



WAREHOUSE SAFETY AND SECURITY

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1. Abstract:

Warehousing is a growing concept which is playing a crucial role in the modern supply chain and logistics sector. There are many safety and security hurdles that are present and can seriously hamper the progress of the logistics. After conducting research with the help of questionnaires and interviews, the paper finds that the Company is struggling and needs to ensure the employee's training and standard operating procedures need to be adopted within the warehouses which will substantially improve the effectiveness of the warehousing services. Proper safety and security protocols needs to be established, and they need to be ensured if they are being fulfilled at the countless warehouses that stretch along different parts of Oman. Furthermore, the paper also finds that information technology can improve the way how warehousing is traditionally done. Once warehousing practices are improved, they will help Company, it will help the organization to generate more revenue and grow much faster.

2. Introduction:

In today's environment and global trade scenario, the importance of warehousing cannot be ruled out. Logistics are playing an important role as to how the brands

or manufacturers are sending their goods to their consumers. The process sounds so easy however at the end of the day, the complexities are much higher. Likewise, the field of logistics is developing methods through which these challenges can be addressed and users at one end of the world can acquire and consumer goods from the other end of the world. These goods can be from ranging to things like medical equipment, personal items, to electronics. The possibilities are endless, and the modern trade is able to provide the necessary answers that are needed¹. During the whole process of logistics, warehousing is important because goods send from one part of the world need to be stored in another part of the world before they can reach their end-user or customer. The place where they are stored is known as Warehouse and the process of storing the equipment in the warehouse is known as warehousing. The warehouses have certain different types of challenges that are needed to be addressed, and these challenges often range from security issues to safety issues. Anything can go wrong depending upon the types and the qualities of the equipment being kept in the warehouses.

The paper looks and examines one of the most important organizations in Oman which deals with the warehousing of goods. There are multiple types of safety

and security issues that compromise the safety and security of the warehouses and these issues are:

Fire: Fire can erupt at anytime within a warehouse, and can seriously jeopardize the safety and the security of the warehouse. It can entirely burn the equipment that is being stored within the warehouse and thus can cause a serious disruption of the supply of certain equipmentⁱⁱ.

Security: there are countless security hurdles that are present within the warehouse, and these hurdles can often make life easier for the bad guys or people who do not have good intentions with the equipment that is being kept within the warehouse. Thus, there is always a need to ensure there is proper protection within the warehouseⁱⁱⁱ.

Human Errors: human errors are common everywhere, however in the warehouses, they present a serious hurdle because it can cause serious issues once occurred and can disrupt the supply for many days.

System Errors: there are different kinds of materials that are being placed within the warehouse and require certain types of conditions through which they can run. Chemicals or Gases^{iv} are among the examples there are. Failure of the system which is keeping the equipment at a certain temperature can make things worse. Thus, it is necessary for the warehouses to ensure their systems are running 24/7 without any hurdles^v.

3. Research Problems and Objectives:

It is clear that warehouses need to be safeguarded against the multiple kinds of threats that are actively looking or harming them. It becomes necessary for the warehouse managers to ensure that the equipment or material that is being stored inside of them is fully guarded and monitored against any outside to inside threats. The importance of warehouses is higher than ever before because they can seriously hamper the supply of crucial equipment or material in one place. Warehouses also ensure that before some serious issues to arise, there is an adequate place to store the important and Aid material. Thus, from the above observation, the safety of the warehouse is crucial and without it, a warehouse is bound to fail.

The paper looks solely into what kind of safety and security challenges are apart from the ones that have been mentioned, and it looks also into how those challenges can be resolved. The paper aims to conduct thorough research and base its finding into how it can help the Company to perform better, and how their warehouses can better serve the community and vendors who are attached to the daily supply of materials.

The paper looks closely into how the safety and the security of the warehouse can be improved and what methods and materials can be placed that will ensure its safety. The paper also looks into the challenges there are present within the warehouse's safety and security and how those challenges are met by the Company. Furthermore, the paper also looks into how and what role can the technology place ensure the effectiveness and the safety of the warehouses. The paper will examine what role the technology is bringing and how the tech can serve better and improve the effectiveness of the warehouses.

| Objectives of the Research Paper | |
|----------------------------------|--|
| 1. | The efficiency of the warehouse: the paper examines what are the steps needed to ensure the efficiency of the warehouses. |
| 2. | Impact of safety and security: the paper examines the impact there is within the increased safety and security of the warehouse on the supply of logistics. |
| 3. | Analysis: the paper examines the current steps and measures that are being in-place within the Company in the safety and security of the warehouses. |
| 4. | Recommendation: one of the most important steps, through the acquisition of the data is to recommend what steps can be undertaken by the Company to ensure the safety and the security of their warehouses in the near future. |

4. Methodology:

The methodology is one of the most important parts of a research paper, and without it, the data necessary to understand the research problem and recommend changes. Without the methodology, the research will be impossible to move further. The paper follows both, qualitative research methodology and quantitative research methodology^{vi}. The reason behind the selection of both kinds of research is because the paper needs to be explorative research. Furthermore, this helps to bring more diversity within the answers that are will be gathered and also helps to dive deeper and develop a deeper understanding of the research problems. Quantitative research allows us to gather quantifiable data, with the help of statistical along with mathematical techniques. With the help of this method, research can and will be able to generate knowledge as well as a thorough understanding which will help to further understand the research question. Multiple forms of quantitative research are present that include Participant observations, Surveys, Experiments, the Delphi method, Cronbach's Alpha and Interviews. The paper will use Participants' observations and Cronbach's alpha to understand the legibility of the research data that has been acquired through the help of questionnaires and interviews.

Questionnaires:

There are two types of questionnaires that are being asked and these include Open-ended and closed-ended.

1. Open-Ended: the open-ended questionnaires are those which are being asked and provide the user enough leverage through which the participant can easily and thoroughly answer the research question.
2. Close Ended: The close-ended questions are those that do not provide the participant enough room to answer in fact they have to answer to a given number of choices^{vii}.

The questions will be asked both in Arabic and English language. This is done because it allows the participant to better understand the research problem at hand. The researcher will use Google form which will be shared with the participant. All the participants will have to answer to the research question online.

The questionnaires are selected because, most important of all, they are one of the easiest forms of data collection and are widely used. They provide the researcher ease to collect and present data. Their legibility is the highest because it does not cause the participant any issue while they are answering the research question.

Interviews:

The interviews will be conducted through online software's and participant will be given 30 minutes each. What this will allow is that the participant can answer the question by taking adequate response time. When the participant is rushing, that rushing causes several problems and the answers become less legible. Thus, the time has been selected likewise to ensure the participant has enough time to answer the research questions.

Interviews are also considered to be one of the most widely acknowledge and used research methods that have been selected by people in different parts of the world. The interviews allow the participant to remain on track, and if they have any issue regarding their understanding of the research question, they can simply acquire more information on the subject matter.

Legibility of Interviews and Questionnaires:

It is important to understand that both the questionnaires and interviews are considered to be one of the most legit sources of acquiring data. The collection of questionnaires and interviews is deliberate because it allows them to ensure that the participant is well-read about the research topic and if they have any issues with the questions, they can simply acquire more information through the help of the interviews.

5. The population of the Study:

The total number of the participants is 70, all of them are employees with the Company. They work in different departments. And these departments include the departments such as the:

1. Planning Division
2. Warehouse safety managers
3. Logistics
4. Operations

As the research's main objective is to understand the Company, thus this number is crucial as it allows the research to gather enough data which can be thoroughly analyzed and understood to a point that ensures that the gathered research's objective and data is thorough and accurate.

6. Research Considerations:

The research considers multiple forms of the ethical, legal, and social issues which help to look ensure that the data of the participant is not compromised, nor their identity. It also ensures that all academic codes of conduct will be followed by the researcher, and most important off, the anonymity of the participants will be considered a top priority. With all the considerations, this allows the research to maintain the ethical integrity every researcher has, and it helps to maintain all codes of conduct an academic student needs to have^{viii}.

7. Result Analysis:

Qualitative Data Analysis:

The qualitative data involves questionnaires and interviews. Questionnaires and interviews were asked by the researcher to the participants, and the acquired data was then analyzed using Google drive software to present it in a more readable and extracted format.

The following are the reactions that have been assembled which helps to assists with understanding the research question. The answers gathered help to understand that the members have faith so as to make the wellbeing and security division to be progressively powerful, there necessities towards the organization's strategy as well as its further development.

The major response that has been gathered helps to identify that there should be follow up of the laws and guidelines, there should be all the more preparing that should be given to the laborers, and generally significant of every one of, the members propose that the way of life of security should be created basically, the response gathered helps to understand that the training programs of the employees need to be more mature. Along these lines, toward the end, wellbeing

and security of the Warehouse centers are of extraordinary significant nature, and because of the absence of appropriate measures and rules, it is practically hard to execute them, and thus different kinds of issues arise.

The members recommend that with the assistance of sufficient norms, and their usage, things can improve which will help the COMPANY to grow and secure its warehouses. Multiple approaches should be received as well as redesigned occasionally, and there should be appropriate governing rules to guarantee these strategies are being developed and placed in their practicality. Besides the following, the members additionally accept that security culture should be advanced and it should be more mature.

There is by all accounts an absence of organization approaches just as their adaption. The exploration assists that oftentimes the site or warehouse supervisors neglect to present measures through which their group can adjust towards the strategies of the organization, consequently speeding and making sure about up the whole technique, the distribution center practices are changing regularly, it is a result of the idea of stock which continues transforming and evolving. Hence, it is significant for the distribution center's wellbeing and security to refresh their systems to stay unblemished with the necessity of the coordination segment.

Wellbeing and security can be improved inside a warehouse of the COMPANY. Questions and Interviews were both directed through the assistance of the web, on account of COVID 19, it was hard for the analyst to move toward every member. The information accumulated through the assistance of polls and meetings recommends that a larger part of the members accept that there is an enormous opportunity to get better inside the wellbeing and security of Company.

Quantitative Data Analysis:

The quantitative data analysis was done to understand the quantifiable data through the help of data that has been gathered provided the help and support of questionnaires and interviews. The quantitative data analysis helps to understand the legitimacy of the data that has been gathered. The importance of quantifying data cannot be ignored, and thus for this purpose, Cronbach's alpha has been used which helps to understand the

legitimacy of the data. However, one key observation thus far is that the data which has been acquired is present in less number which can then be considered as numeric data, enough for the analysis to be performed.

| Variable. | Cronbach Alpha |
|------------|----------------|
| Age | .695 |
| Question 1 | .739 |
| Question 2 | .596 |
| Question 3 | .589 |
| Question 4 | .599 |

Table 1 – Discussion of Statistical Analysis

| Variable | GR | EDU | DES | AGE | EXP | SM_U | DD | PTD | PC | PQ |
|----------|--------|--------|---------|--------|-------|--------|--------|--------|--------|----|
| GR | 1 | | | | | | | | | |
| EDU | .104** | 1 | | | | | | | | |
| DES | .096 | -.148* | 1 | | | | | | | |
| AGE | -.021 | .149* | -.268** | 1 | | | | | | |
| EXP | .092 | .100** | -.088 | .705** | 1 | | | | | |
| SM_U | .020 | -.027 | -.078 | .051 | -.024 | 1 | | | | |
| DD | -.140* | -.016 | -.190** | -.005 | -.046 | .245** | 1 | | | |
| PTD | -.033* | -.031 | -.170** | .194** | .042 | .246** | .500** | 1 | | |
| PC | -.010* | -.049 | -.256** | .110 | .074 | .296** | .399** | .442** | 1 | |
| PQ | -.240* | -.057 | -.468** | -.011 | -.020 | .257** | .376** | .386** | .725** | 1 |

Table 2 – Correlation Analysis.

The lower probability has been obtained and the P-value is low which helps to suggest that the evidence is much higher and stronger. In the previously mentioned outline, two principle things are thought of and how they influence the distribution center's wellbeing and security. One is the socioeconomics of the representatives and the other being their capabilities and work involved with the distribution center's wellbeing and security. The choice of them in Quantitative examination assists with proposing that there are significant contemplations for the scientist.

8. Conclusion:

It is evident that the importance of the warehouse's safety and security cannot be ruled out. There have been multiple grew areas found within the COMPANY or Company that need to be addressed. The researcher selected 70 participants out of whom all of them serve within the Company in different departments. Their responses help to identify that employee training and follow-up of Standard Operating Procedures is a must, which has been ignored. Technology is also needed and the organization needs to develop a roadmap through which it can be incorporated. The training of the employees needs to be effective and improved. All in all, the research helps to understand that many areas of improvement within Company are needed.

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