



Perceived psycho-social effects of electricity load-shedding, insight from Ward 1, Mucheke A, Masvingo.

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Abstract

The study focused on the perceptions of residents on electricity load shedding. The researcher's motivation in carrying the study was based on the need to explore the perceived psychosocial effects of electricity load shedding in ward 1, Mucheke A. The study carried out a qualitative study which states that only the factual data were to be collected from the sample drawn from the area of study. A sample of 7 participants was used in carrying the study. Semi structured interviews were used in collecting perceptions of the selected participants. The procedures for the qualitative analysis were used in analyzing the data. The main revelation of the study included positive and negative sentiments, with negative sentiments taking the majority which are stress, financial constraints and others. A set of recommendations were included for the government which included ZESA on the proper management of the load shedding schedule. The recommendations also included further research in the study especially for the upcoming researchers.

Keywords: load shedding, psychosocial, perceptions, crisis

1. Introduction

Electrical power reflects financial advancement of a nation. It is urgent for activities of business, market and education institutes while soul for urban areas. The examination has been required with craving to address difficulties and advantages experienced due to power load shedding. Confirmations propose that what people perceive highly impacts their conduct with truth. Attitudes are said to be acquired through transformation of what one perceives as reality. Perceptions not managed properly can escalate and end up harmful to one or the environment as a whole.

Electricity load shedding is a controlled transitory method of slicing capacity to parts of the nation when there isn't sufficient power to address the issues of clients. Apart from insufficient generation capacity, we have several more factors that can lead to electricity load shedding. The factors may include inadequate transmission and also the distribution of infrastructure for sufficiently delivering power to areas it is needed. The procedure is generally done in stages and relying upon the deficiency, the service organization may choose to turn off certain sections of the clients during the procedure. According to Zubair et al., (2021), load shedding is a proportion after all other options have run out to forestall the breakdown of the whole force framework. At the point when the interest or burden from clients is more prominent than the accessible, gracefully the power framework gets uneven which can therefore bring about nationwide force trips that could take days to re-establish.

A taste of load shedding has been felt by a lot of countries globally, and some were once confronting extreme vitality emergencies. These incorporate Pakistan, Nepal and Kazakhstan to specify plenty of a couple. The energy structure of these countries is confirmed to be inadequately overseen and underdeveloped. Pakistan was hit by its most



noticeably power crisis in 2007 when power fell from 4000 Megawatts with monstrous shutdowns. From that point forward, Pakistan has been confronting vitality emergencies which affected varying backgrounds from the scholarly community to industries.

The economy and public activity of Pakistan has been gravely influenced by power emergencies with loss of expensive asserts which invited a lot of psychosocial problems. Given that, individuals in Pakistan 75 percent to 100 percent of their tasks rely upon power, and electricity load shedding has exceptionally influenced their socioeconomic life by 50 percent to 75 percent. The request for electricity has surpassed the supply hence load shedding has become an unavoidable wonder through force shutdown.

Apart from the different countries around the globe, regional countries like Zambia and South Africa have been victims of electricity load shedding for a number of years. A lot of landlocked countries in Southern Africa, such as Zambia being amongst the world's fastest growing economies in and for the past 10 years, suffered an economic decline in 2015 due to reduced power generation. Zambia undertook electricity load shedding to address the imbalance in electricity generation. This then affected the socioeconomic life of Zambians.

Genuine electricity load shedding in Zimbabwe began in 2000 not long after the land reform programme (Kayo, 2001). The nation was famished of remote money required to meet importation of fuel and power (Ministry of Energy and Power Development, 2005). Zimbabwe was then cut from the Southern African Power Pool (SAPP) network due to non-instalment and issues inside different individuals from the network gathering. This prompted lack and an appeal for electricity. Electricity in Zimbabwe is provided by the Zimbabwe Electricity Supply Authority (ZESA). The Zambezi Water Authority decreased the measure of water accessible to the ZESA power generators at Kariba dam because there was extremely low precipitation in the 2018-2019 downpour season and the water levels at Kariba Dam turned out to be low. ZESA (2019) stated that Hwange, Bulawayo and Harare power plants are at present not producing much because of 'old age'. Zimbabwe has five significant force stations, with a complete limit of 1240MW. These facilities don't fulfil power needs. Electrical power in Zimbabwe is chiefly from coal and hydro plants, with a limit of 1240W, while the Kariba hydropower plant produces 780MW.

One of the measures undertaken by ZESA in load management was electricity load shedding. With the current capacity of electricity, ZESA was forced to introduce electricity load shedding. ZESA is responsible for the supply and demand of electricity in Zimbabwe. When you need electricity to switch on lights, print a document, and others, ZESA's role is to supply the required power to meet the demand. Failure to meet the demands of people, affects people's everyday business. The load shedding has affected financial viability and most business operations. Putting into consideration, the literature has investigated that introduction of load shedding is more of a blessing and curse. Masvingo is one of the largest cities recognized in Zimbabwe. It has different urban locations with Muccheke being the oldest location amongst others. Ward 1 has been recognized as one of the locations with a vast and also growing population of the city along other adjacent locations. The people of ward 1 rely upon electricity in achievement of different tasks. Access to dependable power, gracefully is viewed as fundamental for operations of most informal businesses in ward 1. These incorporate machine operations, and also lighting both day and night.



The living conditions of people in ward 1 is highly affected by the electricity crisis with a massive income reduction. The different perceptions of people on electricity load shedding are to be investigated more in this study. Given the different importance of electricity, the study seeks to investigate the negative and positive effects of load shedding focusing much on ward 1 area in Masvingo.

This research therefore, sought to address the following questions.

- a) What are the windfalls of electricity load shedding in ward 1 Mucheke A?
- b) What are the perceived negative effects of electricity load shedding?
- c) How best can affect related to power shortages be reduced in ward 1?

2. Materials and methods

2.1 Population and Sampling strategies

The research sample size for qualitative research method depends on the point at which saturation is reached. The sample size for the study was 10 respondents willing to undertake the research. Amongst the respondents included students, housewives, local people and also retailers in the informal business sector. Purposive sampling was used to develop the sample of the research under discussion. According to this method, which belongs to the category of non-probability sampling techniques, sample members were selected on the basis of their knowledge, relationships and expertise regarding a research subject (Freedman *et al.*, 2007). In the study, the sample members who were selected had relevant information in the study area. Purposive sampling was employed, due to its plus of saving time, money and its ability to meet multiple needs and interests while still maintaining the foundation of a singular focal point.

2.2 Research design

According to McMillan and Schumacher (2006), a research design can be termed the set-up of the research, handling, and selection of participants for data collection and also analysis of the methods used for the study. Poor preparation of research design upset the entire project. The research adopted the phenomenological approach since the study objective was to acquire in-depth knowledge of how electricity Load shedding is affecting the livelihood of people in Mucheke.

Phenomenology can be termed an exploration of how individuals of a given location and context experience different occurrences within their day to day undertaking. Constantly individuals are influenced distinctively and it is the aim of the researcher to draw out the implications of the experience of each influenced individual. Cohen et al (2011), demands that each and every individual experience to be studied so as to understand human behavior. A phenomenological guided research must be highly descriptive and with vigor. Within the research, the researcher explored deep on the relationship between the individual and their own experiences.



The phenomenological study states the study of individual perceptions, feelings and lived experiences, hence a reason why the researcher has chosen this research design. Christensen & Turner (2010) explored the primary objective of the phenomenological study as to explicate the structure, meaning and essence of lived experience of a group of people or an individual around a specific marvel. Acquired evidence, proves how phenomenological study aims at comprehending human action through ordinary eyes. The researcher adopted this research design since it takes a unique perspective as it focuses much on how people perceive an event or phenomena, rather than simply how the phenomena exists in a vacuum. Thus, to say, it provides a profound detailed understanding of a single phenomenon.

2.3 Data analysis and interpretation

Thematic analysis was adopted for the research. Thematic analysis is viewed as one of the well-known and common forms of data analysis the qualitative approach. This is a way of categorizing data on a qualitative approach. It is often used to break down an interview into clear sections; this makes the researcher's job far easier, making the most of the data collected. The main thrust in thematic analysis is identification of themes that is the different patterns within data which are crucial and these themes are then used in addressing the fulcrum of the research. A good quality of theme is highly influenced by the amount of effort and time spent on data analysis, as well as innovativeness. The drawbacks of the thematic analysis could be that, the process itself does not highlight the possible way to identify themes' (Bryman, 2008). If themes are not identified by the researcher, the whole process turn to be pointless, as the utilization of data is not maximized.

3. Results

A deeper meaning on the perceptions of participants was produced after the data was transcribed. There were 7 participants involved in the study and the participants were named using numbers that is 1 to 7. The detailed analysis of the 7 participants is provided below.

3.1. Windfalls of electricity load shedding.

The first objective was directed at getting information related to some of the positive effects that could have emerged due to electricity load shedding in ward 1. This gave light on the effects of electricity load shedding. Participants aired out their views concerning the positive effects of electricity load shedding. Participant 1 and 5 stated that lack of electricity especially during day has led to reduction in the costs of electricity bills.

3.2. Reduced costs of electricity bills.

The costs of electricity bills were getting high monthly with the use of refrigerators, television and other appliances made a huge upsurge in bills. The introduction of electricity load shedding has brought a curse though with a blessing.



Participant 1 remarked,

The costs of electricity become very high if we use electricity daily, day and night but because of electricity load shedding, it has reduced costs of electricity bills and we have managed to use the electricity wisely when it comes and has led also to the use of renewable energy sources.

Participant 4 alluded that:

kunetsa kwemagetsi panguva ino kwaita kuti mitengo yemagetsi aya idererere. (Shortage of electricity has reduced cost of electricity bills).

The flows from these responses substantiated that, before electricity load shedding, people suffered and struggled with the payment of very high electricity charges and the dearth of electricity during day has led to the reduction in the costs of bills or electricity charges.

Strengthen relationships.

Participant 5 and 7 gave a different perspective on electricity load shedding uttering that, it has brought family members together, strengthened socialization and marital bond within communities. Below is their actual response.

Participant 5 answered,

.....ummm maybe kusimbisa rudo with families no phone or television time. (maybe it strengthens love within families since there won't be destructions like cellphones and television).

Participant 7 answered,

Loading shedding has helped chinyakare chedu chidzoke, kare taiwana nguva yekutandara semhuri nevavakidzana tichikurukura zveupenyu, electricity being there evertime zvinotoita kuti tishaye nguva yekutaura nekudzidzisa vana vedu sezvo munhunwese anonga akuswera patv vamwe pamaphone, with this load shedding our socialization circles are now emerging back. (.....bringing back our tradition, where we had time as a family and relatives, socializing life related issues and electricity being there every time we won't have time for educative interaction with our children since everyone would spend most of his or her time on phone or television,....).

Increased conservative strategies.

From the different responses given, shortage of electricity has led to reduction in the cost of bills. This proves that some of the people living in ward 1 they believe load shedding as a blessing financially. Some participants believe that, the introduction of load shedding has led to wise usage of electricity and introduction of other resources that replaces electricity during load shedding period. Below are the actual responses from the participants:

Participant 2 answered,

People have become aware of the need to conserve and use electricity wisely.

Participant 1,2,4,5 and 7 came with their own perceptions in relation to the positive facets of electricity load shedding whilst participant 3 and 6 found nothing positive on electricity load shedding.



Some participants uttered that electricity load shedding has created a certain level of employment in the ward, through the selling of gas, firewood and other sources that replaces electricity. Some of the participants believed, no one benefits from electricity load shedding.

Participant 1 was short in answering and stated that:

Some youth, through selling and manufacturing goods which use renewable energy for example, solar panels and use of gas.

Participant 6's angle of perception for this question was really different from others and divorced to individual perceptions. Below is the actual response for participant 6:

I think, thieves and witches will be the only ones as they can intrude without the presence of light (in darkness). For me load shedding has brought more harm than good. I am not aware of anything good from load shedding.

Participant 6 believes only those doing evil deeds especially during the night sees electricity load shedding as a blessing to them so that they do their own work properly without anyone noticing them.

Participant 5 identified a positive outcome of load shedding on marriages which is one of the dimensions that was overlooked during the literature review. This participant stated that, her friend's husband who used to go out and drink with friends has changed, and instead of spending most of his time with friends drinking outside, the focus now is in his family and his wife. This has strengthened their relationship unlike before the introduction of electricity load shedding. Below is a participant 5 actual response:

My friend told me that her husband has changed. He doesn't go out to drink. He stays home during load shedding; they have candle light dinners, which is romantic. Load shedding has improved her marriage

The prevailing sentiments hold that, electricity load shedding has brought more harm than good, though participants 1, 5 and 6 manage to highlight some of the main benefits some are getting through load shedding, most participants within the study such as participant 2, 3, 4 and 7 found the question unworthy to answer since they believe nothing positive can come from electricity load shedding.

4. Discussion

A discussion of the principle discoveries comparable to the goals of the investigation yielded a positive weight. The participants had different sentiments and perception towards electricity load shedding.

4.1. Perceptual windfalls on electricity load shedding.

The participants believe that electricity load shedding by its nature is viewed as a curse; it has also brought a blessing though less considerable. The findings revealed that, load shedding created employment to some as stated by the participants in the research through the selling of firewood, gas filling and installation of solar energy. The participant



stated that, *'the youth are benefiting, through selling and manufacturing goods which use renewable energy for example solar panels and use of gas.'* Since most men in different families spend most of their time with friends at the beer halls, power shortages have jeopardized their chances of spending more time outside their family circle. Hence, the results proved this to have strengthened marriage bond within families since the period is experienced by shortage of power at both ends.

4.2. Perceived challenges of electricity load shedding.

Considering the influence of load shedding, the results revealed, load shedding does influence the livelihood and normal activity of residents in ward 1. From the flows of the data, ward 1 residents should take load shedding into account whenever they are to make business related decisions. The decisions include how they prepare ahead for possible load shedding episodes. This problem might seem unique for ward 1, but the literature shows; many informal business sectors around countries like our neighboring South Africa, did condemn their state of affairs which brought the implementation of load shedding (Slabbert, 2014).

Findings revealed that, during dark, they experienced very higher rate of theft unlike during day or when there is electricity. With plenty of people reporting theft cases each and every morning to the police station. The above is supported by literature which states that on occasions when load shedding was effected at night, the residential areas were cloaked in darkness. Some residents (almost 20%) noted that thieves take advantage of the darkness to break into homes and also attack residents that are found in the streets. During this night period, resident's life was at risk since they wouldn't know the form of weapons the thieves could carry during their activities (Zaman, 2014). The research findings also review that, business has deteriorated with totally shutting down their business especially those that require electricity to function well. This does not affect the owner of the business but together with the workers themselves. The above is also supported by literature. The industrial area of Faisalabad, many workers are in immense socio-economic pressure, most of the workers were out of their jobs, because almost all factories were closed during electricity load shedding, these types of economic mishaps have deep social, economic and psychological effects on the working class that leads them and their families into swear difficulties.

4.3. Strategies residents can use in reducing power shortages in ward 1.

The findings revealed possible measures that can be taken and used in managing the impact which poses negative effects of load shedding, these includes the use of generators, having solar energy and staying aware or abreast with the load shedding schedules. Be that as it may, government must mediate by accelerating the structure of solar energy stations or solar plant. Taking a gander at all the measures recommended above, what is clear is that they all include going through cash one way or another in spite the fact that they stay account of the load shedding schedule. A portion of the entrepreneurs opined that Solar Power can support a lot in spite the fact that they can just offer a short flexibly of power after load shedding occurs or when the power is off. These do help in avoiding situations where the power instantly shuts down affecting other electric appliances.



The utilization of solar energy is upheld by literature. Literature shows that utilization of solar energy is far reaching over the world and the informal business part favors them on the grounds that, they always function whenever there is direct sunlight which enables them to save their information when the electricity goes off due to electricity load shedding (Zulu et al., 2021). With the use of solar energy there is no loss of information as it gives room to saved work (Meyers, 2007).

Generators are likewise well known among residents. The individuals who don't have generators wish they had them and others had to give positive comments of their use. The perceptions of those in the informal sector is that, generators are the main dependable way to guarantee that the business doesn't endure loss of pay when there is load shedding. Nonetheless, findings discovered that there are few deficits related with utilization of these generators.

The deficits include the robust cost of diesel and the way that the utilization of generators is expensive to the business. Numerous business holders in the informal sector discredit this reality with the notion that they feel they need to expand their input costs only for the business to get by as opposed to utilizing money to develop the business (Mgibisa, 2008, Prinsloo, 2015). Despite the fact that generators keep the business running, they draw some cash out of the coffers of the business and in the long run this may affect the business. There is need for the government of Zimbabwe to organize architects and also engineers to other developing countries, to discover how they managed power shortages. India had issues providing power and needed to fabricate power stations rapidly which they accomplished in 2 years (Ahn & Graczyk, 2012:2).

5. Conclusion

As highlighted direct from the research topic, the research was carried in Mucheke A ward 1 of Masvingo. The main thrust of the study was to shed more light on the perceptions of residents towards electricity load shedding in this ward. The semi structured interviews were used to gather information from the participants. The information was later dissected and analyzed inductively as this is the most ideal method of breaking down subjective information. Having perceived how detrimental load shedding is and can be to our livelihood, it implies vigorous moves must be made to guarantee the alleviation of the effect. To start with, from the responses given by the participants, it may be concluded that there is a requirement in the adjustments of attitudes. From the findings, participants need to change the manner in which they view electricity load shedding so as to relieve its negative effects especially on one's wellbeing. As expressed above, these attitudes can lead one to be excessively weak and losses focus to make an essential move in alleviating the effects brought by electricity load shedding.

The attitude towards the utilization of ZESA's load shedding plan likewise is by all accounts very negative with respect to the participants. They see it as an excise in futility. Indeed, even the individuals who utilize the calendars in scheduling their everyday activity, take a skeptical gander, since they suspect its validity in showing the specific hours



to which power will go off. It is only when the individual attitudes change that the recommendations below may be fully implemented.

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“Conceptualization, Z.S and B.M.; methodology, B.M. investigation, B.M and Z.S.; resources, B.M.; writing—original draft preparation, B.M.; writing—review and editing, B.M and Z.S; visualization, B.M, and Z.S; supervision, B.M and Z.S; project administration, B.M. All authors have read and agreed to the published version of the manuscript.

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