Moderating Effect of Mental Health on the Association between Teachers' Stress and their Professional Attitude in Tanzania

Faustine Bwire Masath
Dar es Salaam University College of Education (DUCE)-Tanzania
E-mail: fmasath@duce.ac.tz

Abstract

Various reports show that there is an increase in teachers' stress and a decline in teachers' professional attitude in Tanzania. Few studies have examined the reasons for such situation. *This study examined the moderating effect of mental health on the association between teachers' level of stress and their professional attitude. The study used a selected sample of teachers from 12 randomly selected public primary schools of Tanzania (N = 173, Mean Age = 38.10 years, SD = 10.0). Using hierarchical regression moderation model, a significant association was found between teachers' professional attitude and their level of stress (β = – .21, p < .001), which was moderated by mental health (β = – .12, p < .029). The findings call for interventions to enhance teachers' wellbeing including the wellbeing of their mental health in order to improve their organizational and life performance in the country.*

Keywords: *mental health, professional attitude, teachers' stress, Tanzania*

Introduction

Numerous studies indicate that teachers in Sub-Sahara Africa work in stressful working environments (Moses et al., 2017; Sumra, 2005) characterized with motivation crisis (Bennell & Akyeampong, 2007) which poses a risk not only to their mental health and wellbeing but also to their organizations. Amongst the possible stressors are the attitudes that teachers hold and the commitment they have to the profession (Anangisye, 2009; Moses et al., 2017). Arguably, an increase in the negative attitude towards the job is associated with an increase in stress, which, in turn, affects their wellbeing in different aspects (including mental health), reduces their job efficiency and influences short lasting in the profession, turnover and attrition as well as job dissatisfaction (Hammen, 2005).

Teacher stress, professional attitude, and mental health in Tanzania

Researches indicate that teachers' attitude and commitment to their profession are at stake in Tanzania (Anangisye, 2009; Moses et al., 2017). For instance, in a

study by Sumra (2005), 51% of teachers in Tanzania said that they would leave the teaching job if they found another job, and 40% said that they would not advise their children to become teachers (Sumra, 2005). In the same vein, lack of positive professional attitude among teachers is reported by Moses *et al.* (2017) who found that pre-service teachers indicated that they had less commitment to the teaching profession. Amongst those with less commitment, the majority have entered the teaching profession because of lack of alternative career paths/choices or they found themselves compelled to pursue degree programmes in education just in order to get financial support (Moses et al., 2017). Apart from the low professional attitude indicated in studies, teachers in Tanzania face a motivation crisis (Bennell & Akyeampong, 2007; Sumra, 2005) and are reported to work in stressful working environments (Hecker et al., 2018). The effect of such conditions on teaching and quality of education is a topic worth investigating. However, a review of related literature shows that there is no study that has focused on the state and effect(s) of teachers' mental health in Tanzania. This is partly because of poor understanding of mental health and mental illness in African countries including Tanzania, and lack of recognition of mental health (Crabb et al., 2012; Hugo et al., 2003).

The association between mental health, attitude, and stress

Theoretically, individuals' attitudes affect and/or are associated with their behaviour and/or actions in different ways. For instance, negative attitudes may lead to heightened stress, anxiety, fear, dislike, and anger (Maio & Haddock, 2009). To the contrary, positive attitudes are associated with lower stress, satisfaction, creativity, and improved health and wellbeing. Positive attitudes lower stress and, in turn, improve one's wellbeing. It is argued that attitudes alone can predict a certain behaviour but the strength of its association with behaviour depends on a number of other factors (Maio & Haddock, 2009). The same case is found in the association between attitude and work-related behaviours such as work stress. It is anticipated that one's personal judgment of the working environment and the job may lead to job stress and burnout (Cooper et al., 2001). There is evidence indicating that individuals with positive attitudes not only take career challenges and stressors lightly but also are flexible and can easily adjust to challenging situations. As per the P-E fit model of stress, a lack of fit between personal characteristics (e.g., abilities, values) and the environment (e.g., demands, supplies) can lead to unmet individual needs or unmet job demands. These unmet needs or demands can result in strain (Cooper et al., 2001) which, in turn, may lead to depression and mental health problems in general (Hammen, 2005; Harvey et al., 2017). While the bidirectional association of attitude and mental health is still a debate, research shows that negative perception of an object leads to depression, and a depressed person may develop negative perception of objects in turn (Harvey et al., 2017).

Work stress, if experienced for a prolonged period of time, can result in a variety of mental and physical health issues that affect both the individual and the organization (Joyce et al., 2016; Knezevic et al., 2011). For instance, having an overwhelming workload with lack of time to rest can lead to physical exhaustion and stress-related illnesses (Chandola et al., 2006). Harvey et al. (2017) show that role ambiguity (when an employee lacks information about their role's responsibilities and objectives) and role conflict (when there are two or more opposing expectations about an employee's role) were significantly associated with increased depression symptoms and mental illness among employees. The effects of such mental health problems enhance the wellbeing of individual employees and organizations. For instance, Wittchen and Jacobi (2005) establish that the quality of an individual's life is about one standard deviation unit lower when they experience mental health disorders. In a study conducted on prospective teachers in India, mental health was found to have a significant impact on individuals' study habits, teaching attitudes and academic stress (Chandra & Reddy, 2014).

While there exist some research reports on (professional) attitude and stress, literature is silent about the association between teachers' professional attitude and their stress, the state of teachers' mental health in Tanzania and its effects on their professional life, including their attitude to the job and stress. Based on the P-E model of stress (Cooper et al., 2001), mental health is associated with both individuals' attitudes (Cooper et al., 2001; Hammen, 2005) and stress (Chandra & Reddy, 2014; Joyce et al., 2016). Such an association suggests that there is a moderating effect of mental health on the association between stress and attitude. As such, investigating the state and moderating effect of teachers' mental health on the association of their professional attitude and stress is important. The current study not only fills the gap in literature but also informs about the state of teachers' mental health in Tanzania and its effect on teachers' professional life, including their attitude to the job and stress. Furthermore, the moderating effect of mental health on the association between teachers' professional attitude and their stress opens up another area of intervention amidst the existing systemic and structural strategies to reduce teachers' stressful working environment in the country such as provision of in-service training provision, and reduction of the teacher-student ratio (United Republic of Tanzania, 2019). According to Sumra's (2005; 2014) argument, shortage of resources and lack of training are not the sole areas to be addressed in an attempt to improve education and the working and living conditions of teachers. Rather, there are other areas including teachers' working attitude and well-being, especially their mental health. Thus, this study fills the existing gaps in the literature on teachers' professional attitude, stress, and mental health, particularly in Tanzania. Specifically, this study examined the level of teacher's stress, professional attitude, and mental health, the association between teachers' professional attitude and their level of stress, and the state of mental health and its

effects on the association between teachers' professional attitude and their level of stress. This study was guided by one research question and two hypotheses which are presented below:

Research question

What is the level of teachers' stress, professional attitude, and mental health?

Hypotheses

1. There are significant associations between teachers' level of stress and their professional attitude, mental health and stress, as well as mental health and professional attitude.
2. Mental health significantly moderates the association between teachers' professional attitude and their level of stress.

Methodology

This study was part of a cluster randomized controlled design trial project to reduce violent disciplining of students in primary schools of Tanzania. The project was conducted from March to November 2019 in six regions randomly selected out of the 26 administrative regions of the country. In each region, two districts were randomly selected. One co-educational public primary day school with more than 40 students in the fifth and sixth grades from each selected district (and the municipalities in Dar es Salaam) were later randomly selected. A total of 12 public primary schools were therefore randomly selected. Later, all teachers working in the selected schools were introduced to the study in a brief meeting and invited to participate in the study. The selected schools had a total of 178 teachers. Out of that number, only 173 teachers (97% enrolment rate, mean age: 38.05 years, school range: 8-20) assented in writing, appeared for interviews, and their responses were used for analysis. Further details of the project design are presented elsewhere (Masath et al., 2020). Table **1** provides descriptive demographic information of the participants**.**

Structured interviews were used to collect information from the teachers in a one-on-one setting under supervision and guidance of an interviewer who had attended a four-day training on data assessment. Teachers' stress and burnout symptoms were measured using Copenhagen Burnout Inventory (CBI: Kristensen et al., 2005) and the scale had good reliability with Cronbach's alpha value of 89. Teachers' professional attitude was measured using the modified items of the Attitude towards Teaching Profession scale developed by Tezci and Terzi (2010) and the scale had Cronbach's alpha value of 87. Teachers' mental health was assessed using the Brief Symptom Inventory (BSI-18: Derogatis & Savitz, 2000) and the scale had Cronbach's alpha value of 86. All measures were piloted at one of the public

primary schools (not included in the study) prior to the actual collection of data for the study. Descriptive (frequency, percentages, mean, standard deviations, and range) and inferential (bivariate correlations and regression analysis) statistics were used in the analysis, which was done with IBM SPSS 27. Standardized coefficients of the regression model with *p*-value ≤.05 were considered significant. Following Cohen's (1992) effect size estimates, associations of ≥0.10, ≥0.30, and ≥0.50 were considered small, medium, and large effect sizes, respectively. The study was approved by the ethical committee of Bielefeld University and a research clearance was obtained from the University of Dar es Salaam, as well as regional and district authorities in Tanzania. All other ethical considerations were observed throughout the whole course of undertaking the study.

Table 1. *Descriptive Statistics of the Participants' Demographic Information (N = 173)*

Variable	
Age in years, *M* (*SD*)	38.05 (9.96)
Sex (% female)	53.71
Marital status, *n* (%)	
Single	35 (20.0)
Married and living together	113 (64.6)
Married but not living together	12 (6.9)
In a permanent relationship but not married	5 (2.9)
Separated/divorced	3 (1.7)
Widowed	5 (2.9)
Highest educational level [a], *n* (%)	
No teaching qualification	21 (12.0)
Teaching certificate	102 (58.3)
Diploma in teaching	33 (18.9)
Bachelor	17 (9.7)
Working experience in years, *M* (*SD*)	13.9 (9.8)
Working hours per week, *M* (*SD*)	45.46 (9.70)
Number of students per class, *M* (*SD*)	87.66 (36.41)
Additional employment, *n* (%)	
No	92 (52.6)

Another informal job	4 (2.3)
Own business	76 (43.4)
Household income in TSH per month, *n* (%)	
Below 500,000	91 (52.0)
500,000 – 950,000	54 (30.9)
More than 1,000,000	28 (16.1)
No. of people living in the household, *M* (*SD*)	4.30 (1.99)
Religious affiliation, *n* (%)	
Catholic	58 (33.1)
Protestant / Anglican	50 (28.6)
Muslim	47 (26.9)
Born again	15 (8.6)
Other	2 (1.1)
Ethnic groups, amount (range) [b]	41 (1-23)

Note. **[a] Teaching certificate: 11 years of formal schooling plus 2 years of teacher training, qualifies someone to teach in primary schools; Diploma in teaching: 13 years of primary and secondary education plus 2 years of teacher training, allows one to teach in primary and secondary (ordinary level) schools; Bachelor: 3 years at university or university college, allows one to teach in primary and secondary (ordinary and advanced levels) schools; [b] Ethnic groups, amount (range): total amount of ethnic groups in the sample, range of number of people per group.**

Findings and Discussion

The state of teachers' stress, professional attitude, and mental health

Teachers' total score on the attitude towards their teaching profession scale ranged from 98-164 (M = 136.52, SD = 14.609). The scores of <136.52 on the total professional attitude scale were considered to indicate negative attitudes among teachers, while scores of ≥136.52 on the total professional attitude scale were considered to indicate positive attitudes towards the teaching profession. Thus, 47.4% (n = 82/173) of the teachers were found having negative attitudes, and 52.6% (n = 91/173) had positive attitudes towards the profession. Specifically, teachers scored high on item 27 "I think I am a learned and qualified teacher" (M = 4.67, SD = .495) and scored low on item 20 "It makes me happy to think that I am a teacher" (M = 1.71, SD = .928). Table 2 presents descriptive results of teachers'

scores on items of the professional attitude scale. Teachers' total CBI scores were categorized into three groups: normal level of stress (group 1) with a total score <475; an elevated level of stress (group 2) with a total score ≥ 475; and a high level of stress (group 3) with a total score ≥950). The descriptive findings indicated that 3.0% (n = 5) of the teachers had a high level of stress, 29.0% (n = 49/173) had an elevated level of stress, and 68% (n = 119/173) had a normal level of stress. The descriptive results on teachers' scores for the items of the CBI are presented in Table 3. The findings of the global severity index (GSI) indicated that 61% (n = 95/173) of the teachers scored <average and 39% (n = 67/173) scored ≥ average (M = 8.56, SD = 7.333; Range 0-31). The higher scores of GSI represent the sum across the three subscales of the scale (depression, somatization, and anxiety) and indicate higher levels of psychological distress (Derogatis & Savitz, 2000). Specifically, teachers' mean scores for each of the subscales were (M = 2.99, SD = 3.073; range 0-16) for depression, (M = 3.56, SD = 3.310; range 0-14) for anxiety, and (M = 2.02, SD = 2.098; range 0-11) for somatization. Table 4 presents descriptive details of teachers' scores on the scale's items.

The study findings are in line with previous studies which report that there has been an increase in teachers' negative professional attitude (Anangisye, 2009; Moses et al., 2016, 2017; Sumra, 2005; Sumra & Katabaro, 2014) and a heightened level of stress among them (Sumra & Katabaro, 2014). Also, this study's findings indicated that there exist mental health problems among teachers. Teachers scored higher on the depression subscale of mental health. This is an indication that teachers working in a stressful environment are prone to mental health problems including depression. Implicitly, there is an alarming indicator that teachers' mental health is at stake in Tanzania, which may call for intervention. The reports of heightened stress and mental health challenges, as well as lower professional attitudes imply that despite the various systemic and structural efforts made in order to improve teachers' professional life and the quality of education, teachers are still stressed (Hecker et al., 2018; Sumra, 2005), demotivated, and their professional attitude is problematic (Anangisye, 2009; Bennell & Akyeampong, 2007). Teachers' low professional attitude and heightened stress can also be attributed to the fact that some of them entered the teaching profession out of their free will, not because it was their choice (Moses et al., 2017). The present study's findings are in line with the assumption of the P-E model of stress that there needs to be a balance between stress, attitude, and wellbeing (Cooper et al., 2001). Arguably, a stressed teacher with unmet professional and individual demands cannot be expected to have a positive attitude towards his/her profession and her/his wellbeing is compromised by challenges, including mental health challenges. This is supported by the bivariate correlation findings as presented in the next paragraph.

Table 2. *Descriptive Statistics of Teachers' Mean Attitude Score on the Teaching Profession Items*

Items		*M*	*SD*
1	The idea of becoming a teacher attracted me.	4.29	0.848
2	The teaching profession is boring for me. *	4.00	1.276
3	The teaching profession is appropriate for me.	4.37	0.815
4	If I had to choose a profession again, I would prefer becoming a teacher.	3.84	1.296
5	I think teaching is a suitable profession for me. *	1.76	0.950
6	I think teaching does not suit my lifestyle. *	3.71	1.298
7	I think teaching does not suit my personality. *	3.90	1.243
8	I regret to have chosen the teaching profession. *	4.21	1.090
9	I believe I am successful in the teaching profession.	3.92	1.118
10	I am pleased with having chosen the teaching profession.	4.17	0.973
11	I believe I can overcome the difficulties I have in the teaching profession.	4.12	0.916
12	I like to work as a teacher even under difficult conditions.	3.65	1.261
13	I feel sure of the requirements of the teaching profession.	4.34	0.575
14	I believe I have a special talent for teaching.	4.53	0.634
15	I think teaching is not a suitable profession for me. *	4.15	1.062
16	I think teaching provides me with opportunities to be productive and creative.	4.29	0.875
17	I believe I am a professional teacher.	4.51	0.652
18	The idea of teaching people things they do not know pleases me.	4.54	0.735
19	I feel attracted to people working as teachers.	4.53	0.624
20	It makes me happy to think that I am a teacher. *	1.71	0.928
21	I would not recommend teaching to those who are to choose a profession. *	3.91	1.202
22	I think I have much to do as a teacher.	4.35	0.680
23	The working conditions of the teaching profession attract me.	2.71	1.367
24	I consider professional development courses in teaching as important.	4.49	0.833
25	I like conversing with people working as teachers.	4.30	0.794

26	I talk about and discuss the issues of education, learning, teaching, and the teaching profession.	4.46	0.555
27	I think I am a learned and qualified teacher.	4.67	0.495
28	I believe teaching brings me a prestigious status in society.	4.47	0.751
29	I voluntarily chose the teaching profession.	4.08	1.115
30	I fear I have troubles in the teaching profession. *	3.80	1.196
31	I find it honourable to guide people's lives by working as a teacher.	4.30	0.794
32	I do not like talking about and discussing the issues of education, learning, teaching, and the teaching profession. *	4.27	1.018
33	I believe I am sufficiently esteemed by society for being a teacher.	4.15	1.084
34	The continuous nature of the teaching profession makes me feel secure.	4.01	1.056

Note. Items marked with asterisk (*) are reverse rated

Table 3. *Teachers' Report of Personal, Work – and Student-related Stress and Burnout Symptoms in the Past Month, n (%).*

In the past month, how often…	Never	Seldom	Sometimes	Often	Always
Personal stress					
…have you felt tired?	23 (13.3)	62 (35.8)	72 (41.6)	13 (7.5)	3 (1.7)
…have you been physically exhausted?	78 (45.1)	57 (32.9)	33 (19.1)	4 (2.3)	1 (0.6)
…have you been emotionally exhausted?	73 (42.2)	66 (38.2)	31 (17.9)	3 (1.7)	0 (0.0)
…have you thought "I can't take it anymore?"	118 (68.2)	37 (21.4)	14 (8.1)	4 (2.3)	0 (0.0)
…have you felt worn out?	113 (65.3)	42 (24.3)	16 (9.3)	2 (1.2)	0 (0.0)
…have you felt weak and susceptible to illness?	67 (38.7)	63 (36.4)	40 (23.1)	3 (1.7)	0 (0.0)
Work-related stress					
…have you felt worn out at the end of a working day?	54 (31.2)	71 (41.0)	36 (20.8)	12 (6.9)	0 (0.0)
…have you been exhausted in the morning at the thought of another day at work?	98 (56.6)	42 (24.3)	24 (13.9)	9 (5.2)	0 (0.0)

…have you felt that every working hour is tiring for you?	135 (78.0)	26 (15.0)	9 (5.2)	3 (1.7)	0 (0.0)
…have you had enough energy for family and friends during leisure time?	27 (15.6)	41 (23.7)	50 (28.9)	39 (22.5)	15 (8.7)
…has your work been emotionally exhausting?	75 (43.4)	60 (34.7)	27 (15.6)	7 (4.1)	4 (2.3)
…has your work frustrated you?	108 (62.4)	41 (23.7)	17 (9.8)	4 (2.3)	3 (1.7)
…have you felt burnt out because of your work?	52 (30.1)	65 (37.6)	42 (24.3)	13 (7.5)	1 (0.6)
Student-related stress					
…have you found it hard to work with students?	134 (77.5)	23 (13.3)	13 (7.5)	3 (1.7)	0 (0.0)
…has it drained your energy to work with students?	143 (82.7)	19 (11.0)	9 (5.2)	2 (1.2)	0 (0.0)
…have you found it frustrating to work with students?	142 (82.1)	21 (12.1)	6 (3.5)	2 (1.2)	2 (1.2)
…have you felt that you give more than you get back when you work with students?	61 (35.3)	43 (24.9)	33 (19.1)	23 (13.3)	13 (7.5)
…have you been tired of working with students?	85 (49.1)	54 (31.2)	25 (14.5)	8 (4.6)	1 (0.6)
…have you wondered how long you will be able to continue working with students?	62 (35.8)	42 (24.3)	35 (20.2)	22 (12.7)	12 (6.9)

Note. *n* = number of individuals report on each of the item response. Percentages may not total 100 due to rounding.

The association between teachers' stress, professional attitude, and mental health

Results from the bivariate correlation analysis indicated that teachers' professional attitude is significantly correlated with their level of stress ($r = -.264$, $p < .001$)

and mental health ($r = – .169$, $p < .027$), both indicating a small effect size. Similarly, a significant correlation was found between teachers' level of stress and their mental health ($r = .561$, $p < .001$), indicating a moderate effect size. The study findings suggest that a reduction in the level of teachers' professional attitude would lead to an increase in their level of stress and mental health, while an increase in teachers' level of stress would lead to an increase in mental health challenges. These findings were again confirmed using the hierarchical regression analysis model as presented in Table 5.

The study's findings on the associations between teachers' professional attitude, their level of stress, and mental health corroborate with those of other studies conducted elsewhere (e.g., Cooper et al., 2001; Hammen, 2005; Harvey et al., 2017). In Tanzania, the findings indicate that teachers' lower professional attitude significantly affects their professional life, may lead to stress and compromising their wellbeing, especially in terms of mental health. This is consistent with Hammen's (2005) argument that an individual with a positive attitude towards his/her job has less professional stress and good wellbeing, including mental health (Hammen, 2005). With 48% of teachers exhibiting negative professional attitudes, the likelihood that they have stress, and their wellbeing is at stake is high. In addition, this study's findings on the association between stress and mental health imply that the stressful working environment in Tanzania and elsewhere threatens teachers' professional and individual wellbeing, including the wellbeing of their mental health. This way, teachers' professional and organizational performance and life are at risk as other studies conducted elsewhere have also shown (Joyce et al., 2016; Knezevic et al., 2011). The findings further suggest that a stressed teacher with mental health problems is likely to be less functional, characterized with disciplinary issues, dissatisfied with his/her job, and short-lived in in the profession (Hammen, 2005). This is reflected in Sumra's (2005) report in which 51% of in-service teachers in Tanzania revealed that they would quit the teaching job if they found another job, and 40% affirmed that they would not advise their children to pursue a teaching career.

Table 4. *Teachers' Report of Mental Health in the Past Month, n (%).*

	How much has … bothered/affected you during the past month?	Not at all	A little bit (Once in a while)	Moderately (Sometimes)	Quite a bit (Often)	Extremely (Most of the time)
	Somatization					
1.	Faintness or dizziness	154(89.0)	16(9.2)	3(1.7)	-	-
4.	Pains in heart or chest	124(71.7)	30(17.3)	18(10.4)	1(.6)	-
7.	Nausea or upset stomach	100(57.8)	58(33.5)	11(6.4)	3(1.7)	1(.6)
10.	Trouble getting your breath	165(95.4)	8(4.6)	-	-	-
13.	Numbness or tingling in parts of your body	137(79.2)	28(16.2)	7(4.0)	1(.6)	-
16.	Feeling weak in parts of your body	91(52.6)	54(31.2)	27(15.6)	-	1(.6)
	Depression					
2.	Feeling no interest in things	91(52.6)	63(36.4)	15(8.7)	3(1.7)	1(.6)
5.	Feeling lonely	104(60.5)	37(21.5)	20(11.6)	9(5.2)	2(1.2)
8.	Feeling blue	79(45.7)	63(36.4)	26(15.0)	4(2.3)	1(.6)
11.	Feelings of worthlessness	137(79.2)	22(12.7)	13(7.5)	1(.6)	-
14.	Feeling hopeless about the future	109(63.0)	41(23.7)	18(10.4)	4(2.3)	1(.6)
17.	Thoughts of ending your life	158(91.3)	10(5.8)	2(1.2)	3(1.7)	-
	Anxiety					
3.	Nervousness or shakiness inside	105(60.7)	44(25.4)	19(11.0)	4(2.3)	1(.6)
6.	Feeling tense or keyed up	55(31.8)	57(32.9)	37(21.4)	19(11.0)	5(2.9)
9.	Suddenly feeling scared for no reason	132(76.3)	25(14.5)	14(8.1)	1(.6)	1(.6)
12.	Spells of terror or panic	116(67.1)	51(29.5)	5(2.9)	1(.6)	-
15.	Feeling so restless you couldn't sit still	101(58.4)	42(24.3)	22(12.7)	8(4.6)	-
18.	Feeling fearful	116(67.1)	43(24.9)	10(5.8)	3(1.7)	1(.6)

Note. *n* = number of individuals report on each of the item response. Percentages may not total 100 due to rounding.

The association and moderating effect of mental health on the association between teachers' stress and their professional attitude

Results from the hierarchical regression analysis (see Table 5) indicated that the model fit was not good (adj. $R^2 = .000$, F (4, 167) = 1.016, $p = .401$; $f^2 = .024$) in the first step as none of the covariates (location, age, sex, and working experience) was significantly associated with the dependent variable (stress). The model's independent variables explained 2% of the variability in teachers' stress. In the second step, teachers' professional attitude and mental health were added as independent and moderator variables respectively. The model got improved in terms of model fit (adj. $R^2 = .462$, F (6, 165) = 25.446, $\Delta R^2 = .457$, $p < .001$; $f^2 = .694$) and explained 48% of the variability in teachers' stress. Teachers' professional attitude and mental health were found to be associated with their level of stress. In the third step, the interaction variable (teachers' professional attitude **X** mental health) was added in the model. A slightly significant change in the model fit was found (adj. $R^2 = .474$, F (7, 164) = 23.016, $\Delta R^2 = .015$, $p < .001$; $f^2 = .984$) with 50% contribution of the variability in teachers' stress.

The findings confirm the study's second hypothesis in relation to the moderating effect of mental health on the association between teachers' stress and their professional attitude. The findings are also in line with the P-E fit model of stress (Cooper et al., 2001). The findings imply that teachers' mental health is important for healthy professional life. This is in line with the argument that the future of work depends on employees' wellbeing, including the wellbeing of their mental health (Meister, 2021). Thus, unless teachers' wellbeing (including the wellbeing of their mental health) is improved in Tanzania, their level of stress and professional attitude will constantly remain at risk. The study findings have implications for health policies to ensure mental health services are offered to teachers in Tanzania and other places where the teaching profession is characterised with stressful working environment and teachers hold negative professional attitude (Anangisye, 2009; Bennell & Akyeampong, 2007).

Table 5. *Hierarchical Linear Regression Analysis Moderating the Association of Teachers' Stress Level with their Professional Attitude and Mental Health*

Predictor	**Stress**				
	B	SE	*β*	*t*	*p*
Step 1[a]					
Location	-0.012	0.023	-0.042	-0.516	0.606
Sex	-0.167	0.164	-0.083	-1.018	0.310
Age	-0.019	0.025	-0.192	-0.787	0.432

Job experience	0.007	0.025	0.064	0.260	0.795
Step 2[b]					
Location	0.006	0.017	0.021	0.354	0.724
Sex	0.036	0.122	0.018	0.295	0.768
Age	-0.021	0.018	-0.214	-1.189	0.236
Job experience	0.018	0.018	0.180	0.990	0.324
Professional attitude (IV)	**-0.226**	**0.058**	**-0.226***	**-3.880**	**0.000**
Mental health (MV)	**0.612**	**0.059**	**0.611***	**10.332**	**0.000**
Step 3[c]					
Location	0.001	0.017	0.003	0.051	0.959
Sex	0.015	0.121	0.008	0.128	0.898
Age	-0.020	0.018	-0.195	-1.098	0.274
Job experience	0.016	0.018	0.160	0.889	0.375
IV	**-0.214**	**0.058**	**-0.214**	**-3.701**	**0.000**
MV	**0.601**	**0.059**	**0.600**	**10.229**	**0.000**
Interaction (IV x MV)	**-0.123**	**0.056**	**-0.125**	**-2.205**	**0.029**

Note. N = 173, *B* = unstandardized regression weight, SE = standard error, β = standardized regression weight, t test statistics, IV = independent variable, MV = moderator variable, *$p < .05$

[a]Test statistics: $\Delta R^2 = .024$, F (4, 167) = 1.016, $p = .401$, $f^2 = .024$
[b]Test statistics: $\Delta R^2 = .457$, F (6, 165) = 25.446, $p < .001$, $f^2 = .926$
[c]Test statistics: $\Delta R^2 = .015$, F (7, 164) = 23.016, $p < .001$, $f^2 = .984$

Conclusions and Recommendations

The findings of this study indicate that teachers have a high level of stress, a high level of mental health challenges, and an alarmingly low professional attitude in Tanzania. Furthermore, the study findings confirm the hypothesis that teachers' professional attitude is significantly associated with stress and mental health, while mental health is significantly associated with stress. Also, the study findings confirmed the hypothesis that mental health moderates the association between teachers' stress and their professional attitude. The study findings not only expound our understanding of the state of teacher's stress and professional attitude in Tanzania, but also make a unique contribution to the existing research-based knowledge about the association between stress, attitude, and mental health.

It also uncovers the existing gap in literature on teachers' mental health and its implications on their professional life in Tanzania. Generally, the study findings unfold the existing association between stress, attitude, and mental health in a country where teachers have low professional attitude and heightened stress. As such, the findings imply that unless teachers' mental health is improved, their professional life and organizational performance will remain at risk (Knezevic et al., 2011). Thus, the existing intervention strategies to eliminate systemic and structural stressors for promoting quality education in Tanzania should also be aimed at enhancing teachers' wellbeing (including their mental wellbeing) in order to improve teachers' life as individuals and the performance of the organizations (schools) they work for. Ultimately, this will help to attain the envisaged quality of education in the country. In addition, mental health services should be made readily available for teachers since teaching is one of the most stressing professions.

This study has some strengths that are worth noting here. First, this study is the first of its kind as it links teachers' stress, their professional attitude, and mental health. Second, the study drew its findings on the state of teachers' mental health and on the moderating effects of mental health on the association of teachers' professional attitude and stress in Tanzania from a sample of teachers selected from six regions representing different administrative zones, as well as social, economic, and ethnic backgrounds. However, it has some limitations since its findings on the associations between stress, professional attitude and mental health were drawn from cross-sectional data. As such, it is hard to draw a generalizable conclusion on the cause-effect relationship between its variables. So, longitudinal studies investigating such associations are recommended. Also, the study findings cannot rule out the possible existence of bidirectional associations between variables. Future studies may need to eliminate this knowledge controversy.

Reference:

Anangisye, W. (2009). The Current Status of Teachers and the Teaching Profession in Tanzania. *Lwati: A Journal of Contemporary Research*, *6*(1). https://doi.org/10.4314/lwati.v6i1.46497

Bennell, P., & Akyeampong, K. (2007). Teacher Motivation in Sub-Saharan Africa and South Asia. *Dfid*, 114.

Chandola, T., Brunner, E., & Marmot, M. (2006). Chronic stress at work and the metabolic syndrome: prospective study. *BMJ*, *80*(January), 1–5. https://doi.org/10.1136/bmj.38693.435301.80

Chandra, T. S., & Reddy, D. S. (2014). Effect of mental health on study habits, Teaching attitude and academic stress. *Indian Journal of Applied Research*, *4*, 505–508.

Cohen, J. (1992). A Power Primer. *Psychological Bulletin*, *112*(1), 155–159. https://doi.org/10.1037/0033-2909.112.1.155

Cooper, C. L., Dewe, P. J., & Driscoll, M. P. O. (2001). What is Stress? In *Organizational Stress: A Review and Critique of Theory, Research, and Applications* (pp. 1–26). Sage Publications, Inc. https://doi.org/10.4135/9781452231235

Crabb, J., Stewart, R. C., Kokota, D., Masson, N., Chabunya, S., & Krishnadas, R. (2012). Attitudes towards mental illness in Malawi: A cross-sectional survey. *BMC Public Health*, *12*(1), 1. https://doi.org/10.1186/1471-2458-12-541

Derogatis, L. R., & Savitz, K. L. (2000). The SCL–90–R and Brief Symptom Inventory (BSI) in primary care. In M. E. Maruish (Ed.), *Handbook of psychological assessment in primary care settings* (pp. 297–334). Lawrence Erlbaum Associates.

Hammen, C. (2005). Stress and Depression. *Annu. Rev. Clin. Psychol.*, 293–319. https://doi.org/10.1146/annurev.clinpsy.1.102803.143938

Harvey, S. B., Modini, M., Joyce, S., Milligan-Saville, J. S., Tan, L., Mykletun, A., Bryant, R. A., Christensen, H., & Mitchell, P. B. (2017). Can work make you mentally ill? A systematic meta-review of work-related risk factors for common mental health problems. *Occupational and Environmental Medicine*, *74*(4), 301–310. https://doi.org/10.1136/oemed-2016-104015

Hecker, T., Goessmann, K., Nkuba, M., & Hermenau, K. (2018). Teachers' stress intensifies violent disciplining in Tanzanian secondary schools. *Child Abuse and Neglect*, *76*(October 2017), 173–183. https://doi.org/10.1016/j.chiabu.2017.10.019

Hugo, C. J., Boshoff, D. E. L., Traut, A., Zungu-Dirwayi, N., & Stein, D. J. (2003). Community attitudes toward and knowledge of mental illness in South Africa. *Social Psychiatry and Psychiatric Epidemiology*, *38*(12), 715–719. https://doi.org/10.1007/s00127-003-0695-3

Joyce, S., Modini, M., Christensen, H., Mykletun, A., Bryant, R., & Mitchell, P. B. (2016). Workplace interventions for common mental disorders : a systematic meta-review. *Psychological Medicine*, *46*, 683–697. https://doi.org/10.1017/S0033291715002408

Knezevic, B., Milosevic, M., Golubic, R., Belosevic, L., Russo, A., & Mustajbegovic, J. (2011). Work-related stress and work ability among Croatian university hospital midwives. *Midwifery*, *27*(2), 146–153. https://doi.org/10.1016/j.midw.2009.04.002

Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work and Stress*, *19*(3), 192–207. https://doi.org/10.1080/02678370500297720

Maio, G. R., & Haddock, G. (2009). The Influence of Attitudes on Information Processing and Behavior. In *The Psychology of Attitudes and Attitude Change* (pp. 47–66). Sage Publications, Inc. https://doi.org/10.4135/9781446214299

Masath, F. B., Hermenau, K., Nkuba, M., & Hecker, T. (2020). Reducing violent discipline by teachers using Interaction Competencies with Children for Teachers (ICC-T): Study protocol for a matched cluster randomized controlled trial in Tanzanian public primary schools. *Trials*, *21*(1), 4. https://doi.org/10.1186/s13063-019-3828-z

Meister, J. (2021). *The Future of Work is Employee Well-Being*. https://www.forbes.com/sites/jeannemeister/2021/08/04/the-future-of-work-is-worker-well-being/?sh=25daaf094aed

Moses, I., Admiraal, W. F., & Berry, A. K. (2016). Gender and gender role differences in student–teachers' commitment to teaching. *Social Psychology of Education*, *19*(3), 475–492. https://doi.org/10.1007/s11218-016-9340-3

Moses, I., Berry, A., Saab, N., & Admiraal, W. (2017). Who wants to become a teacher? Typology of student-teachers' commitment to teaching. *Journal of Education for Teaching*, *43*(4), 444–457. https://doi.org/10.1080/02607476.2017.1296562

Sumra, S. (2005). The Living and Conditions of Teachers in Tanzania: A Research Report. *HakiElimu*.

Sumra, S., & Katabaro, J. K. (2014). The Human Development Report 2014: Declining quality of Education : Suggestions for Arresting and Reversing the Trend. In *The Economic and Social Research Foundation (ESRF)* (Issue 9). http://www.thdr.or.tz/docs/THDR-BP-9.pdf

Tezci, e., & terzi, a. R. (2010). An examination on the attitudes towards teaching profession of the students of secondary school branch teacher training programs. *Education Sciences*, *5*(2), 367–388. https://dergipark.org.tr/en/pub/nwsaedu/issue/19824/212336

United Republic of Tanzania. (2019). *Basic Education Statistics (BEST)-National Data*.

Wittchen, H. U., & Jacobi, F. (2005). Size and burden of mental disorders in Europe – A critical review and appraisal of 27 studies. *European Neuropsychopharmacology*, *15*(4), 357–376. https://doi.org/10.1016/j.euroneuro.2005.04.012