19.37)</td>
</tr>
<tr>
<td>About Colleague's work</td>
<td>55 (6.78)</td>
</tr>
<tr>
<td>Personal/family related</td>
<td>79 (9.75)</td>
</tr>
<tr>
<td>About Quality of animals/products</td>
<td>47 (5.79)</td>
</tr>
<tr>
<td>About market price of products</td>
<td>32 (3.94)</td>
</tr>
<tr>
<td>About existing facility and Doctor</td>
<td>16 (1.97)</td>
</tr>
<tr>
<td>About movies/sports/festival etc.</td>
<td>94 (11.59)</td>
</tr>
</tbody>
</table>

Values in parentheses indicate percentage of total.

Table 3. Classification of communication episodes according to their types.

<table>
<thead>
<tr>
<th>Types of communication</th>
<th>Spoken</th>
<th>Written</th>
<th>Non-verbal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency (n=881)</td>
<td>611 (69.35)</td>
<td>06 (0.68)</td>
<td>264 (29.97)</td>
</tr>
</tbody>
</table>

Values in parentheses indicate percentage of total.

about the working facilities in the slaughterhouse, quality of animals and products, and their market price (Table 2). This indicates the level of apathy among workers towards their organisation and work.

Although frequency of various types of communication i.e., spoken, written, and non-verbal, may not be a criterion to judge efficiency of an organisation, but abysmally low share of written communication does reflect the administration's and workers' concern towards organisation and existence and type of formal authority in organisation. As evident from the Table 3, out of total 617 episodes recorded in slaughterhouse only six (less than one per cent) episodes were in the form of written communication.

Study of communication network revealed that there was not any systematic pattern of communication in the slaughterhouse. The network observed was like open for all. This is a sign of

Table 4. Ranking of different occupations by the workers.

<table>
<thead>
<tr>
<th>Occupations</th>
<th>1st rank</th>
<th>2nd rank</th>
<th>3rd rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor</td>
<td>40(88.89)</td>
<td>xx</td>
<td>xx</td>
</tr>
<tr>
<td>Gatekeeper</td>
<td>xx</td>
<td>xx</td>
<td>05(11.11)</td>
</tr>
<tr>
<td>Cleaner</td>
<td>xx</td>
<td>xx</td>
<td>xx</td>
</tr>
<tr>
<td>Butcher</td>
<td>xx</td>
<td>01(2.22)</td>
<td>03(6.67)</td>
</tr>
<tr>
<td>Blood contractor</td>
<td>xx</td>
<td>02(4.44)</td>
<td>06(13.33)</td>
</tr>
<tr>
<td>Retailer</td>
<td>02(4.44)</td>
<td>20(44.44)</td>
<td>17(37.78)</td>
</tr>
<tr>
<td>Middleman</td>
<td>03(6.67)</td>
<td>22(48.89)</td>
<td>14(31.11)</td>
</tr>
<tr>
<td>Businessman</td>
<td>xx</td>
<td>xx</td>
<td>xx</td>
</tr>
<tr>
<td>Blood collector</td>
<td>xx</td>
<td>xx</td>
<td>xx</td>
</tr>
</tbody>
</table>

Values in parentheses indicate percentage of total.
lack of communication system and lack of formal hierarchy in the organisation.

**Occupational prestige:** This refers to the prestige attached to one particular occupation of an organisation. This dimension is a very powerful determinant of differentiation in organisation and expected behaviour. To study the occupational prestige in slaughterhouse all occupations viz., blood collector, butcher, blood contractor, retailer, middleman, businessman, doctor, gatekeeper, cleaner were listed and respondents were asked to rank three most prestigious occupation and secondly mention their preferences what they would like their son/grandson to be, on three point continuum. Respondents (n= 45) were selected randomly from all group of workers involved in the slaughterhouse except the doctor. While reacting to former, most of the respondents (88.89%) described the doctor's occupation as most prestigious (Table 4). Middleman's and retailers occupations were ranked second by about 49 and 44 per cent of respondents respectively. Same occupations were ranked third most prestigious by 31.11 per cent and 37.78 per cent of respondents respectively. It is clear from the above explanation that workers ranked those professions higher which were not directly related with actual work in the slaughterhouse. It is important to mention that workers are in this profession since generations and still they don't consider their profession as prestigious.

**Organisational Prestige:** It was studied in terms of prestige attached by the workers to the organisation in which they worked. It is obvious from Table 5 that more than 71 per cent of workers felt bad working in the slaughterhouse, 60 per cent of workers attached nil importance to their occupational attachment with the slaughterhouse, and more than 42 per cent of workers never brought any friends/relatives to show them the place where they work. Based on the answer of above questions it could be concluded that organisational prestige of slaughterhouse was very low. All of them were of the view that their profession lacked social recognition, and even Muslims did not regard this profession as a dignified one. When asked, if they get another job with same level of physical work and same earnings, what would they want?

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Questions</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>How do you feel while working in this slaughterhouse?</td>
<td>Good (6.67)  So-so (22.22)  Bad (71.11)</td>
</tr>
<tr>
<td>2.</td>
<td>How much importance do you attach to your occupational association with slaughterhouse?</td>
<td>High (11.11)  Medium (28.89)  Nil (60.00)</td>
</tr>
<tr>
<td>3.</td>
<td>Do you bring your visiting friends/relatives to show the slaughterhouse?</td>
<td>Always (22.22)  Sometimes (35.56)  Never (42.22)</td>
</tr>
<tr>
<td>4.</td>
<td>Will you leave this job if you get an offer of another job of same level?</td>
<td>No (24.44)  Can't say (31.11)  Yes (44.45)</td>
</tr>
</tbody>
</table>

Table 5. Responses of workers to the different questions asked to study organisational prestige.

Values in parentheses indicate percentage of total.
prefer? About 44.45 per cent were found ready to leave the job while 31.11 per cent were undecided about it. Among those who preferred to continue, some were of the view that if they had realised that they can fit into new job, they will think again. It can be inferred from the above discussion that organisational prestige of the slaughterhouse was very low even in the eyes of its workers.

**Norms:** Norms in slaughterhouse were studied based on the criteria suggested by Mitchell *et al.*, (1985). Norms of the group were identified and studied in detail in terms of norms for whom, level of deviation (flexibility), who are deviants, norms enforcing mechanism and what purpose does a particular norm serve. It was observed that many norms which were important for maintaining a working system, a good organisational cultural and cleanliness in production process were not being followed and had many deviants. Norms like, a butcher will slaughter animal at the place fixed for him, only those animals would be slaughtered which are in good health, butcher would not take any part of the slaughtered animal, slaughter will not take place in day light, slaughtering will start from 2.00 a.m., were often flouted. Norms enforcing mechanisms like, peer group pressure and administration were not effective at all.

C. Administrative:

**Maintenance of Infrastructure:** As discussed in the above section when originally built, slaughterhouse had all the facilities for quality meat production but with the time the situation has gone from bad to worse. As the slaughterhouse was under government control, government was responsible for overall maintenance of the campus and working environment. During the entire period of observation neither veterinary doctor nor any government representative came and saw the facilities and status of building. Although the doctor who was the overall in charge of the slaughterhouse, came to the slaughterhouse on every working day but he was never found discussing facilities, cleanliness and poor status of buildings and campus. During the 140 days of observation doctor never visited slaughterhouse while the slaughtering was going on (late night or early morning). On inquiry workers expressed their helplessness that blamed government for the present state of affairs of slaughterhouse. When similar question was asked from doctor he also accepted that the condition of slaughterhouse is not workable and expressed his helplessness by saying that it was not on government agenda.

**Number of animals slaughtered:** There was not any check on number of animals to be slaughtered and it depended on the wish of the retailers and not on the capacity of slaughterhouse. As table indicates number of animals kept in stable and slaughtered were more than its capacity. This resulted in overcrowding and which consequently led to many problems related to hygiene and maintenance of norms and infrastructure facilities of slaughterhouse.

**Quality of animal slaughtered:** Although the veterinary doctor is responsible for verifying animals before slaughtering for their health status and maintaining hygiene and meat quality produced at the slaughterhouse, yet, in practice, he was never found doing these seriously. He visited slaughterhouse everyday in the evening and participated in the verification process of animals. However, not a single animal was found being culled out during the entire period of observation and once the verification
process was over he returned to visit
next day only for animal verification. All
the animals irrespective of their age and
health status were slaughtered.

**Cleanliness in slaughterhouse:**
Cleanliness in the campus was found
lacking during the entire period of
observation. Cleaners cleaned the platform
and courtyard where slaughtering took
place. However because of broken and
cracked floors wastes remained in those
cracks and broken areas. Outside the
slaughtering premises cleaning was done
casually. Those areas where people used
to gather daily for auctioning were cleaned
but the rest of the places were left on
nature for maintenance. Just outside the
slaughterhouse there was heap of solid
wastes which with time had become a
part of the landscape. Spilloff liquid wastes
had covered a considerable area which
too had become a permanent feature of
the campus. The situation at auctioning
site was no better. Workers in
slaughterhouse were found smoking and
spitting wherever they wished. There was
not any fixed place where workers can
have toilet facilities and it was also like
as per wish.

**Enforcing rules or set norms:** There
were many established norms and written
rules intended to maintain the cleanliness
quality of meat and smooth functioning
of slaughterhouse. But many rules or
norms, which required administrative
interventions, were found being flouted.
Norms related to slaughtering time,
duration of slaughtering blood collection,
waste disposal, and auctioning were being
flouted with varying degrees because of
administrative ignorance.

**D. Workers**

**Apathy:** Workers in slaughterhouse
appeared quite content with the existing
situation. During the entire period of
observation not even a single sincere voice
of discontent was heard. All the workers
were found mainly concerned with their
own work and appeared having tendency
do it anyhow. This is also clear from
the diagnosis of the content of their
communication (refer communication
section). Further, their achievement
motivation was found very low which is
quite evident from the discussion made
under the heads of occupational prestige
and organisational prestige, respectively.

**Use of obsolete techniques:** Workers
were found using age-old techniques. Even
incharge veterinary doctor agreed that
these methods have become obsolete in
other meat producing countries, but he
expressed his helplessness to do anything
in this regard. These methods were not
only cruel to the animals but were time
consuming and not safe to the workers
as well. The sense of cleanliness at work
was also found lacking. Workers did not
hesitate in working in even dirtier area.
They smoked and spitted here and there
and even just adjacent to places where
they worked.

**E. Consumers**

People were not concerned about
the how and where the meat was being
produced. During the entire period of
observation there was only one article
written in a local daily on the
slaughterhouse. Although it carried
information against slaughterhouse but
there was not any reaction to it. Local
institutions and organisations (either
government or non-government) were
found silent on this important public health
related issue.

**CONCLUSION AND IMPLICATION**

It is an established fact that meat
industry has a great potential in the
country. Slaughterhouses being the
authorised centres for slaughtering animals assume importance in this context. Status of slaughterhouses and their workers working in it affect the productivity and quality of meat produced. The study throws light on some of the aspects explaining existing status of slaughterhouse and brings forth many facts which deserve immediate attention of all concerned. There is a consistent demand of buffalo meat in the city and this can be assumed true for the entire country also as there are documents supporting this hypothesis. However, if existing literature and findings of the study are considered these together point out the miserable status of slaughterhouses and flaws and weaknesses in working systems of these slaughterhouses. If not addressed properly these can prove fatal for the industry and indications for such effect are already in offing (Editorial, Times of India, 07.4.94). No doubt, the situation appears grim. Originally built old buildings with basic amenities are still existing although, in dilapidated condition; Some characteristics of a functional organisation can still be observed but without any concern for continuing it; a system of work is still operational but not in its original form. Now, there is an urgent need to find out the ways to overcome above shortcomings and limitations to turn these centres with high potentials into efficient and productive organisations.

To achieve the objective of bringing changes for better our extension interventions need to be multidirectional. However, the onus is on local administration and they will have to take initiative or if an outside agency takes up the task, administration need to be fully co-operative. Maintaining quality and productivity in an organisation like slaughterhouse requires good infrastructural facilities and continues maintenance of these facilities. Reconstruction and repair works should be started keeping the changed needs in view. At the same time there should be full hearted effort to strengthen those characteristics which were found existing but not in their true form. The characteristics like communication, occupational and organisational prestige and existence of norms need to be analysed to find out scope for their improvement.

Administrative interventions are most crucial elements for the improvement of status of slaughterhouse. Maintaining hygienic condition in and around slaughterhouse and quality of meat produced is the responsibility of slaughterhouse administration. This is possible by providing all required facilities and scientifically accepted procedure of animal selection, Slaughtering of animals, disposal of by-products and wastes. In spite of recent technological developments, obsolete methods and tools are being used. These are not only cruel to animals but also require a lot of physical work and energy of butchers. Introduction of new norms or maintenance of old norms, which are in accordance with the objectives of slaughterhouse and establishment of a productivity linked work culture are the demand of the time. Workers as a whole appeared apathetic towards their organisation and were not satisfied with their occupation. They were not aware of the potential of industry to which they were associated. They were ignorant about the importance of hygiene in work place. They not only added to the existing unhygienic condition but also worked in such situation. Administrative interventions are required to address these issues. A long-term remedial strategy needs to be chalked out and accordingly work should
start on priority basis. Administration has not only to maintain the infra-structural facilities but maintenance of a working system is also its responsibility. It needs to be responsive to the need of the time; at the same time it has to be proactive in working for the workers and protecting the interest of silent consumer. A trained and empowered worker is the need of the time and administration would have to be honest in their efforts to achieve the above mentioned objectives.

Besides slaughterhouse administration, workers and consumers too will have to own some responsibilities. Workers were found least concerned about the status of slaughterhouse and unhygienic conditions in which they were working. The study has revealed that during their presence in slaughterhouse they talked least about available physical facilities. They were found interested in their own work only and tendency to complete the work anyhow. Similar was the case of consumers. If consumers are paying for the product they have a right to know about its purity and workers can always demand for the working conditions which are not harmful to their health. Further, if workers and consumers are aware and assertive about their rights, the administration would be forced to work. Hence, extension intervention need to be multi-pronged which can address the need of outside support (for improved infrastructure), administrative tuning up, training of workers, and awareness among consumers. Only then we can expect increased productivity and improved quality of meat for consumers.

REFERENCES


