META-ANALYSIS OF STUDIES ON TEACHERS' LIFE CHALLENGES HINDERING THEIR OVERALL ACADEMIC ACHIEVEMENTS IN THE SOCIETY

[1]EBIRIM, A. F. & [2]NWAHUNANYA, C.I.

[1]Physical Science Department, Measurement and Evaluation, Imo State University, Owerri
[2]Department of Psychological Foundation, Faculty of Education, Abia State University, Uturu
queenmuda11@gmail.com

Abstract

This meta-analysis synthesizes research on the life challenges that impede teachers' overall academic achievements in society. Employing an ex-post facto design, this study systematically examined existing literature on the teaching profession. A comprehensive search yielded 59 studies, including doctoral theses, dissertations, journals, articles, and projects etc. Descriptive statistics, statistical transformation, and effect size calculations were used to analyze the data. The results revealed significant challenges affecting teachers' performance and achievements, particularly in relation to gender, school level, and location. Specifically, 79 (67.5%) of the cases reported statistically significant effects, while 38 (32.5%) were non-significant. This meta-analysis provides conclusive evidence that teachers' life challenges hinder their overall performance and achievements in society, underscoring the need for targeted support and interventions.

Keywords: Meta-Analysis, Teachers' Achievements, Statistical Transformation, Effect Size, expo- facto, systematic reviews.

Introduction

The Nigerian education sector aims to foster the development of all citizens to their full potential, promoting a strong, democratic, and prosperous nation (Federal Republic of Nigeria, 2009). Teachers play a crucial role in achieving this vision, but they face numerous life challenges that hinder their overall achievements. These challenges can be viewed as tasks that teachers encounter at various stages of their lives, affecting their performance and well-being. This study aims to investigate the relationship between teachers' life challenges and their overall achievements through a meta-analysis of previous studies.

A comprehensive review of literature was conducted, covering empirical, theoretical, and conceptual studies on teachers' life challenges worldwide. The

review examined various predictor variables, including gender, school levels, and locations, and their impact on teachers' lives. A summary of the findings was published, highlighting the inconsistencies and contradictions in previous research.

The empirical studies reviewed revealed that teachers face numerous life challenges, including classroom management, student behavior, and parental involvement (Heeralal, 2014; Igbokwe, 2012). Theoretical frameworks, such as the theory of teacher motivation and the theory of teacher burnout, were also examined (Afe, 2002; Ekennia, 1998). Conceptual studies highlighted the importance of teacher well-being and the impact of life challenges on teacher's performance (Goodard & Huberman, 2001; Lynch, 2016). Despite the wealth of research on teachers' life challenges, the findings have been inconsistent and contradictory. A meta-analysis of previous studies is necessary to synthesize the findings and provide a comprehensive understanding of the relationship between teachers' life challenges and their overall achievements. Meta-analysis is a statistical technique that combines the results of multiple studies to draw a more general conclusion (Glass, 1976). This approach can help identify the common effects of teachers' life challenges on their achievements and provide insights into the inconsistencies in previous findings.

The predictor variables examined in this study include gender, school levels, and locations. Gender is a significant predictor variable, as male and female teachers may face different life challenges that affect their achievements (Afe, 2002). School level is another important variable, as teachers in different school levels (pre-primary, primary, secondary) may encounter unique challenges that impact their performance (Igbokwe, 2012). Location is also a crucial variable, as teachers in rural and urban areas may face different challenges that affect their achievements (Heeralal, 2014).

This study provided a comprehensive understanding of the relationship between teachers' life challenges and their overall achievements, highlighting the impact of predictor variables such as gender, school level, and location. The findings revealed implications for educational policymakers, administrators, and teachers, providing insights into the challenges faced by teachers and the need for targeted interventions to support their well-being and performance. To investigate the relationship between teachers' life challenges and their overall achievements, these were the objectives the researcher planned to achieve:

To determine the pooled effect size of previous studies on the relationship between predictor variables (gender, school level, and location) and teachers' life challenges that hinder their overall achievements; To examine the effect size of each predictor variable (gender, school level, and location) on teachers' life challenges that hinder their overall achievements; To calculate the mean effect size of all stipulated predictor variables on teachers' life challenge; To investigate whether gender moderates the relationship between teachers' life challenges and their

academic achievements, and to determine the effect size variation; To examine whether school location (rural and urban) moderates the relationship between teachers' life challenges and their academic achievements, and to determine the effect size variation; To investigate whether school levels (pre-primary, primary, secondary) moderate the relationship between teachers' life challenges and their academic achievements, and to determine the effect size variation.

In order to achieve these objectives, the following six research questions were posed to guid the investigation:

1. What is the pooled effect size of previous studies between predictor variables (gender, school level, and location) and teachers' life challenges that hinder their overall achievements?

2. What is the effect size of each of the predictor variables in teachers' life challenges that hinder overall achievements?

3. What is the mean effect size of all the stipulated predictor variables on teachers' lives?

4. Does gender moderate the relationship between teachers' life challenges and their academic achievements, and if so, what is the effect size variation?

5. Does school location (Rural and Urban) moderate the relationship between teachers' life challenges and their academic achievements, and if so, what is the effect size variation?

6. Does school level (pre-primary, primary, secondary) moderate the relationship between teachers' life challenges and their academic achievements, and if so, what is the effect size variation?

Methodology
    This study employed a survey research design using an ex-post facto approach, which enabled the examination of existing phenomena and the factors influencing them. A meta-analytic technique was used to synthesize the findings of previous studies on teachers' life challenges, allowing for the calculation of effect sizes and the identification of patterns and trends. The context of this study focused on Nigeria, a country with a diverse population of over 200 million people, comprising 36 states, 109 senatorial districts, 360 federal constituencies, 774 local government areas, and over 420 languages. The country with rich cultural heritage, three major tribes (Ibo, Hausa, and Yoruba) and English as the official language. The study population consisted of all previous research reports on teachers' life challenges in Nigeria, published between 1960 and 2017. Since this study did not require a numerical

headcount, the population was defined as all relevant research reports on the topic. The study focused on teachers in pre-primary, primary, and secondary schools, excluding tertiary institutions. Comprehensive review of literature took care of the conceptual, theoretical, and empirical studies on teachers' life challenges worldwide and efforts were made to eliminate errors and duplication of data from previous studies. A coding instrument was developed by the researcher to collect data from previous studies. The instrument recorded information on study characteristics, such as author names, publication year, school level, subject area, sample size, assessment types, independent variables, statistical tools, results, and effect sizes. The instrument was validated by four experts in measurement and evaluation, who provided feedback and suggestions.

The reliability of the data collection instrument was established using inter-rater agreement, with a reliability coefficient of 0.89 which indicates a high level of agreement among the raters and suggests that the instrument is reliable for collecting data. Data was analyzed using descriptive statistics (mean, standard deviation) and statistical transformation techniques were also used to analyze the data. The results were presented in tabular form, according to the research questions and effect sizes were calculated to quantify the magnitude of the relationships between teachers' life challenges and their overall achievements.

The study addressed six research questions, which guided the data analysis and interpretation. The results and answers to the research questions were presented in tables, providing a clear and concise summary of the findings.

Research Question One. What is the pooled effect size of previous empirical studies between the predictor variables and teachers' life challenges that hinder their academic achievement?

Table 1: Summary of the Results of Previous Studies on Effects of Teachers Life Challenges

	No of Cases	No. of Significant	%	No. Not Significant	%
Gender	7	3	42.9	4	57.1%
School Levels: Primary	3	2	66.7	1	33.3
Secondary	26	19	73.1	7	26.9
Tertiary	9	6	66.7	3	33.3
School Location: Rural	11	4	36.4	7	63.6
Urban	28	19	67.9	9	32.1
Design: Survey	27	21	77.8	6	22.2
Experimental	4	4	100	0	0
Others	2	1	50	1	50
Total Average %	117	79	67.5%	38	32.5%

Above table reveals that 7 gender cases were reviewed while school level cases were 3 in primary, 26 cases in Secondary and 9 cases in tertiary. The study also investigated 11 rural cases and 28 in urban areas. The table showed that 27 cases used survey

design, 4 used Experimental and other types used 2. Moreso, it can be observed that under gender, 3(42.9%) cases were statistically significant, while 4(57.1%) cases were not statistically significant. On school levels, the cases 2(66.7%) in primary, 19 (73.1%) in Secondary and 6(66.7%) in tertiary recorded statistically significant while primary 1(33.3%), secondary (73.1%) and 3(33.3%) all recorded non statistically significant. On School location, 4(36.4%) in Rural and 19(67.9%) in Urban areas were statistically significant while 7[63.6] in Rural and 9(32.1%) Urban were not statistically significant. The study also looked at the design used and found that survey 21(77.8%), experimental 4(100%) and others 1(50%) of statistically significant studies and 6[22.2] in Survey, 1[50] in others recorded no statistically non significant.

It's clear that in 117 cases examined above, 79(67.5%) empirical studies recorded statistically significant while 38(32.5%) indicated statistically non- significant cases. This result therefore showed that more significant findings had been recorded in the previous studies than non-significant findings. This means that Teachers' life challenges hinders their overall achievement in the society.

Research Question Two What is the effect size of each of the predictor variable in teachers' life challenges that hinder their academic achievement)?

Table2: Summary of the Magnitude of the Effect Sizes of each of these predictor variables examined

	Gender	School Levels			Subject Investigated		Design				
		Primary	Sec.	Tertiary	Rural	Urban	Survey	Exp	Others	Total	%
Large	1	-	11	2	6	18	8	-	-	46	39.3
Moderate	4	2	8	5	3	8	12	3	2	47	40.2
Small	2	1	7	2	2	2	7	1	-	24	20.5
Total	7	3	26	9	11	28	27	4	2	117	100

Table 2 results showed that 46 representing 39.3% of the 117 cases examined has large effect size, 47[40.2] have moderate effect and 24[20.5] showed small effect sizes. This result showed that majority of the studies on teachers' life challenges showed large and moderate effect on teachers.

Research Question Three. What is the mean effect size of the stipulated predictor variables (teachers' life challenges) examined? The data analysis of this research question was answered by adding up all the effect sizes of all the cases considered and finding the averages.

Table 3: Mean Effect Size of the stipulated predictor Variables.

Variable	Total Cases	Total Effect sizes	Mean Effect Size	Interpretation (Effect Size)
Gender	7	7.65	0.915	Large
School Levels: Primary	3	1.659	0.553	Large
Secondary	26	13.931	0.535	Large
Tertiary	9	3.61	0.401	Moderate
School Location: Rural	11	6.501	0.591	Large
Urban	28	15.93	0.568	Large
Design: Survey	27	14.42	0.534	Large
Experimental	4	0.86	0.415	Moderate
Others	2	0.48	0.24	Moderate
Total Average %	117	65.041	0.556	Large

Table 3 presents the mean effect size of the variables (117) as 0.556. From the guideline as posited by Cohen et al (2007), the mean effect size value here represents a large effect size. The value also represents a positive effect size. This result therefore indicates that teachers' life challenge has large and positive effect on the overall achievement of the teachers by 0.556 effect size.

Research Question Four: Does gender moderate the relationship between teachers' life challenges and their academic achievement and if so, what's their effect size variation?

Table 4: Mean Effect Size Variation Based on Gender on Teachers Life Challenges.

Variable	Total no of Cases	Total Effect Size	Mean Size	Interpretation
Gender	7	7.65	0.915	Large effect

The table reveals that the mean effect size for the 7 gender cases reviewed in the empirical studies as o.915 large and positive effect size. This actually showed that the studies so examined that worked on gender relationship to teachers' life challenges produced large and positive effect size on hindering teachers' achievements.

Research Question Five: Does school locations (urban and rural) moderate the relationship between teachers' life challenges and their academic achievement and if so, what's their effect size variation?

Table 5: Mean Effect Sizes based on school Locations

Variable	Total no of Cases	Total Effect Size	Mean Size	Interpretation
School Locations : Rural	11	6.501	0.591	Large
Urban	28	15.93	0.569	Large
Total	**39**	**22.431**	**0.576**	**Large**

Table 5 shows the mean effects size value for urban teachers to be 0.569 and rural teachers challenges 0.591 which implies that both are large and positive.

Research Question Six: Does school levels (Primary, Secondary and Tertiary) moderate the relationship between teachers' life challenges and their academic achievement and if so, what's their effect size variation?

Table 6: Mean Effect Size based on School Levels

Variable	Total no of Cases	Total Effect Size	Mean Size	Interpretation
School Level : Primary	3	1.659	0.553	Large
Secondary	26	13.931	0.535	Large
Tertiary	9	3.61	0.401	Moderate
Total	**38**	**19.2**	**0.536**	**Large**

Table 6 showed that in primary level, mean effect of 0.553 which is large and secondary school level 0.535 which is also large and tertiary level effect of 0.401 is seen as moderate.

Discussion of Findings

The findings of this meta-analytic review provide insights into the relationship between teachers' life challenges and their overall achievements.

Research Question One showed that the pooled effect size of the predictor variables (gender, school level, and location) on teachers' life challenges was examined. The results, summarized in table 1, revealed that 79 (67.5%) of the 117 cases examined recorded statistically significant findings, while 38 (32.5%) indicated non-significant findings which suggests that teachers' life challenges significantly hinder their overall achievements.

In research question two, the effect size of each of the predictor variables examined as presented in table 2, showed that 46 (39.3%) of the cases had a large effect size, 47 (40.2%) had a moderate effect size, and 24 (20.5%) had a small effect size. This indicates that the majority of the studies on teachers' life challenges showed large and moderate effects on teachers.

Research question three which was 'the mean effect size' of all the predictor variables on teachers' life challenges was examined. The results, presented in table 3, showed a mean effect size of 0.556, indicating a large and positive effect. This suggests that teachers' life challenges have a significant impact on their overall achievements.

Research question four: The moderating effect of gender on the relationship between teachers' life challenges and their academic achievements was examined. The results, presented in table 4, showed a mean effect size of 0.915 for the 7 gender cases examined, indicating a large and positive effect. This suggests that gender plays a significant role in moderating the relationship between teachers' life challenges and their academic achievements.

Research question five the moderating effect of school location (rural and urban) on the relationship between teachers' life challenges and their academic achievements was examined. The results, presented in table 5, showed mean effect sizes of 0.569 for urban teachers and 0.591 for rural teachers, indicating large and positive effects. This suggests that school location plays a significant role in moderating the relationship between teachers' life challenges and their academic achievements.

Research Question Six which was the moderating effect of school level (pre-primary, primary, secondary) on the relationship between teachers' life challenges and their academic achievements was examined. The results, presented in table 6, showed mean effect sizes of 0.553 for primary school teachers, 0.535 for secondary school teachers, and 0.401 for tertiary school teachers, indicating large and positive effects for primary and secondary school teachers, and a moderate effect for tertiary school teachers. This suggests that school level plays a significant role in moderating the relationship between teachers' life challenges and their academic achievements.

Conclusion

The findings of this meta-analytic review highlighted the significant impact of teachers' life challenges on their overall achievements. The results suggest that gender, school location, and school level play significant roles in moderating this relationship. Teachers' life challenges have a significant impact on their overall achievements. The pooled effect size of 0.556 indicates a large and positive effect, suggesting that teachers' life challenges are a substantial hindrance to their academic achievements. The predictor variables, showed that gender, school level, and location are significant predictors of teachers' life challenges. The effect sizes for these variables were large and positive, indicating that they have a substantial impact on teachers' life challenges. Moderating Effects revealed that these variables moderate the relationship between teachers' life challenges and their academic achievements. Specifically: - Gender: The mean effect size for gender was 0.915, indicating a large and positive effect. School location: Urban and rural teachers experienced large and positive effect sizes (0.569 and 0.591, respectively) School level: Primary and secondary school teachers experienced large and positive effect sizes (0.553 and 0.535, respectively), while tertiary school teachers experienced a moderate effect size (0.401).

Implications

The findings of this study have significant implications for educational policymakers, administrators, and teachers. Specifically: Teachers' life challenges should be addressed through targeted interventions and support systems. Educational institutions should provide resources and support to help teachers manage their life challenges. Policymakers should consider the impact of teachers' life challenges on their academic achievements when developing educational policies.

Limitations:
The limitations are that:- This meta-analytical research reviewed only studies that examined the relationship between teachers' life challenges and their academic achievements. The study did not control for other variables that may influence the relationship between teachers' life challenges and their academic achievements.

Recommendations
 Future Researchers are advised to direct their future researches to : examining the impact of specific types of life challenges (e.g., financial, health, relationship) on teachers' academic achievements.- Investigate the effectiveness of interventions aimed at reducing teachers' life challenges.- Explore the relationship between teachers' life challenges and their academic achievements in different cultural and educational specialties.

References
Abraham, N. M., Ememe, O. N., & Egu, H. (2012). Teacher job satisfaction for secondary school effectiveness in Nigeria. Abia State University, Uturu.

Afe, J. O. (2002). Reflection of becoming a teacher and challenges of teacher education. 19th Inaugural Lecture Series, University of Benin.

Akinboye, K. (2004). Unsweet rest after labour; Retired Nigerians are living a rosy life. *International Journal of Humanities and Social Science*, 2(6), 1-5. (link unavailable)

Andrews, D. B., & Quinn, J. R. (2004). The balancing act: The personal and professional life: How separated are they?

Cohen, J. (2007). Statistical power analysis for behavioral science (2nd ed.). Routledge. (link unavailable)

Denga, D. I. (2010). Planning for retirement. In P. Oladunjoye (Ed.), Retirement: A blessing or a curse? (pp. 17-25). *Journal of Education*, 23(2).

Ede, M. O. (2004). Meta-analysis of the effect of mastery learning on students' academic achievements (PhD thesis, Abia State University, Uturu).

Ekennia, C. C. (1998). Essentials of counseling. Barloz Publishers.

Federal Republic of Nigeria. (2004). National policy on education. Lagos Education and Research Development Council.

Federal Republic of Nigeria. (2016). The roadmap for Nigeria education sector. Lagos Educational Research and Development Council.

Glass, G. V. (1976). Meta-analysis of primary and secondary researchers. Psycho methods, 3, 5-8.

Goodard, J., & Huberman, M. A. (2001). The life of rural teachers. Teachers' College Press.

Heeralal, P. I. H. (2014). Overcoming personal challenges that rural teachers encounter. *Mediterranean Journal of Social Sciences*, 5(6), 3906-3823. (link unavailable)

Huberman, M. A. (1989). The professional life cycle of teachers. Teachers' College Record, 91(1), 31-57.

Igbokwe, U. O. (1989). Perception and the use of evaluation procedure by teachers in selection schools in Ogun State. Ogun State College of Education.

Igbokwe, U. O. (2012). Challenges of enhancing best practices in teacher education. Paper presented at the 3rd National Conference of CEFWA, IBB University Lapai.

Johnson, D. W., Maruyama, G., & Nelson. (1981). Effect of cooperative, competitive, and individualistic goal structures on achievement: A meta-analysis. Cochrane Review.

Lynch, M. (2016). Teachers' private life. Board of Education of the City of New York Law.

Made, A. (2004). Retirement: A challenge not a curse. The Statesman Newspaper Limited.

Mishra, R. C., Sharma, P., & Bansal, H. (2007). International encyclopaedia of education (Vol. XV). Modern methods of teacher training. Delhi: A.P.H. Publishing Corporation.

Nwahunanya, C. I., & Akanwa. (2008). A practical guide to research and project writing. Springfield Publisher Ltd.

Troclair, A. (2015). Why teachers can't have a normal life. The Educators Room. (link unavailable)

Weird, R. (1988). The MetLife survey of American teachers.