



Agonies Presented to Students and their Pedagogues in Institutions of Higher Learning due to Load Shedding: Eclectic Contexts

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ABSTRACT

Axiomatically, in this era of irregular power outages, a fundamental change in the method of delivering lectures, whether online learning, distance learning, or continuing education has emerged as a universal remedy. Researchers have put to the fore that load shedding has adverse effects on the mental health of students and lecturers. This is a literature review investigative analysis which endeavoured to elucidate the detrimental effects on mental health and well-being caused by power outages to students and their educators. The article utilised variegated literature from various research engines such as Ebscohost, Google Scholar, Research Gate, etc. The study concurred with the legal decision that power outages contravene the South African Constitution, with this transgression causing socio-psychological repercussions. The study concluded that the upcoming government elections give a chance for change to the energy parastatal behemoth, ESKOM. The paper recommends, as a ploy to ease agonies imposed by load-shedding, the implementation of various coping strategies, including maladaptive coping strategies, resolution coping strategies, and the application of the circumplex model coping. The study discusses the impact of load shedding on South Africans' mental health including involvement of psychosocial factors. It offers a detailed examination of the mental health implications of load shedding.

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INTRODUCTION

Unequivocally, online learning, distance learning, and continuing education have become a panacea in this epoch of erratic load-shedding that necessitates a paradigm shift in lecturing.¹ Woefully, erratic load shedding drives internet breakdown, decreased human productivity, and a collapse of the telephone network.² Mlambo postulates that these drawbacks disrupt teaching as well as confound the

¹ Sumitra Pokhrel and Roshan Chhetri, "A Literature Review on Impact of COVID-19 Pandemic on Teaching and Learning," *Higher Education for the Future* 8, no. 1 (January 19, 2021): 133–41, <https://doi.org/10.1177/2347631120983481>.

² Raja Masood Larik, Mohd Wazir Mustafa, and Muhammad Naveed Aman, "A Critical Review of the State-of-art Schemes for under Voltage Load Shedding," *International Transactions on Electrical Energy Systems* 29, no. 5 (May 28, 2019): 2828, <https://doi.org/10.1002/2050-7038.2828>.

smooth delivery of academic content.³ Khan et al. propound that these long hours of erratic load shedding add much misery to the university community, as they lengthen class preparation hours, whether for exams or teaching.⁴ It is painful that one cannot assess how much it will take to do a particular task as the load shedding has become very erratic, with a huge negative impact felt by South Africans since 2007.⁵ In South Africa, the energy parastatal behemoth, ESKOM, with its erratic power supply has made it imperative that pedagogues and students adjust by disregarding the prescribed timetable time slots, and pushing teaching hours only when there is no load shedding.⁶

Axiomatically, the phenomenon of load-shedding has set in place moments of social distress and despondence causing psychological doldrums, especially for people with pre-existing mental health conditions, and adding to the day-to-day South African residents' vicissitudes.⁷ Malik et al., in their study, found that, compared to the erstwhile period of non-load-shedding, the current epoch of load shedding has been inundated with complaints from both the lecturers and students as each party is inconvenienced.⁸ Lecturing has indeed become both an arduous and an uphill task due to unprecedented power cuts, with the worry that student throughput may be jeopardized, as well as their basic rights such as education, compromised.⁹ Wang et al. allude that despite all the efforts to adjust, load-shedding manifest in two different ways, planned & unplanned power cuts.¹⁰ Inglesi-Lotz agreeing with the latter further states that ensuring students are not disadvantaged has been difficult in some regions and has aggravated pockets of inequalities.¹¹ Because following the timetable has become an impossible event, some lecturers have even tried to make the loss by holding classes outside the prescribed set times, although it is not always properly working. It is unfortunate that in this era of modernization, most tasks are performed using gadgets that use electricity.

Khan et al. posit that load shedding has adverse effects on the mental health of the university community.¹² Some studies have confirmed that prolonged or frequent loss of basic services, including power outages, has been shown to precipitate the onset of several mental health conditions, such as depression, anxiety, and post-traumatic stress disorder.¹³ Malik et al. concur with the above studies by asserting that the disturbances exacerbate stressors and ordinary study routines.¹⁴ Valinejad, Mili, and Wal aver that when a community is exposed to natural and human-induced disasters such as load shedding, it faces a variety of mental stresses and strains.¹⁵ It is believed that electricity shortage or its unavailability threatens human lives and makes people mentally unsatisfied. Facts on the ground suggest that the day-to-day lives of the teachers and students are grossly affected by load-shedding

³ V. Mlambo, "Living in the Dark: Load Shedding and South Africa's Quest for Inclusive Development," *International Journal of Social Sciences* 11, no. 2 (2023): 1–8.

⁴ Bisma Khan et al., "Preeclampsia Incidence and Its Maternal and Neonatal Outcomes With Associated Risk Factors," *Cureus*, November 6, 2022, <https://doi.org/10.7759/cureus.31143>.

⁵ Devika Naidoo and Mbali Mabaso, "Social Constructivist Pedagogy in Business Studies Classrooms – Teachers' Experiences and Practices," *Perspective in Education* 41, no. 2 (June 2023), <https://doi.org/10.38140/pie.v41i2.7151>.

⁶ Marthinus J. Booysen, Servaas van der Berg, and Pieter W. van der Walt, "Some Real but Mostly Unconsidered Costs Hiding in the Dark Corners of Load Shedding," *South African Journal of Science* 119, no. 9 (2023): 1–4.

⁷ Jason Bantjes and Leslie Swartz, "Load Shedding and Mental Health in South Africa: Methodological Challenges of Establishing Causal Links," *South African Journal of Science* 119, no. 9/10 (August 31, 2023), <https://doi.org/10.17159/sajs.2023/16661>.

⁸ Anwar Ali Malik et al., "Impacts of Coping Strategies for Electricity Load Shedding among University Students," *Pakistan Journal of Medical and Health Sciences* 16, no. 5 (May 30, 2022): 1165–67, <https://doi.org/10.53350/pjmhs221651165>.

⁹ Reginald Masilo Matsheta and Isaiah Mmatipe Sefoka, "Load-Shedding in South Africa: An Immediate Threat to the Right to Education, 'Section 29 Inquiry,'" *Journal of Educational and Social Research* 13, no. 1 (January 5, 2023): 216, <https://doi.org/10.36941/jesr-2023-0020>.

¹⁰ Can Wang et al., "Emergency Load Shedding Strategy for Microgrids Based on Dueling Deep Q-Learning," *IEEE Access* 9 (2021): 19707–15, <https://doi.org/10.1109/ACCESS.2021.3055401>.

¹¹ Roula Inglesi-Lotz, "Load Shedding in South Africa: Another Nail in Income Inequality?," *South African Journal of Science* 119, no. 9/10 (August 31, 2023), <https://doi.org/10.17159/sajs.2023/16597>.

¹² Khan et al., "Preeclampsia Incidence and Its Maternal and Neonatal Outcomes With Associated Risk Factors."

¹³ S. Laher and K. Cockcroft, Psychological Assessment in South Africa: Research and Applications. *Research gate* (2013). <http://www.scribd.com/mobile/doc/104509735>

¹⁴ Malik et al., "Impacts of Coping Strategies for Electricity Load Shedding among University Students."

¹⁵ Jaber Valinejad, Lamine Mili, and Natalie van der Wal, "Research Needed in Computational Social Science for Power System Reliability, Resilience, and Restoration," October 22, 2022, <https://arxiv.org/abs/2011.08064>.

hence stifling both parties' efficiency in their tasks.¹⁶ Mental health problems can hinder individuals' natural potentialities, and possibly lead to depression among lecturers and students of tertiary institutions.¹⁷

Unequivocally, energy is invaluable and significant in the input of any production activity, whether in local, regional, or global contexts.¹⁸ Inopportunately, the extreme power shortage is one of the most serious drawbacks facing South Africa today. Axiomatically, load-shedding perfidiously affects the running of institutions. Inter alia, students miss their classes; classes are disrupted when load shedding strikes and the process of academic learning is interrupted. More so, the process of imparting knowledge to students is disrupted in the institutions of learning. Lecturers are also disrupted in their quest to prepare for classes as well as in executing their classes. Regrettably, load shedding causes poor connectivity that forces lecturers to temporarily suspend their classes or reschedule some classes and sessions, which makes it difficult for some students to be accommodated as in the erstwhile prescribed timetable. This is because they could be attending other lessons when a lecturer negotiates an opportunity to hold a class. These disturbances are prone to driving mental stresses. This paper thus seeks to examine the mental health agonies experienced by lecturers and students in an endeavour to expedite their teaching tasks. The findings are presented subsequently.

METHODOLOGY

A comprehensive examination of scholarly journal articles, books, and newspaper articles was conducted to analyse the ramifications of load shedding to both the students and their lecturers, as well as institutional administrators. To aid the data collection process, the following questions were used to get material for this study: (i) What are the mental illnesses related to power cuts in learning? (ii) How does load shedding affect students? The results of this search drew the themes including the problem statement. The application of narrative review methodology in this study was predicated upon the perspective put forth by Washington, Demiris, and Oliver.¹⁹ More than 23 research journal articles from reputable sources were analysed before being included for the validity and credibility of the study. The search was limited between 2015-2024 to ensure the article does include outdated matters. The primary aim of employing this methodology was to discern and analyse studies that expound on a specific issue of interest.²⁰ They further argue that it is important to note that narrative reviews do not adhere to a predetermined research question or a specified search strategy; rather, they focus on a topic of interest. Generally, narrative reviews are commonly employed in the exploration of clinical-related subjects due to their inherent capacity to comprehensively discuss and encompass the significance of the said topic.²¹ Consequently, they provide a thorough and profound understanding of the examined mental illnesses.²²

¹⁶ Asma-Ul- Ferdous and Nazia Forhin Shifat, "Dealing with Mental Health in Online Learning: A Retrospect on ELT Teachers and EFL Learners during COVID-19 Pandemic," *REiLA : Journal of Research and Innovation in Language* 2, no. 3 (December 26, 2020): 101–7, <https://doi.org/10.31849/reila.v2i3.5217>.

¹⁷ Ferdous and Shifat, "Dealing with Mental Health in Online Learning: A Retrospect on ELT Teachers and EFL Learners during COVID-19 Pandemic."

¹⁸ Muhammad Arslan and Rashid Zaman, "Impact of Brand Image and Service Quality on Consumer Purchase Intention: A Study of Retail Store in Pakistan," *Research on Humanities and Social Sciences* 4 (2014): 98–105.

¹⁹ G. Demiris, D. P. Oliver, and K. Washington, *Behavioral Intervention Research in Hospice and Palliative Care* (Elsevier, 2019), <https://doi.org/10.1016/C2017-0-01131-X>.

²⁰ Demiris, Oliver, and Washington, *Behavioral Intervention Research in Hospice and Palliative Care*.

²¹ Demiris, Oliver, and Washington, *Behavioral Intervention Research in Hospice and Palliative Care*.

²² Sae Hwang Han, Kyungmin Kim, and Jeffrey A. Burr, "Take a Sad Song and Make It Better: Spousal Activity Limitations, Caregiving, and Depressive Symptoms among Couples," *Social Science & Medicine* 281 (July 2021): 114081, <https://doi.org/10.1016/j.socscimed.2021.114081>.

RESULTS AND DISCUSSIONS

Students' Poor Class Attendance

South Africa adopted the World Health Organisation blended learning pedagogy during the coronavirus to bridge learning inequalities in higher institutions of learning.²³ The August 1997 Social Welfare White Paper emphasises that for South Africa to develop, it must invest in the education of its citizens,²⁴ and intermittent power cuts pose a significant threat to this goal.²⁵ In March 2020, all 26 South African universities were compelled to transition their academic activities from traditional face-to-face instruction to an online teaching and learning framework as proposed by the World Health Organisation.²⁶ While the move aimed to save the academic year as students had to learn from their domiciles, it was considered an opportunity for equitable educational opportunities for all South Africans. This is critical as education is considered a tool to eradicate poverty while also tackling issues of inequality, unemployment, ecological concerns, and social and economic viability. Moreover, education is an integral component of South Africa's Vision 2030 which also reflects the United Nations Sustainable Development Goal number four which vouches for quality education.

However, Onwuegbuzie and Ojo's research paper does imply that the South African government through the implementation of load shedding does not act in line with Sustainable Development Goals by asserting that, the occurrence of load-shedding prompts some students to miss their classes and other academic activities, which may drive them to experience spates of mental disorders.²⁷ In consideration of this information, a study by Bantjes et al. concluded that students encountering distress are more likely to discontinue their academic pursuits when faced with escalating pressures.²⁸ A study by Nguse and Wassenaar averred that South Africa is experiencing a prevailing mental health state because of inadequate execution of legislation and policies such as the Mental Health Care Act of 2002; and the National Mental Health Policy Framework and Strategic Plan 2013-2020.²⁹ Matsheta & Sefoka put to the fore that the South African energy parastatal behemoth, ESCOM, with its erratic electricity energy supply given the challenges it presents to students, violates Article 26 of the United Nations Convention plus section 29 of the South African constitution that espouses the right to education that citizens are entitled to.³⁰

Pillay laments that South Africa due to incessant load-shedding outages continues to violate the rights of students to achieve education, further worsening the already significant rate of students discontinuing their studies in South Africa.³¹ This is due to their inability to complete tasks within the designated time frame. The presence of depression and anxiety greatly heightens the likelihood of individuals discontinuing their education, thereby leaving them vulnerable to elevated rates of unemployment, destitution, mortality, and morbidity.³² Comparing the South African experience with that of Pakistan regarding the effects of load shedding on students could help to understand the agonies

²³ Emmanuel O. Ojo and Anthony J. Onwuegbuzie, "University Students Experiences of Learning in an Online Environment in COVID-19 Pandemic: A Meta-Methods Research Study of Perceptions and Attitudes of South African Students," *Journal of Pedagogical Research* 5, no. 4 (September 26, 2021): 1–18, <https://doi.org/10.33902/JPR.2021472164>.

²⁴ South Africa Government, White Paper For Social Welfare. Pretoria: South African Government, (1997). https://www.gov.za/sites/default/files/gcis_document/201409/whitepaperonsocialwelfare0.pdf.

²⁵ Antoinette Lombard, "Social Change through Integrated Social and Economic Development in South Africa: A Social Welfare Perspective," *Journal of Comparative Social Welfare* 24, no. 1 (April 2008): 23–32, <https://doi.org/10.1080/17486830701848712>.

²⁶ Edgar Julius Malatji and Nhlayisi Cedrick Baloyi, "Analysis of Ramifications of Power Outages on Online Teaching and Learning in South Africa," 9th International Conference on New Findings in Humanities and Social Sciences, July 30, 2023, <https://www.dpublication.com/wp-content/uploads/2023/07/15-2357.pdf>.

²⁷ Ojo and Onwuegbuzie, "University Students Experiences of Learning in an Online Environment in COVID-19 Pandemic: A Meta-Methods Research Study of Perceptions and Attitudes of South African Students."

²⁸ Bantjes and Swartz, "Load Shedding and Mental Health in South Africa: Methodological Challenges of Establishing Causal Links."

²⁹ Siphelile Nguse and Douglas Wassenaar, "Mental Health and COVID-19 in South Africa," *South African Journal of Psychology* 51, no. 2 (June 8, 2021): 304–13, <https://doi.org/10.1177/00812463211001543>.

³⁰ Matsheta and Sefoka, "Load-Shedding in South Africa: An Immediate Threat to the Right to Education, 'Section 29 Inquiry.'"

³¹ Kailene Pillay, "Load Shedding Continues to Disrupt Education during the School Holidays," *IOL Politics*, July 7, 2022, <https://www.iol.co.za/news/education/load-shedding-continues-to-disrupt-education-during-the-school-holidays-aeaf011e-786f-471d-a870-fc9f9423a09b>.

³² Cathrine F. Hjorth et al., "Mental Health and School Dropout across Educational Levels and Genders: A 4.8-Year Follow-up Study," *BMC Public Health* 16, no. 1 (December 15, 2016): 976, <https://doi.org/10.1186/s12889-016-3622-8>.

that load-shedding imposes on students. To this end, Lodhi and Malik assert that a significant number of students in Pakistan are impacted by the inconsistent supply of energy which leads to various challenges, including incomplete assignments, ineffective learning, irregular class attendance, delayed tasks, and a sense of restlessness.³³

Additionally, perhaps the agonising part of the power outage in South Africa is the outage implementation in terms of stages, with the highest stage, usually 8, constituting 16 hours of power outage in a day, while stage four means an outage of 8 hours in 24 hours a day. The country has usually been treated across stages 4 to 8.³⁴ Lastly, it is of significant importance to note that these extended stages coincided with the implementation of South Africa Department of Higher Education and Training hybrid teaching and learning approaches in virtually all South African universities, which resulted in heightened anguishes among both students and their facilitators.³⁵ These researchers worry that if the rights of the citizens to uninterrupted and seamless education continue to be jeopardised, the country may be flooded by numerous litigations. This will not augur well for the country's standing among the international community.³⁶

Class Disruption

Apparently, in South Africa, only the use of technology has enabled education facilitators to keep their students engaged during this age of unprecedented events and load shedding, as well as improved pedagogical methods.³⁷ Mensah and Baidoo-Anu posit that ensuring equity and quality as outcomes of an education system is at the centre of South African policy documents in all education systems to ensure the state achieves its esteemed National Development Plan 2030.³⁸ As a result, the strategic plan formulated by the Department of Higher Education and Training in South Africa in line with Fourth Industrial Revolution goals aims to promote technological advancements in educational institutions as a means of rectifying historical disparities.³⁹ Load shedding and its concomitant ramifications are worsening these inequalities.⁴⁰ The consequences of load shedding on education can be associated with the Bantu Education Act of 1953, as highlighted by De Clercq positing that this act resulted in South Africa's unequal education, thereby perpetuating societal disparities in opportunities and South Africa's lingering educational inequalities on a global scale.⁴¹

Unquestionably, universities have become increasingly reliant on electricity ever since the advent of the coronavirus to successfully fulfil their academic calendars.⁴² This surge in demand has disrupted the distribution of power to the network poles, resulting in insufficient power generation due to load shedding.⁴³ Consequently, this situation adversely affects the network frequency, which has a significant impact on the implementation of enhanced pedagogical approaches.⁴⁴ Mthanti conducted a study at the University of the Free State which found that the adverse effects of the increasing

³³ Rab Nawaz Lodhi and R. K. Malik, "Impact of Electricity Shortage on Daily Routines: A Case Study of Pakistan," *Energy & Environment* 24, no. 5 (September 1, 2013): 701–9, <https://doi.org/10.1260/0958-305X.24.5.701>.

³⁴ Malatji and Baloyi, "Analysis of Ramifications of Power Outages on Online Teaching and Learning in South Africa."

³⁵ Malatji and Baloyi, "Analysis of Ramifications of Power Outages on Online Teaching and Learning in South Africa."

³⁶ Thomas Pogge, "World Poverty and Human Rights," *Ethics & International Affairs* 19, no. 1 (March 28, 2005): 1–7, <https://doi.org/10.1111/j.1747-7093.2005.tb00484.x>.

³⁷ Sana Noor, Muhammad Nasir Ali, and Syed Muhammad Husnine, "Performance of Online Classes in Lahore, Pakistan During Covid-19," *Performance Improvement* 59, no. 9 (October 21, 2020): 33–42, <https://doi.org/10.1002/pfi.21938>.

³⁸ Ernest Mensah and David Baidoo-Anu, "Towards Quality and Equitable Education in South Africa: Unpacking the Relationship between Teacher Factors, Students' Socioeconomic Background and Mathematics Achievements," *Research in Mathematics* 9, no. 1 (December 31, 2022), <https://doi.org/10.1080/27684830.2022.2088645>.

³⁹ Dick Ng'ambi et al., "Technology Enhanced Teaching and Learning in South African Higher Education – A Rearview of a 20 Year Journey," *British Journal of Educational Technology* 47, no. 5 (September 18, 2016): 843–58, <https://doi.org/10.1111/bjet.12485>.

⁴⁰ Inglesi-Lotz, "Load Shedding in South Africa: Another Nail in Income Inequality?"

⁴¹ F. De Clercq, "The Persistence of South African Educational Inequalities: The Need for Understanding and Relying on Analytical Frameworks." *University of Johannesburg and Unisa Press*, 24, 22 (2020). doi:<https://orcid.org/0000-0001-9209-059X>

⁴² Ng'ambi et al., "Technology Enhanced Teaching and Learning in South African Higher Education – A Rearview of a 20 Year Journey."

⁴³ C. N. Raghu and A. Manjunatha, "Assessing Effectiveness of Research for Load Shedding in Power System," *International Journal of Electrical and Computer Engineering (IJECE)* 7, no. 6 (December 1, 2017): 3235, <https://doi.org/10.11591/ijece.v7i6.pp3235-3245>.

⁴⁴ Raghu and Manjunatha, "Assessing Effectiveness of Research for Load Shedding in Power System."

electricity dilemma are responsible for causing stress among students due to issues such as struggling to submit assignments in time, impacting their academic performance, and disrupting classes.⁴⁵ This has resulted in some dropping out of the University of the Free State.⁴⁶ Concurring with the above information, Lee, reporting for one of the South African top newspapers averred that “perennial power disruptions euphemistically, are a threat to South Africa’s prospects for higher education recovery, leaving a permanent dent on the country’s education progress as the drive towards the digital era is severely derailed by the intermittent power interruptions as it causes class disruptions due to the network deficits at times.”⁴⁷ In agreement with the above, Kakepoto, Saeed, and Laghari (2022) opined that a significant proportion of educational sessions are reliant on the utilisation of personal computers, portable computing devices, online connectivity, and mobile devices. This systematically enforced truancy amid severe mental impacts on students which manifested in phenomena such as FOMO, atychiphobia, and depressive disorders.⁴⁸ The South African Department of Higher Education and Training expresses its concerns regarding the repercussions of load shedding on students' ability to successfully cover their syllabi, and this phenomenon has the potential to adversely affect the objectives of the course in question.⁴⁹ South Africa is also affected by the consequences of load-shedding, just like India. In their study, Manjunatha and Raghu put forth the perspective that the advancements in technology in India have resulted in an upsurge in energy usage, aligning with the development goals of the United Nations.⁵⁰ However, the frequent interruptions in energy supply hinder the achievement of these goals.⁵¹

Lecturers are also Disordered

Silence and Victor put to the fore that in South Africa, the prevailing issue of power cuts conducted by power behemoth, Eskom, assumes a prominent position, with this predicament exerting a substantial influence on lecturers who find themselves grappling with the prevailing economic crisis such as the ever-increasing food prices, diminished productivity resulting from a scarcity in energy provision, the unsettling disruption of entertainment programmes, an amplified workload stemming from rescheduling, and a prologue of aporophobia.⁵² Water pumps cease to function when load-shedding occurs, resulting in a lack of water in most regions of South Africa during that scheduled power outage.⁵³ Safe drinking water and sanitation are objectives within the Sustainable Development Goals that must be attained by 2030 to completely comply with the embraced United Nations declaration of the Human Right to Safe Drinking and Sanitation.⁵⁴ This declaration emphasizes the need for drinking water and sanitation services that are safe, affordable, acceptable, available, and accessible to all individuals.⁵⁵ The impact of germophobia on lecturers is highlighted by Vignoli, Muschalla, and Mariani who state that anxiety impairs productivity, lowers

⁴⁵ Bawinile J. Mthanti, “A Descriptive Learning Analytics: An Online Learning Programmes and Load-Shedding Conundrum,” *E-Journal of Humanities, Arts and Social Sciences*, December 5, 2023, 161–74, <https://doi.org/10.38159/ehass.202341214>.

⁴⁶ Mthanti, “A Descriptive Learning Analytics: An Online Learning Programmes and Load-Shedding Conundrum.”

⁴⁷ Nathaniel Lee, “Load-Shedding Affects Education as Modern Learning Relies on Electricity,” *Sowetan Live*, November 17, 2021, <https://www.sowetanlive.co.za/opinion/columnists/2021-11-17-load-shedding-affects-education-as-modern-learning-relies-on-electricity/>.

⁴⁸ David Lawrence et al., “Impact of Mental Disorders on Attendance at School,” *Australian Journal of Education* 63, no. 1 (April 14, 2019): 5–21, <https://doi.org/10.1177/0004944118823576>.

⁴⁹ S. McCain, A. Allen and E. Bertrand, “Proteomic traits vary across taxa in a coastal Antarctic phytoplankton bloom.” *The ISME Journal*, 16(2), (2022). doi:<https://doi.org/10.1038/s41396-021-01084-9>

⁵⁰ Raghu and Manjunatha, “Assessing Effectiveness of Research for Load Shedding in Power System.”

⁵¹ Raghu and Manjunatha, “Assessing Effectiveness of Research for Load Shedding in Power System.”

⁵² Silence Chomunorwa and Virimai Victor Mugobo, “Challenges of E-Learning Adoption in South African Public Schools: Learners’ Perspectives,” *Journal of Education and E-Learning Research* 10, no. 1 (January 24, 2023): 80–85, <https://doi.org/10.20448/jeelr.v10i1.4423>.

⁵³ Water Resources Commission (WRC), *WATER RESEARCH COMMISSION, ANNUAL REPORT 2010/11*. <https://www.wrc.org.za/wp-content/uploads/mdocs/WRC%20Annual%20Report%202010-2011%20smaller.pdf>

⁵⁴ G. Hutton and C. Chase, “Injury Prevention and Environmental Health,” in *Water Supply, Sanitation, and Hygiene*, 3rd ed. (The International Bank for Reconstruction and Development / The World Bank., 2017), 46.

⁵⁵ Hutton and Chase, “Injury Prevention and Environmental Health.”

performance, and ultimately produces subpar outcomes.⁵⁶ Considering the above, it is concluded that the Right to Education, especially Section 29 is infringed by load shedding.⁵⁷

Zambia, just like South Africa, is also adversely affected by load-shedding. Hamre et al. suggest that some areas in Zambia ostensibly experience limitations of energy replacements/alternative sources depending on demographic factors and the academic staff that exists in those areas.⁵⁸ Groundbreaking research in South Africa conducted by Matsheta and Sefoka aver that there's a paradigm shift to online pedagogy in South African Universities, at times forcing the rescheduling of activities, and depressive disorders to meet set deadlines.⁵⁹ This imposing load power cuts violates Section 29 Right to Education. Matsheta and Sefoka further emphasise that before the commencement of lectures, the various stages of the educational process are similarly influenced and the exacerbation of the apprehension surrounding the function fulfilled by the lecture within the educational progression of the students has been further amplified.⁶⁰ Furthermore, the ramifications of load-shedding amplify the profound effects on the psychosocial hindrances that have already been encountered, as well as creating a fertile environment for the manifestation of additional anguishes including exacerbation of mental health disorders such as depression, anxiety, panic, ergophobia, nyctophobia, and ultimately culminating in a lasting mark on the educational system of the nation.⁶¹ Lecturers are also affected by this load-shedding. A report by the Department of Higher Education and Training demonstrates a significant impact, with 80% of master's students and 88% of PhD students dropping out.

Masinga and Madzivhandila allude that power outages have a significant financial impact on the cost of living, the experiences that households have, and food spoilage.⁶² 93% of their sample reported having been forced to discard food that spoiled in refrigerators during load shedding, and 38% had to replace their refrigerators because of the damage caused by power outages. South Africa with its constantly increasing high cost of living which load shedding contributes to it can use research findings in the United Kingdom's experience of high cost of living by Broadbent who articulates that the cost-of-living crisis does worsen mental health.⁶³ Lee, Cawthon, and Dawson posit that the detrimental effects of load shedding deny people entertainment programmes that are intended to alleviate stressors and it also imposes sleep deprivation as people are forced to reschedule to complete tasks.⁶⁴ Lee, Cawthon, and Dawson further paint the hideous picture of the imposed power cuts by Eskom by asserting that it results in subpar performance and gives rise to unsatisfactory hygiene conditions due to water paucity during periods of load shedding.⁶⁵ Lecturers cannot conduct their academic programs smoothly as some experience mysophobia, germophobia, verminophobia, and bacillophobia.⁶⁶

Poor Connectivity

The advent of the coronavirus required the South African Department of Education and Training to implement the precautionary measures established by the World Health Organization, banning

⁵⁶ Michela Vignoli, Beate Muschalla, and Marco Giovanni Mariani, "Workplace Phobic Anxiety as a Mental Health Phenomenon in the Job Demands-Resources Model," *BioMed Research International* 2017 (2017): 1–10, <https://doi.org/10.1155/2017/3285092>.

⁵⁷ Matsheta and Sefoka, "Load-Shedding in South Africa: An Immediate Threat to the Right to Education, 'Section 29 Inquiry.'"

⁵⁸ B. Hamre, R. Pianta, J. Downer, J. DeCoster and A. Mashburn, "Testing a Developmental Framework of Teacher." *The Elementary School Journal*, 113(4), (2013). doi:10.1086/669616

⁵⁹ Matsheta and Sefoka, "Load-Shedding in South Africa: An Immediate Threat to the Right to Education, 'Section 29 Inquiry.'"

⁶⁰ Matsheta and Sefoka, "Load-Shedding in South Africa: An Immediate Threat to the Right to Education, 'Section 29 Inquiry.'"

⁶¹ Matsheta and Sefoka, "Load-Shedding in South Africa: An Immediate Threat to the Right to Education, 'Section 29 Inquiry.'"

⁶² Fanelesibonge Masinga and Thanyani Madzivhandila, "Loadshedding Impact on Food Spoilage: An Analysis of Household Experiences in South Africa," *African Journal of Governance and Development* 12, no. 2 (2023): 1–16.

⁶³ Philip Broadbent et al., "The Public Health Implications of the Cost-of-Living Crisis: Outlining Mechanisms and Modelling Consequences," *The Lancet Regional Health - Europe* 27 (April 2023): 100585, <https://doi.org/10.1016/j.lanepe.2023.100585>.

⁶⁴ Bridget Lee, Stephanie Cawthon, and Kathryn Dawson, "Elementary and Secondary Teacher Self-Efficacy for Teaching and Pedagogical Conceptual Change in a Drama-Based Professional Development Program," *Teaching and Teacher Education* 30 (February 2013): 84–98, <https://doi.org/10.1016/j.tate.2012.10.010>.

⁶⁵ Lee, Cawthon, and Dawson, "Elementary and Secondary Teacher Self-Efficacy for Teaching and Pedagogical Conceptual Change in a Drama-Based Professional Development Program."

⁶⁶ Lee, Cawthon, and Dawson, "Elementary and Secondary Teacher Self-Efficacy for Teaching and Pedagogical Conceptual Change in a Drama-Based Professional Development Program."

gatherings, limiting physical contact by maintaining social distancing and taking measures to ensure hygiene.⁶⁷ The implementation of educational technology in South Africa has been initiated augmenting the process of teaching and learning. This introduction has inadvertently intensified the existing mental disorders associated with educational disparities, not forgetting the poor study environments, particularly for those who are socio-economically disadvantaged as this group faces numerous obstacles, including limited access to networks, dearth of electricity, and inadequate learning conditions.⁶⁸ Cullinan et al. point out that there is a dearth of research examining the impact of broadband connection speed and stability on educational outcomes, particularly for socio-economically disadvantaged students who are more likely to experience unfavourable circumstances.⁶⁹ Additionally, it is recommended that Higher Education Institutions adapt their teaching methods to better suit these students.⁷⁰

In harmony with the above, Arslan and Zaman, succinctly suggest that based on the advancement of technology, there's a burgeoning electrical energy demand, and the necessity for sufficient power provision is expanding.⁷¹ Atakorah et al. state that lack of broadband, computers, technical infrastructure, and quality of telecommunication exposes students to many insufficiencies plus inequalities in the education system, therefore affecting knowledge and skills.⁷² The study by Noor, Ali, and Husnine can be used to paint the hideous picture of South African students and lecturers as they found that in Lahore, during this era, there was a shift from traditional methods to e-learning in the education sector.⁷³ This pedagogical shift has its detrimental mental agonies like any developing society, such as neophobia, in addition to the torment caused by the irregular power supply to students and facilitators, such as sleep deprivation, anxiety, aggression, interruption of entertainment programmes, technical problems, pressure to meet deadlines and slow internet speed. On the latter, Raghu and Manjunatha shed light on the multifaceted nature of voltage instability, which encompasses various aspects such as network deficiency.⁷⁴ This phenomenon significantly impacts virtual sessions, including classes and meetings.⁷⁵ This man-made disarray generates novel sources of pressure that occasionally one might find oneself in the act of composing an examination, and the distress experienced by students of the working class is exacerbated.

RECOMMENDATIONS

Undoubtedly, a dearth of emotional tools and emotional intelligence plays a significant role in anguishes experienced by students and pedagogues during such times of unprecedented power cuts. There is a plethora of mental health coping strategies that can be employed under normal conditions including but not limited to maladaptive coping strategies, resolution coping strategies, circumplex model coping, including stress-transactional coping as load shedding is an integral part of almost every day of our lives. Having the ability to rely on alternative sources of power, such as solar options, power banks, and gas stoves, can be immensely beneficial. Engaging in wellness activities, such as practising meditation, spending time in nature, or reconnecting with loved ones, is also highly recommended. For proactive implementation of psychological coping strategies, it is advisable to reach out to the SADAG toll-free helpline. Under typical circumstances within a nation possessing a minimal incidence of criminal activities unlike South Africa, scholars propose the subsequent suggestions put forth by

⁶⁷ Chomunorwa and Mugobo, "Challenges of E-Learning Adoption in South African Public Schools: Learners' Perspectives."

⁶⁸ Chomunorwa and Mugobo, "Challenges of E-Learning Adoption in South African Public Schools: Learners' Perspectives."

⁶⁹ John Cullinan et al., "The Disconnected: COVID-19 and Disparities in Access to Quality Broadband for Higher Education Students," *International Journal of Educational Technology in Higher Education* 18, no. 1 (December 21, 2021): 26, <https://doi.org/10.1186/s41239-021-00262-1>.

⁷⁰ Cullinan et al., "The Disconnected: COVID-19 and Disparities in Access to Quality Broadband for Higher Education Students."

⁷¹ Arslan and Zaman, "Impact of Brand Image and Service Quality on Consumer Purchase Intention: A Study of Retail Store in Pakistan."

⁷² Peter Ofori Atakorah et al., "Challenges to Online Studies during COVID-19: The Perspective of Seventh-Day Adventist College of Education Students in Ghana," *Cogent Education* 10, no. 1 (December 31, 2023), <https://doi.org/10.1080/2331186X.2022.2162680>.

⁷³ Noor, Ali, and Husnine, "Performance of Online Classes in Lahore, Pakistan During Covid-19."

⁷⁴ Raghu and Manjunatha, "Assessing Effectiveness of Research for Load Shedding in Power System."

⁷⁵ Raghu and Manjunatha, "Assessing Effectiveness of Research for Load Shedding in Power System."

engaging in a stroll, participating in physical activities, and indulging in auditory stimuli as viable mechanisms for managing adversities. Authors posit that in cases where the government has neglected its responsibilities, such as in the occurrence of load shedding, elections should be utilised to address and rectify these societal issues.

African leaders ought to refrain from embracing European doctrines as they are presented such as nationalism, communism, and neo-liberalism when devising policies, legislations, and societal ideologies, including those related to service provision and approaches to addressing societal needs for better mental coping. It is evident that the predicament lies in the fact that Western epistemology proclaims itself as the norm which fits in each and every society without studying the nature of that environment, which poses challenges for Africans due to differing circumstances from those of Europeans. Thus, by utilising their theories and ideologies without allowing Western epistemology to assert itself as the standard, Africans could effectively resolve a majority of governance issues. The majority of these challenges tend to stem from government officials who adhere to a neo-liberal perspective.

CONCLUSION

Undoubtedly, load shedding does manifest agonies that have a significant impact on endeavours that aim to mitigate the decrease in anguishes that contribute to socio-spatial polarisation. Additionally, the goals outlined in the White Paper on Social Welfare 1997 which can be attained through education are severely impacted by power cuts. On the need for psychosocial interventions, authors advise that coping skills with agonies presented by load shedding must be drafted. Against this backdrop, students' & lecturers' technical jargon on erratic power cuts has become their daily parlance and they are applauded by sentiments of being resilient by the South African President. Authors further psychologically explain the meaning of resilience in the epoch of load-shedding by stating that it's a process and outcome of successfully adapting to challenging life experiences foolish as they may be, especially through mental, emotional, and behavioural flexibility and adjustment to external plus internal demands. It can be concluded that the forthcoming government elections in South Africa additionally provide a chance for the parties impacted by electrical outages to choose their governing body, considering that ESKOM functions as a state-owned entity, thereby concluding the expressions of perseverance and bringing an end to the critical juncture of distress. It can be concluded, therefore, that education is one of the main means for the end of poverty, unemployment, and health crises as heralded by the White Paper for Social Welfare 1997 including the Revised White Paper for Families 2021 by the Department of Social Development where Social Workers are found heavily negatively impacted.⁷⁶ Therefore, the ramifications of load shedding necessitate prompt intervention in the Higher Education and Training sector by social work.

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