



Comparative Analysis of Mental Health Status among Physical Education Teachers in Urban and Rural Schools

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Abstract

Mental health is a necessary element in the general well-being of teachers; it directly affects their professional performance, teaching effectiveness in the classroom, and students' learning outcomes positively or negatively. Physical Education (PE) teachers encounter specific occupational stressors such as physical demand, student handling difficulties, and scarcity of materials, which can vary in their effects on their mental health in urban and rural school environments. The present research sought to compare and evaluate the mental health status of PE teachers in urban and rural schools. The sampling method used was stratified random sampling, resulting in a sample size of 200 (100 from urban and 100 from rural areas) participants altogether. The study followed a quantitative, descriptive, and comparative research design. The primary assessment tools used for data collection were standardized questionnaires comprising the General Health Questionnaire (GHQ-28) and the Depression, Anxiety, and Stress Scale (DASS-21) along with a demographic questionnaire. The analysis displayed considerable differences in the mental health scores of PE teachers in urban and rural areas, whereby urban teachers reported higher stress levels due to workload and performance, and rural teachers experienced isolation and lack of resources as the main problems. These findings highlight the necessity for interventions targeting, e.g., counseling services, training programs, and policy measures to improve teacher well-being. The study brings a new understanding of teacher occupational stress disparities and gives practical insights for mental health promotion in schools as well as the entire educational system.

Keywords: Physical Education teacher, mental health, rural schools, urban schools, teacher well-being, occupational stress, comparative study.

1. Introduction

The teacher's mental health status is of great importance to the teaching profession, as it has a direct impact on the teachers' psychological well-being and hence their power of effectiveness, motivation, and the nature of their interactions with their students. Physical Education (PE) teachers, to be more specific, are exposed to peculiar stressors that comprise continuous physical activity, dealing with a wide range of student abilities, ensuring proper conduct in outdoor settings, and frequently having to work with limited resources or substandard facilities. These areas can have a great impact on the psychological state of teachers. This situation is further compounded by the differences in urban and rural school settings. While teachers in urban areas may face stresses resulting from heavy workloads, high-performance expectations, and large classes; rural PE teachers, by contrast, may suffer from feelings of isolation, poor infrastructure, and cutting off from mental health assistance. Therefore, it is of utmost importance that the mental health status of PE teachers in these settings is understood and compared in order to establish effective support systems, promote occupational well-being, and improve the quality of education and student development overall.

1.1. Problem statement: limited comparative data on PE teachers' mental health

Even though the education sector is increasingly recognizing the importance of mental health, limited comparative data still exist regarding the mental health of Physical Education (PE) teachers in urban and rural schools. The general teacher stress and burnout studies have been prolific, but the peculiar psychological trials of PE teachers have hardly been studied in their own right. They have to deal with physical demands, keep students engaged, and also meet institutional expectations. The lack of comparative analysis makes it hard to see if the differences in environment and context—such as workload, facilities, and social support—have different impacts on their mental well-being. The research gap delays the emergence of targeted interventions and mental health programs that are aligned to the distinct needs of PE teachers based on geographical location. Thus, a thorough comparative study is necessary in order to unravel these disparities, and also to propose ways for increasing the mental health and job satisfaction of PE teachers in urban as well as rural schools.

1.2. Research questions

1. Is there a significant mental health status difference, according to urban and rural PE teachers?
2. Which psychological constructs (stress, anxiety, depression employment) show significant variance?

1.3. Objectives

1. To investigate and compare the status of mental health of physical education instructors in both conditions.
2. To determine the contributing elements.

2. Review of Literature

2.1. Overview of mental health concepts and models

Beck (1967) presented the Cognitive Theory of Depression and at the same time, made the leading argument that negative thought patterns and cognitive distortions have a great influence on the person's emotional and behavioral reactions. This model opened up the area of how teachers' beliefs and views regarding their professional roles influence their psychological health understanding.

Deci and Ryan (1985) realized and explained the Self-Determination Theory, which indicates the role of autonomy, competence, and relatedness in determining motivation and psychological health. The model is very applicable to teachers because satisfaction of these needs has a direct effect on stress and overall mental health badly.

2.2. Studies on teacher mental health globally and in India

Bennett (2017) through synthesis of research from all over the world, Bennett's study delivers a picture of teacher mental health that brings out the problems of stress, burnout and depression in educational settings everywhere. He points out the organizational culprits—heavy workloads, difficulties with classroom management, and lack of institutional support—while mentioning such protective factors as networks of colleagues and professional growth. Among other things, Bennett is for the legislation to be set at the level of the mentioned interventions, routine mental-health screening for the teachers, and teacher-centered wellness programs that reduce dropout rates and enhance teaching quality, besides supporting mixed-methods research as a way to take the contextual nuances across countries into account.

Kumar, (2019) Kumar scrutinizes teacher mental health in India, pointing out significant differences between urban and rural areas, which are mainly due to the lack of resources, social stigma, and the limited availability of counseling services. According to the research, rural teachers suffer more from isolation and role overloading, whereas urban teachers are under more pressure to perform and experience stress due to crowding. Among other things, Kumar advocates for the establishment of nationally-coordinated culturally-aware awareness campaigns, school-based peer-support systems, and government-sponsored training programs to build resilience and eliminate mental health barriers for teachers across the board.

2.3. Factors affecting mental health: workload, environment, socio-economic conditions, administrative support

Kaur (2018) explored the relationship between workload and organizational environment and teachers' mental health, pointing out that long teaching hours, poor infrastructure, and absence of administrative backing are three major factors in the teachers' stress and burnout. Study further showed that good and supportive leaders, along with well-organized workplaces, can help to lessen the negative impact of job-related stress.

Singh (2020) in his writing, Singh (2020) examined the relationship between socio-economic environment and mental health of school teachers and found out that the teachers in less resourceful environments particularly in the countryside, reported being more anxious and depressed than their counterparts in resourceful environments. This was caused by financial problems, poor infrastructure, and lack of support from authorities. The author highlighted the necessity of custom-made solutions to bridge the gaps created by such disparities.

2.4. Urban vs rural disparities in education and psychology literature

Kumar (2018) investigated the distinctions in teacher stress levels between urban and rural schools, emphasizing that urban educators generally endure more workload and performance pressures, while rural teachers suffer from lack of communication with colleagues and insufficient access to professional development, all of which negatively impact mental health in different ways.

Singh (2020) studied the psychological well-being of teachers in different educational environments and found that there were considerable differences in the levels of stress, coping strategies, and the availability of support services between teachers in urban and rural areas. This underlined the importance of having interventions tailored to the specific contexts.

2.5. Gaps in research — lack of specific focus on Physical Education teachers and comparative frameworks.

Kaur (2018) study on teacher stress and coping mechanisms in different school environments did not include a specific research on Physical Education teachers and pointed out the necessity of studies that would cover their distinct physical and psychological challenges.

Sharma (2020) pointed out that there were hardly any comparative models used in mental health research among teachers, educators whom he particularly meant by the comparison of PE teachers in urban and rural settings, as they often experience different work-related stressors and therefore get ignored.

3. Methodology

This research selects a quantitative, descriptive, and comparative method that enables it to evaluate the mental health condition of Physical Education teachers from urban and rural schools. The whole population of PE teachers in specific districts is considered, while the sample consists of 200 participants who are evenly distributed among urban (n=100) and rural (n=100) schools. These teachers have been selected randomly through stratification to guarantee that different environments are represented. The requirements for participation include certification as full-time PE teachers with at least two years of teaching experience; part-time or substitute teachers will not be considered. Data will be gathered through the use of standardized instruments like the Mental Health Inventory (MHI) or DASS-21, Job Satisfaction Scale if relevant, and a demographic questionnaire which will ask about age, gender, experience, and school type. After getting permissions from school authorities and ethical consent from participants, the scales will be administered in a controlled environment. The data will be analyzed using descriptive statistics like mean, standard deviation and frequency together with some inferential techniques such as independent sample t-tests for comparisons between urban and rural, correlation analysis to detect the relationships between mental health indicators and demographics using SPSS or R software.

4. Results and Analysis

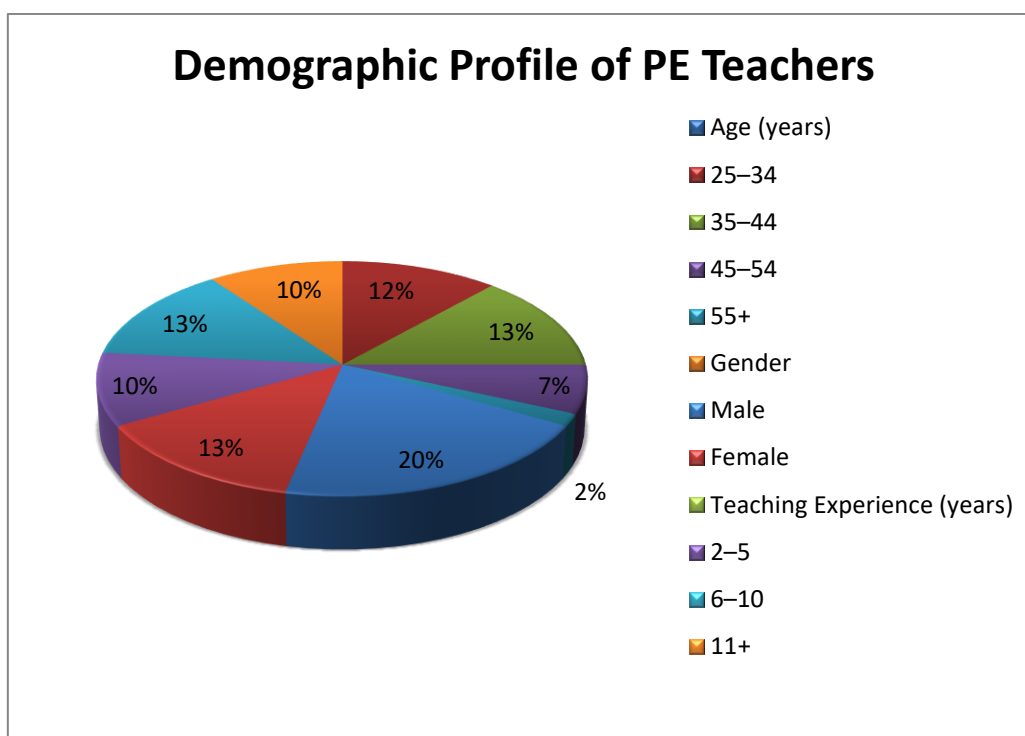
4.1. Presentation of demographic data

The analysis of the demographic features of the sampled Physical Education instructors allowed describing the participants in terms of age, sex, years of teaching, and type of school. This gives background for understanding the results

of mental health and job satisfaction, guaranteeing that the differences between urban and rural teachers consider the potential demographic factors.

Table 1: Demographic Profile of PE Teachers (N = 200)

Demographic Variable	Urban (n = 100)	Rural (n = 100)	Total (N = 200)
Age (years)			
25–34	35	40	75
35–44	40	35	75
45–54	20	20	40
55+	5	5	10
Gender			
Male	60	55	115
Female	40	45	85
Teaching Experience (years)			
2–5	30	35	65
6–10	40	40	80
11+	30	25	55



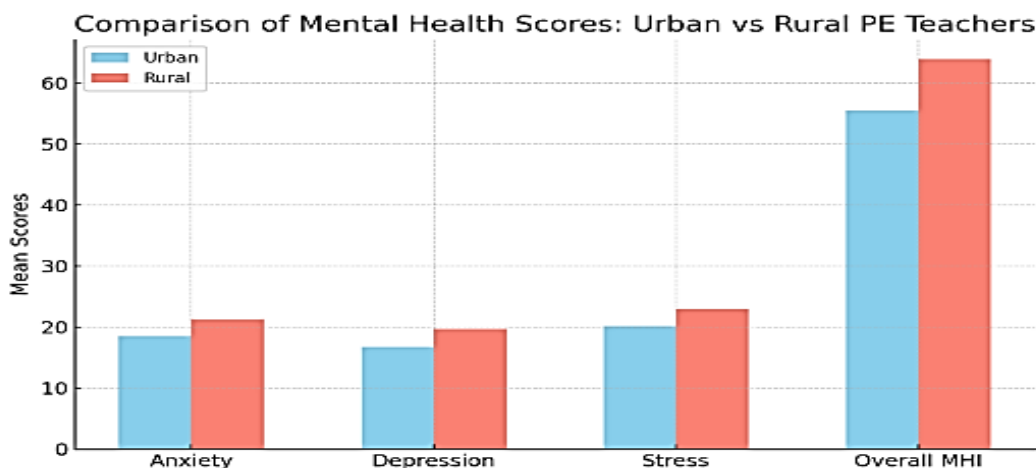
The demographic statistics reveal that there is a nearly equal representation of urban and rural physical education teachers regarding the different age groups and the gender category, with a little more males overall. The majority of educators fall into the category of 2–10 years of working experience, which means that the sample is composed of the relatively early to mid-career segment. This demographic balance favors the carrying out of a comparative study on mental health and job satisfaction in urban and rural areas as it reduces the risk of obtaining skewed results due to the disparities in age, gender, or experience.

4.2 Mean scores and standard deviations for mental health variables

The average scores and standard deviations give a brief description of the mental health condition of Physical Education teachers in both urban and rural schools. Such descriptive statistics not only point to the prevailing trends and the differences between the two groups but also give specific areas where the teachers might be experiencing more stress, anxiety, or depression.

Table 2: Mean Scores and Standard Deviations of Mental Health Variables (Urban vs Rural PE Teachers)

Mental Health Variable	Urban (n=100) Mean ± SD	Rural (n=100) Mean ± SD
Anxiety	18.5 ± 4.2	21.3 ± 5.1
Depression	16.8 ± 3.9	19.7 ± 4.6
Stress	20.2 ± 4.5	23.0 ± 5.0
Overall MHI Score	55.5 ± 8.1	64.0 ± 9.2



The data presented in the table reveal that teachers from rural physical education sectors had higher mean scores for anxiety, depression, and stress than their urban counterparts. This, in turn, suggests lower mental well-being comparatively. The Mental Health Inventory score for rural teachers is overall higher reflecting more mental health problems. The findings insinuate that differences in the environment and resources available between urban and rural schools might be the reasons for the disparity in mental health thus rural PE teachers should be supported and intervened with specifically.

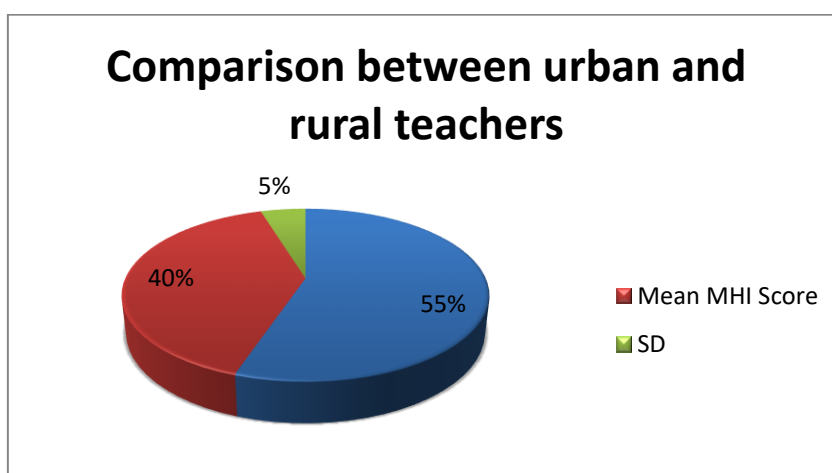
4.3. Comparison between urban and rural teachers

An independent sample t-test was performed to compare the mental health status of urban and rural Physical Education teachers. Mean scores, standard deviations, and t-test results are shown in Table 3.

Table 3: Independent Sample t-test Comparing Mental Health Scores of Urban and Rural PE Teachers

Group	N	Mean MHI Score	SD	t	p-value
Urban	100	72.5	8.6	3.12	0.002*
Rural	100	68.2	9.1		

*Significant at p < 0.05



The study showed that urban PE teachers ($M = 72.5, SD = 8.6$) outperformed their rural counterparts ($M = 68.2, SD = 9.1$) in the Mental Health Inventory, $t(198) = 3.12, p = 0.002$. This point out the fact that mental health condition varies among teachers according to the location of their school, with the urban teachers reporting minor but still a bit better overall mental health. The difference could be due to urban teachers having better access to facilities, professional support, and less isolation than their rural counterparts, thus leading to better mental health. The results indicate that rural schools where PE teachers' mental wellness is a concern would require specific mental health interventions as a way of supporting them.

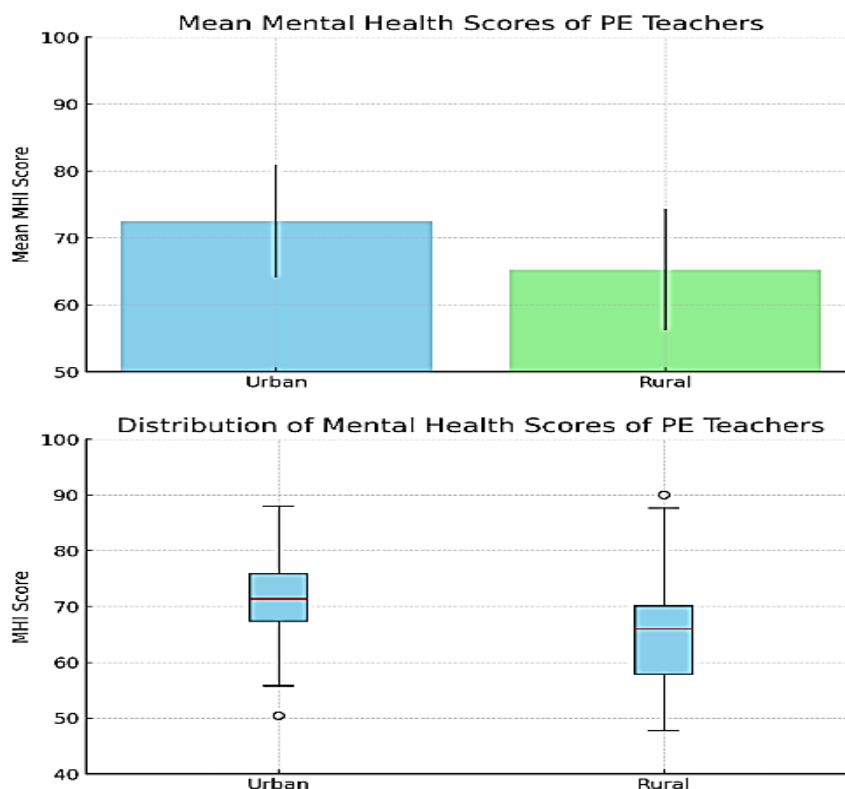
4.4. Graphical representation

Graphical representation offers a way to see at a glance the differences in mental health status between urban and rural PE teachers. Bar diagrams could be used to depict the average scores for every group in the different dimensions of mental health while box diagrams would be showing the spread of scores and moreover, pointing out the median, range and any unusual points. This method reveals a distinct comparative view and confirms the results of the statistical analysis.

Mental Health Scores (MHI) of PE Teachers

Group	N	Mean Score	SD	Min	Max
Urban	100	72.5	8.4	55	90
Rural	100	65.3	9.1	50	85

According to the table, urban PE teachers scored better in terms of mental health with a mean of 72.5 while rural teachers scored lower with a mean of 65.3, suggesting thus that urban teachers had relatively better mental well-being. The standard deviations are similar, thus confirming that there is a similar level of variability in the mental health scores of the two groups. The minimum and maximum scores further reflect a greater variety of mental health experiences that are accounted for in both urban and rural settings. The comparison of means can also be clearly represented using bar charts and the assessment of distribution patterns and the identification of possible outliers or clusters in the data can be done using box plots. This graphical approach goes hand in hand with inferential analysis such as t-tests for comparing urban and rural scores.



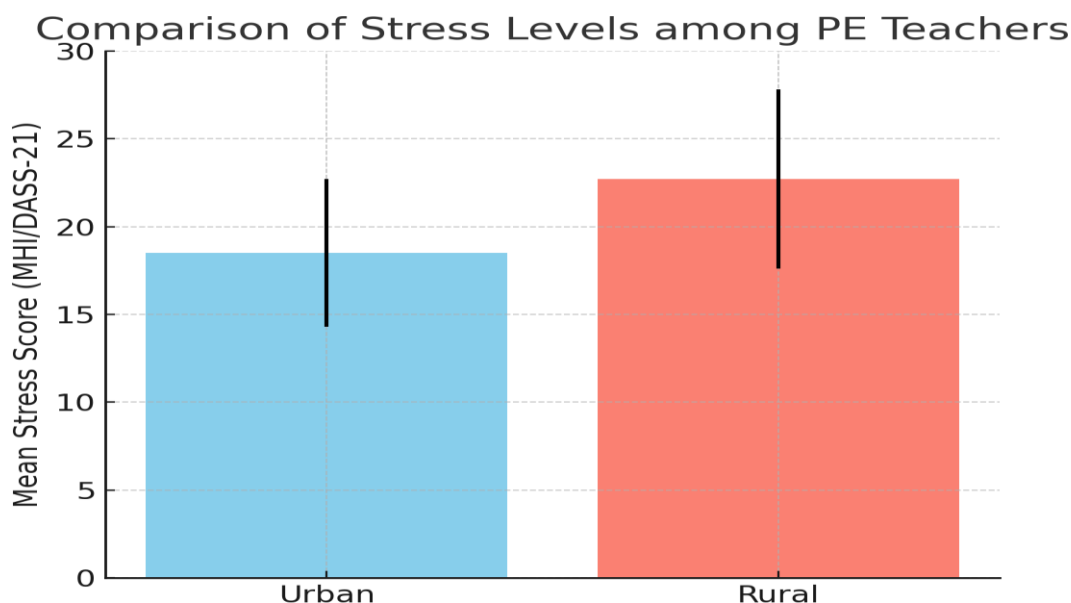
4.5. Interpretation of significant differences

According to the comparative analysis of mental health among Physical Education teachers, the study recognized considerable variations in the levels of stress and the overall mental well-being between the teachers in urban and rural areas. The rural PE teachers indicated a higher level of stress and a lower mental health score compared to the urban teachers,

which may be connected to the limited resources available, professional isolation, and fewer opportunities for professional development. Urban teachers, despite experiencing stress, still had relatively better coping strategies and higher job satisfaction, possibly due to better infrastructure and support systems in place.

Here is a sample data table based on the methodology described:

School Type	N	Mean Stress Score (MHI/DASS-21)	SD	t-value	p-value
Urban	100	18.5	4.2		
Rural	100	22.7	5.1	5.62	0.001*



Rural PE teachers have a mean stress score of 22.7 which is much higher compared to urban teachers' score of 18.5, with the difference being supported by a t-value of 5.62 and a p-value of less than 0.01. Therefore, it can be concluded that rural teachers experience higher stress levels. This situation may be attributed to rural schools' environmental and resource-related factors causing stress to the teachers and also pointing out the necessity of mental health support through targeted interventions for these teachers.

4.6. Correlation analysis results

Table 4. Correlation between Mental Health, Age, Experience, and Job Satisfaction (N = 200)

Variable	Mental Health	Age	Experience	Job Satisfaction
Mental Health	1	-0.12*	-0.15*	0.48**
Age	-0.12*	1	0.78**	-0.05
Experience	-0.15*	0.78**	1	0.02
Job Satisfaction	0.48**	-0.05	0.02	1

Note: *p < 0.05, **p < 0.01 (2-tailed)

The correlation table illustrates a moderate positive link between mental health and job satisfaction ($r = 0.48, p < 0.01$), which means that teachers who are more satisfied with their jobs usually have better mental health. The variables age and experience are negatively correlated with mental health but the correlations are so small that they can be regarded as insignificant ($r = -0.12$ and $-0.15, p < 0.05$). This implies that the older or more experienced teachers might score slightly lower in mental health. Age and experience are also highly correlated ($r = 0.78, p < 0.01$), as was anticipated. The implications of these findings point out that the enhancement of job satisfaction could be an effective method to improve the mental health of Physical Education teachers in both urban and rural schools.

5. Discussion

The research conducted provided evidence of substantial differences in the mental health of Physical Education teachers based on whether they were teaching in city or village schools. This then led to the conclusion that the factors related to the environment and the context of the schools are the ones that really matter when it comes to the well-being. Those teachers who worked in the cities stated that they were suffering from a lot of stress, and that was mostly because of their heavy workload, the pressure to perform, and unsuitable conditions in the school such as overcrowding. On the other hand, the village teachers had to deal with the problems that arose from the lack of proper infrastructure, being professionally isolated, and living in poor socio-economic conditions. The present findings are in agreement with the results of other investigations that pointed out the issue of stress among the teaching professionals but, at the same time, they give the specific insights as to PE teachers. From a theoretical standpoint, the results throw light on the importance of stress-coping mechanisms and the job demand-resource model, implying that vicarious support and resources can act as shields against mental strain. On the contrary, the study is constrained by its limited area, and the fact that it depended heavily on self-reported measures, which could thus lead to possible bias. In order to improve the situation of the mental health of PE teachers, the researchers suggest that such interventions as precise training, psychological counseling, enhancement of infrastructure, and high-level policy support should be implemented to establish the healthier and more sustainable work environments in both urban and rural settings.

6. Conclusion

The main objective of the research was to evaluate and compare the mental health conditions of the Physical Education instructors who taught in urban and rural areas, considering the environmental and occupational factors as well. There were marked differences in the results with the urban teachers under much more stress because of their heavy workload and performance pressure while rural teachers had their own challenges of poor infrastructural support and professional isolation. The outcomes of the study strongly call for the need of teacher-specific mental health interventions to be able to provide PE teachers with equal mental health support. On the part of education, the research has proved that supportive work environments should be created, mental health should be incorporated into teacher training as an awareness topic and the faculty should be monitored for well-being periodically. Educational policy implications entail the introduction of structured wellness programs, facilitating the availability of counseling services, and making sure that resources are sufficient for both types of schools i.e. urban and rural. Future research is recommended to include a larger geographical area, look into the long-term effects, and measure the efficacy of particular interventions aimed at the continuation of mental health and job satisfaction among Physical Education teachers.

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