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Original Article

How organizational climate of silence affects job performance: the role of work engagement and supervisor support among frontline nurses

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Abstract

Background: The growing body of evidence demonstrates both the desirable and undesirable consequences of organizational silence. This study aims to explore the influence of the organizational climate of silence on job performance through the mediating effects of work engagement (WE). Further, the degree to which supervisor support (SS) and work engagement moderate job performance are examined.

Methods: A quantitative cross-sectional design was used for the study. Survey data from 14 hospitals and 15 health centers and community-based health planning services (CHPS) compounds in the Western Region of Ghana. We used the variable-to-sample ratio to determine an appropriate and sufficient sample size of 565 respondents. The hierarchical regression technique was employed in estimating the relationship between the variables.

Results: In selecting an adequate and appropriate sample size for this current study, we relied on the variable-to-sample ratio. Results from the study showed that top management's attitude to silence and the supervisor's attitude to silence had a significant adverse effect on task performance (β=-.090, p< 0.05) and (β=-.110, p< 0.01). Work engagement had no role in mediating top managers' and supervisors' attitudes toward silence, communication opportunities, and task performance. Supervisor support acted as a moderating factor in the relationship between job engagement and task performance. In contrast, despite the direct positive relationship between supervisor support and contextual performance, it failed to moderate the relationship between work engagement and contextual performance.

Conclusion: The study's findings demonstrate the need for health managers and supervisors to become more conscious of silence. The results offer diverse recommendations for encouraging the sharing of relevant ideas, facts, and opinions within the health sector.

Keywords: Organizational Climate, Job Performance, Work Engagement, Supervisor Support, Frontline Nurses, Ghana

Background

Organizational silence is a communication and management issue in health care, as it is essential for high performance. It is common for health professionals to remain silent about workplace issues due to fear of confrontation, alienation, being labeled as a complainer, fear of damaging relationships, or misinterpretation by direct managers [1,2]. The growing body of evidence demonstrates both the desirable and undesirable consequences of organizational silence, with some scholars suggesting that it can have a beneficial effect on an individual

or an organization [3]. However, others have argued that it can be more damaging than being outspoken. The impact of organizational silence on employee engagement (EE) is critical for organizations to achieve their goals, as WE are a positive, fulfilling work mindset characterized by vitality, devotion, and absorption [1, 4, 5]. There is a need for further investigation, especially among frontline nurses, who are vital components of the quality of healthcare services in Ghana. Pirzada et al. [6] investigated the effects of employee silence on job engagement and discovered a significant negative correlation. This research aims to develop a more comprehensive understanding that will assist health managers in enhancing communication. From this perspective, the objective of the study shown in Figure 1 is to examine the three components of an organismal climate of silence on the job between the organizational climate of silence and job performance through work engagement. Supervisor

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support is considered to moderate the relationship between the types of organizational climate of silence and job performance, of which little research has been reported in the literature. We also segregated performance into contextual and tasks following Borman and Motowidlo (1993) [7] to systematically compare and evaluate the impact of organizational climate, work engagement, and supervisor support. The research examines frontline nurses' perceptions of their supervisor's attitude toward job engagement and its effect on their contextual and task performance.

Literature Review

Motowidlo [8] described job performance (JP) as the forecasted benefit from an employee's actions over a given timeframe. Numerous researchers [9-12] have examined the direct effects of organizational silence on job performance among nurses and concluded that staying silent affected the job satisfaction and performance of nurses in Turkey. The organizational climate of silence (OCS) and performance is an undesirable occurrence within an organization. Vakola and Bouradas [13] classified organizational silence into attitudes toward silence and communication opportunities held by top management and supervisors. It is believed that investigating JP among nurses using established theory could guide decision-makers and researchers to augment communication, work engagement, and performance in Ghana. The social exchange theory by Blau [14] suggests that when one party indulges in beneficial activities aimed at another party, the first person creates an implicit obligation that can affect employees' empowerment, performance, and job satisfaction. Supervisors are more likely to reciprocate by providing additional resources and emotional support, which promotes the development of positive working relationships with subordinates. Communication opportunities (CO) influence performance, and employee voice is associated with contextual performance. Vakola and Bouradas's [13] findings show that when leaders communicate well with employees and listen, they are encouraged to perform well in their jobs.

H1: Organizational Climate of silence is significantly related to job performance.

H1a: There is a significantly negative relationship between top management's attitude to silence and task performance.

H1b: There is a significantly negative relationship between a supervisor's attitude to silence and task performance.

H1c: There is a significantly positive relationship between communication opportunity and task performance.

H1d: There is a significant negative relationship between top management's attitude to silence and contextual performance.

H1e: There is a significantly negative relationship between a supervisor's attitude to silence and contextual performance.

H1f: Communication opportunities will positively and significantly influence contextual performance.

Silence and Work Engagement (WE)

Rees et al. [15] found that organizational silence is associated with work engagement, but relatively little attention has been paid to the relationship between voice and engagement [16]. Work engagement is widely known as critical to organizational success and a driver of novelty and competitiveness, but few studies have been conducted on communication and

engagement [17] Truss and Hall [18] found that having opportunities to communicate upward is one of the top factors influencing engagement, while Purcell and Hall [19] posit that speaking up and being heard is a critical antecedent to work engagement. Beugré [20] noted that the "deaf-ear" syndrome may discourage communication, resulting in employee disengagement. It is hypothesized that employees' engagement at work decreases when they suspect their superiors are going through the motions of discussion without genuinely attaching seriousness.

H2: Organizational Climate of silence is related to work engagement.

H2a: Top management's attitude to silence will negatively and significantly affect work engagement.

H2b: Supervisor attitude to silence negatively and significantly influences work engagement.

H2c: Communication opportunity positively and significantly affects WE.

Work Engagement as a Mediator between Organizational Climate of Silence and Job Performance

Work engagement creates an environment of self-identity where employees feel excited and show greater job satisfaction [21, 22]. This study believes that work engagement will help explain the influence of the organizational climate of silence on job performance. Frontline nurses who can communicate freely and take seriously are inherently motivated and engaged in their work, but nurses whose views are not taken seriously are less likely to become committed and engaged, leading to poor performance [23, 24]. The above debates led to the following hypothesis:

H2a: Top management's attitude to silence will negatively and significantly affect work engagement.

H2b: Supervisor attitude to silence negatively and significantly influences work engagement H2c: Communication opportunity positively and significantly affects WE

H3: WE will significantly relate to job performance:

From the above-reviewed literature, it is therefore hypothesized that H2: Organizational Climate of silence is related to work engagement.

H3a: Work engagement will significantly mediate the relationship between TMAS and task performance.

H3b: Work engagement will significantly mediate the relationship between SAS and task performance.

H3c: Work engagement will significantly mediate the relationship between CO and task performance.

H3d: WE will significantly mediate the relationship between TMAS and contextual performance.

H3e: WE will significantly mediate the relationship between SAS and contextual performance.

H3f: WE will significantly mediate the relationship between CO and contextual performance.

Supervisor support as a moderator between WE and JP

Supervisor support is defined as assistance received from superiors at the workplace [25]. According to Meral et al. [26] social exchange theory, makes employees feel more connected and affiliated with the organization, and they reciprocate by assisting supervisors in achieving organizational goals. Babin and Boles [27] established that supervisors exert significant

influence over employees, and employees may provide supervisor support by improving performance to return [28]. Despite evidence in the literature demonstrating supportive supervisors as a buffering factor, there is a limited number of studies demonstrating supervisor support as a vital buffering factor contributing to job engagement and performance [26, 29. 30.31,32]. In this present study, supervisor support is expected to moderate the relationship between work engagement and performance (task and contextual). Communication opportunities are usually related to contextual performance because affiliate behavior is designed to maintain or improve relationships.

Vakola and Bouradas's (2005) [13] findings show that when leaders communicate well with employees and listen, they are encouraged to perform well in their jobs. Given the above research findings concerning the association between silence and performance, it is hypothesized that:

H4: Supervisor support will significantly moderate the relationship between WE and performance.

H4a: Supervisor support will significantly moderate the relationship between WE and task performance.

H4b: Supervisor support will significantly moderate the relationship between WE and contextual performance.
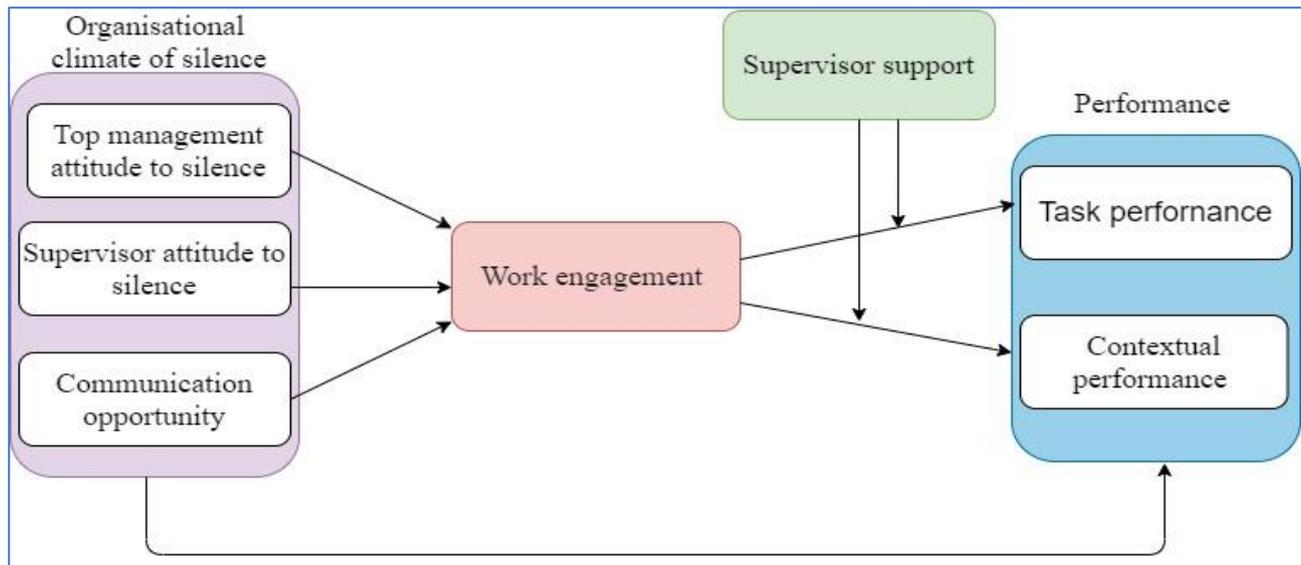
Figure1: Conceptual framework: (Author's construction 2023)

Methods

Study design and data analysis

A quantitative cross-section design was used for the study. The survey was data collected from 14 hospitals and 15 health centers and Community-based Health Planning Services (CHPS) compounds in the Western Region of Ghana between 21st April and November 20th, 2021. The data were collected in four waves, with a two-month gap between each wave. The informed consent form also described the main constructs, such as job performance. The average age of the respondents was 43, and they had an average of nine years of professional experience. We used STATA and Statistical Package for the Social Sciences (SPSS) software for data analysis. The unrotated principal component factor analysis revealed five factors with eigenvalues greater than one on all measurement elements.

Inclusion and exclusion criteria

Frontline workers who were on leave and had not worked for more than at least six months at the health facility were exempted from the study. The study however focused on frontline workers who had patient care experience for more than six months. The eligibility requirements included answering yes to two questions: Do you experience organizational silence at the moment, and will you be able to participate in four data collection waves performed at nearly 8-month time intervals?

Frontline health workers who qualifiers and responded yes to the questions were targeted for the study and those who responded no were exempted.

Sample size

We used the variable-to-sample ratio to determine an appropriate and sufficient sample size for this study [33]. According to Sprent and Smeeton [33], the variable-to-sample ratio suggests that the choice of sample size should be made based on the proportion of respondents to items. As N: p, the ratio is written. The p stands for the number of items, while the N stands for the number of respondents. Variable-to-item ratio examples include 3:1, 6:1, 15:1, and even 20:1. In contrast, we used a 10:1 ratio for this research project. According to this ratio, ten respondents were used for each item, as recommended by Cattell [34], among other earlier studies. We could have settled on 370 respondents based on the total of thirty-five items used in assessing the study's variables. The current study, on the other hand, gathered 565 valid responses from frontline healthcare professionals. The 549 valid responses outnumber the 370 respondents; thus, the data from this current study is more than adequate for further analysis. In addition, we selected respondents using the purposive sampling technique. It is strong enough to allow a researcher to collect data from a convenient and accessible segment of a population.

Survey instruments

The questionnaire employed in the study contained items evaluating top management's attitude to silence, the supervisor's attitude to silence, communication opportunities, work engagement, supervisor support, task performance, and contextual performance.

Organizational climate of silence

The organizational climate of silence was categorized into three subscales: Top manager's and supervisor's attitude to silence and communication opportunity.

Top management attitude to silence (TMAS)

This study assessed TMAS, the unwillingness of top managers to share their errors or seek assistance from others, using five items from Vakola and Bouradas [13]. Sample items were modified to suit the context of the current study, such as "If you express your disagreements about company issues, you may suffer negative consequences from top management." The Cronbach's α coefficient was 0.84, and the Cronbach alpha was 0.949 indicating high internal consistency. Sample items were assessed on a 7-point Likert scale with 1 = strongly disagree to 7 = strongly agree.

Supervisor attitude to silence (SAS)

This study assessed the SAS construct by using five items from Vakola & Bouradas [13]. These items have been proven to have high reliability and were rated on a seven-point Likert scale from one (strongly disagree) to seven (strongly agree). The Cronbach alpha for SAS was 0.89.

Communication opportunity (CO)

Communication opportunities in the current study are related to mutual trust and openness and a perceived sense of having a say and being recognized. The communication opportunity was evaluated with five items from Vakola & Bouradas [13]. These items had high reliability in previous studies with Cronbach alpha 0.79. Sample items comprise "Communications with co-workers from other departments are satisfactory," "In this hospital, there is a structured and systematic exchange of experience and knowledge among employees." Items for CO were rated on a seven-point Likert scale from one (strongly disagree) to seven (strongly agree).

Task performance (TASK)

Task performance is described as an employee essential job description. We measured TASK with seven items that were adapted from (Kahya 2009) [35] Sample items include "Job knowledge" and "Problem-solving" These items have been proven to have high internal consistency in previous studies. For instance, Kahya [35] recorded a reliability coefficient of 0.89 for the Task construct. In this current study, the Cronbach alpha coefficient for OC is 0.949. All items on the scale were assessed on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Contextual performance (CONT)

Individual actions unrelated to their primary task structure shape the organizational, social, and psychological context that serves as a future value for task practices and functions. This is described as contextual performance [36]. We measured CONT with eight items following the work of Koopmans et al. [37]. The Cronbach alpha value for the job performance scale is 0.905, which is even better than in previous studies. Items for JP were rated on a 7-point Likert scale ranging from 1 (extremely low) to 7 (extremely high).

Work engagement (WE)

The current study defines WE as an employee's high job-related psychological state, followed by total commitment and resilience. Four items adapted from Schaufeli et al [38] were used to assess the work engagement construct. The Cronbach alpha for WE was 0.88. Items were rated on a seven-point Likert scale from one (strongly disagree) to seven (strongly agree).

Supervisor support (SS)

We measured supervisor support (SS) with three items adapted from the work. Cronbach's alpha value for the job performance scale was 0.913, higher than in previous studies. Items for JP were rated on a 7-point Likert scale ranging from 1 (extremely low) to 7 (extremely high).

Control variables

The variables such as gender, age, education, and marriage were employed as controls during the hierarchical regression analysis. The variables were chosen because they have been identified by Al-Ahmadi (2009) [39] to influence performance among nurses.

Results

Socio-demographic characteristics of study participants

The data analysis included 565 valid responses from 169 male and 397 female nurses, with a net response rate of 68.9%. The first element explained 14.68% of the total variance, less than the 50.0% cut-off criteria suggested by Hu and Bentler [40], while all elements explained 77.25% of the variance. The findings of this study provide evidence that the data was not affected by common method bias.

Correlations, Mean, and Standard Deviation Analysis

From Table 1 below, the inter-factor correlation factor, mean, and standard deviation analysis of all elements showed that the supervisor's attitude to silence correlated with task and contextual performance and work engagement. To check the discriminant validity of the scales, we assessed the latent variable correlations and the square root of the AVEs. The results showed that discriminant validity has been achieved, indicating that the variables are distinct from each other.

Measurement model, construct validity, and reliability

The data was subjected to validity and reliability testing with SPSS version 23 software as shown in table 2 below. An exploratory factor analysis (EFA) was performed to see if the items for the survey could load onto their predicted variables. The SPSS was also used to check the reliability of the scales, which had Cronbach alpha (α) coefficient values above the proposed 0.70 thresholds. A validity test with critical interests in standardized factor loadings, fit indices, average variance extracted (AVE), composite reliability (CR), and discriminant validity showed that the scales had good convergent validity.

Table 1: Correlation analysis, discriminant validity, means, and standard deviations (n=565)

	1	2	3	4	5	6	7	8	9	10		Mean	Std. Dev
1. Gender	-											1.27	0.442
2. Age	0.053	-										3.09	0.931
3. Educa	-.188**	0.01	-									2.03	0.917
4. Marriage	.196**	0.016	-.261**	-								1.35	0.476
5. Tmas	-0.016	0.046	0.014	.093*	0.867							3.12	1.32
6. Sas	0.018	-0.016	0.02	-.077	-.489**	0.890						2.92	1.357
7. Cont	-0.021	-0.074	0.022	0.006	-.171**	.175**	0.742					2.3	0.743
8. Task	-0.069	-0.036	-0.033	-0.024	.172**	.181**	.178**	0.867				2.85	1.216
9. WE	-0.032	-.167**	0.023	-.097*	-.246**	.201**	.561**	.155**	0.932			2.11	0.816
10. CO	-0.017	-.159**	.101*	-0.029	-.084*	0.078	.234**	.180**	.236**	0.851		4.2874	0.8004
11.SS	0.014	-0.026	-0.034	-0.011	-.230**	.180**	.491**	.151**	.572**	.173**	0.780	11.SS	0.014

Abbreviation: TMAS, Top management attitude to silence; SAS, Supervisor attitude to silence; CONT, contextual performance; TASK, task performance; WE, Work engagement; CO, communication opportunity and SS, Supervisor support.

Table 2: Result of the confirmatory factor analysis and reliability testing

Variables	Loadings	Cronbach alpha	Composite reliability	Ave
Task6	.903	0.949	0.955	0.752
Task7	.892			
Task5	.889			
Task4	.875			
Task2	.874			
Task3	.873			
Task1	.755			
Cont1	.864	0.905	0.907	0.550
Cont4	.787			
Cont7	.744			
Cont3	.742			
Cont6	.740			
Cont5	.730			
Cont8	.672			
Cont2	.633			
Sas3	.898	0.958	0.949	0.789
Sas4	.894			
Sas2	.891			
Sas1	.882			
Sas5	.877			
Tmas1	.921	0.947	0.938	0.753
Tmas5	.871			
Tmas2	.867			
Tmas3	.855			
Tmas4	.823			
CO1	.884	0.913	0.929	0.724
CO3	.878			
CO4	.870			
CO5	.818			
CO2	.801			
WE2	.837	0.925	0.884	0.657
WE3	.829			
WE4	.793			
WE1	.781			
SS3	.799	0.840	0.823	0.608
SS2	.792			
SS1	.747			

Abbreviation: TMAS, Top management attitude to silence; SAS, Supervisor attitude to silence; CONT, contextual performance; TASK, task performance; WE, Work engagement; CO, communication opportunity and SS, Supervisor support.

Hypotheses Testing

Assessing the main effect and mediating effect of Work engagement

The study employed the Hierarchical regression procedure to estimate the various hypothesized associations illustrated in the conceptual framework (Figure 1). First, we examined the main effect model (Table 3), which involves the effect of the controls and organizational climate variables on task performance. The results of model 2, as represented in Table 3, showed that top management attitude to silence and supervisor attitude to silence had a significant adverse effect on task performance (β=-.090, p< 0.05) and (β=-.110, p< 0.01). However, communication opportunities showed a significant positive relationship with task performance. Thus, hypotheses H1a, H1b, and H1c, H1d, H1e, and H1f were supported.

Employing work engagement as a dependent variable in Model 3, top management and supervisor attitude to silence negatively impacted WE. At the same time, communication opportunities positively and significantly predicted work engagement. The result, therefore, supported H2a and H2b. Employing WE as an exogenous variable and task performance as the endogenous variable, the findings from Model 4 showed a significant positive relationship with task performance. The outcome of the study, however, supports H2c.

Table 3: Hierarchical regression results of the mediating effects of WE in the relationship between TMAS, SAS, OC, and TASK performance.

Variables	TASK	TASK	W	TASK	TASK
	Model 1 β (t)	Model 2 β (t)	Model 3 β (t)	Model 4 β (t)	Model 5 β (t)
Constant	3.447 (11.262)	2.955*** (6.662)	2.394*** (8.299)	2.816*** (11.262)	2.651*** (5.655)
Gender	-.200 (-1.674)	-.226 (-1.957)	-.030 (-.394)	-.198 (-1.674)	-.224 (-1.941)
Age	-.041 (-7.	.002 (.043)	-.110*** (-3.123)	-.008 (-.153)	.015 (.268)
Educational	-.069	-.088 (-1.550)	-.014 (-.383)	-.068 (-1.184)	-.088 (-1.553)
Marriage	-.058	-.005 (-.042)	-.116 (-1.622)	-.022 (-.195)	.005 (042)
TMAS		-.090* (-2.080)	-.106*** (-3.760)		-.055 (-1.452)
SAS		-.110*** (-2.637)	-.058* (-2.113)		-.114* ** (-2.768)
CO		.254 *** (4.020)	.197*** (4.799)		.232*** (3.605)
WE				.226*** (3.576)	.118 (1.826)
R square	0.675	0.077	0.037	0.031	0.913
F	.726	6.640	12.363	5.097	6.061

Abbreviation: TMAS, Top management attitude to silence; SAS, Supervisor attitude to silence; CO, communication opportunity; TASK, task performance; and WE, Work engagement

The study regressed the control variables, TMAS, SAS, and CO, on task performance and found that only SAS and CO had a significant relationship with task performance. Supervisors' attitude to silence had a significant negative coefficient, whereas communication opportunities showed a positive relationship. Table 3, Model 2, showed that top management and supervisor attitude to silence similarly had a negative impact on work engagement. Work engagement as a dependent variable showed that both TMAS and SAS had a significant adverse effect on contextual performance, while communication opportunities had a positive and significant impact contextual performance. H3a, H3b, and H3c were not supported.

The results of Model 5 showed that both TMAS and SAS had an insignificant effect on contextual performance. Work engagement partially mediated the relationship between communication opportunities and contextual performance, partially supporting H3d, H3e, and H3f. The structural model for model fitness with Chi-square = 98.143, standardized root mean square residual (SRMR)= 0.026, root mean square error (RMSEA)= 0.103, and comparative fit indexes (CFI), p=0.935, showed that our data had an acceptable model fit. Model 4 showed a significant positive relationship with task performance.

Table 4: Hierarchical regression results of the mediating effects of WE in the relationship between TMAS, SAS, OC, and CONT performance.

Variables	CONT β (t)	CONT β (t)	WE β (t)	CONT β (t)	CONT β (t)
	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	2.439*** (13.020)	1.931*** (7.168)	2.394*** (8.299)	.990*** (5.510)	.771*** (3.157)
Gender	-.027 (-.373)	-.044 (-.623)	-.030 (-.394)	-.023 (-.375)	-.029 (-.489)
Age	-.059 (-1.752)	-.027 (-.814)	-.110*** (-3.123)	.016 (.574)	.026 (.934)
Educational	.020 (0.551)	.004 (.120)	-.014 (-.383)	.020 (.685)	.011 (.373)
Marriage	.027 (0.386)	.059 (.879)	-.116 (-1.622)	.110 (1.924)	.115 * (2.007)
TMAS		-.057* (-2.163)	-.106*** (-3.760)		-.006 (-.246)
SAS		-.061* (-2.403)	-.058* (-2.113)		-.033 (-1.521)
CO		.197*** (5.132)	.197*** (4.799)		.101*** (3.026)
WE				.519*** (16.023)	.484*** (14.308)
R square		0.90	0.037	0.31	0.335
F		7.854	12.363	52.413	34.97

Abbreviation: TMAS, Top management attitude to silence; SAS, Supervisor attitude to silence; CO, communication opportunity; CONT, contextual performance; and WE, Work engagement.

Assessing the moderating role of supervisor support

The study employed hierarchical regression analysis, mean-centered work engagement, and contextual performance variables to determine the moderating effect of supervisor support. The results presented in Table 5 Model 2, show the moderating effect of SS on task performance. In Table 5, Model 2, the results showed that the impact of WE and supervisor support on tasks was statistically insignificant. Finally, the results presented in Model 3 revealed that the interaction between WE and SS was positive and statistically significant, hence supporting H4b. The results show a partial moderating influence of the interactive term between WE and task performance. The graphical presentation of the moderating impact of WE on the association between SS and Tasks performance is presented in Figure 2. The results show that WE still exerted a significant positive effect on contextual performance, which provides additional support for H2. Supervisor support also had a significant positive relationship with contextual performance. The interaction between work engagement and supervisor support was positive and statistically insignificant. The findings suggest that supervisor support could not moderate the relationship between work and engagement and contextual performance. Hence, H4a was not supported. The graphical presentation of the moderating impact of WE on the association between SS and contextual performance is presented in Figure 3.

Table 5: Hierarchical regression results of the moderating effects of SS in the relationship between WE and performance.

Variables	TASK β (t)	TASK β (t)	TASK β (t)	CONT β (t)	CONT β (t)	CONT β (t)
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Constant	3.447*** (11.262)	2.428*** (5.966)	4.372**(6.375)	2.439*** (13.020)	.361 (1.783)	.730* (2.118)
Gender	-.200 (-1.674)	-.202 (-1.712)	-.189 (-1.620)	-.027 (-.373)	-.029 (-.496)	-.027 (-.456)
Age	-.041 (-.749)	-.017 (-.313)	.008 (.143)	-.059 (-1.752)	.002 (.067)	.007 (239)
Educational	-.069 (-1.176)	-.064 (-1.105)	-.061 (-1.064)	.020 (0.551)	.028 (.967)	.028 (.987)
marriage	-.058 (-.517)	-.030	-.026 (-.238)	.027 (0.386)	.098 (1.753)	.098 (1.766)
WE		.143 (-.266)	.971*** (-2.969)		.384*** (9.973)	.172 (1.048)
SS		.139 (1.863)	.349* (-2.212)		.226*** (6.069)	.133 (1.680)
WE* SS			.254*** (3.503)			.048 (1.322)
R square	0.82	0.37	0.57	0.82	.361	0.363
F		3.53	4.84		52.616	45.41

Abbreviation: WE, Work engagement; CO, communication opportunity and SS, Supervisor support; WE* SS, Interaction between work engagement and supervisor support.

Discussion

In this current study, a conceptualized model is proposed to investigate the influence of the organizational climate of silence (OCS) on job performance, directly and indirectly, using work engagement as a mediator. In addition, the study tested the moderating role of supervisor support in the relationship between work engagement (WE) and job performance (JP) among frontline nurses. Findings from the hierarchical regression analysis confirmed most of the hypotheses proposed.
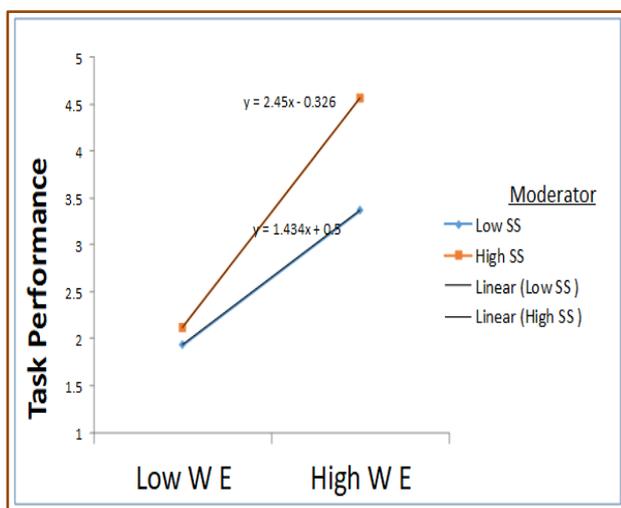
Figure 2. The moderating influence of work engagement in the relationship between the organizational climate of silence and task performance

The Influence of OCS on job performance

The study found that communication opportunities had the highest predictive capacity on task and contextual performance, followed by supervisor attitude to silence ($\beta=-0.110$, $p<0.05$) and top management attitude to silence. The positive relationship between communication opportunities and contextual performance corroborates the findings of Ruck et al [17]. Effective communication can foster collaboration and the ability of nurses to work cooperatively toward a common goal. However, top management and supervisor attitudes toward silence had significant and negative effects on work engagement and performance. Silence among nurses could slow organizational development and decrease employee engagement. This study found that organizational silence is detrimental to the health sector, especially hospital success and that OCS variables are statistically significant and influence work engagement. Communication opportunities showed a strong predictive effect on contextual and task performance, while top managers and supervisors' attitudes toward silence had a significant negative impact on performance. This is possible because top managers' and supervisors' attitudes toward silence cause nurses to perceive themselves as having fewer opportunities to effectively communicate their concerns, eliciting fewer positive attitudes and demonstrating lower levels of engagement. This study is in line with Welch [41] which identified the linkage between silence and work engagement and encouraged women to take communication seriously.

The mediating effect of work engagement

Work engagement had no mediatory role between TMAS, SAS, CO, and TASK performance, but partially mediated the relationship between communication opportunities and contextual performance. This study contributes to the literature in the health industry, articulating human resource and healthcare management perspectives. It provides empirical evidence that senior manager and supervisor attitudes towards silence can influence work engagement, which predicts nurses' level of contextual performance. Sequentially, work engagement predicts a nurse's level of contextual performance [42, 43, 44].

Moderating Effects of supervisor support on work engagement and contextual performance

The most important details are that supervisor support could not moderate the relationship between work engagement and contextual performance, Quansah et al [45] indicated that it would not be wrong to interpret the main effects in the case of statistically insignificant interactions among exogenous variables, and the influence of work engagement and supervisor support on task performance was positive and statistically significant. The results suggest that support from supervisors should be taken seriously at the hospital as their powerful influence can enhance work engagement and task performance among nurses. This study contributes to human resource and healthcare management perspectives but has limitations that should be considered in future research. The initial data collection method was a two-month time lag, which may be limited in terms of causal impact. Future studies should collect data at longer time intervals and use larger samples and multiple hospitals in Ghana and elsewhere.
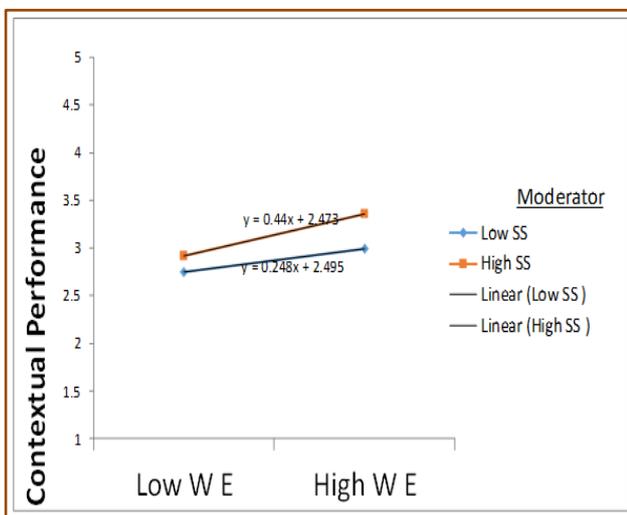
Figure 3. The moderating influence of work engagement in the relationship between the organizational climate of silence and contextual performance

Theoretical implications

The current research assesses top managers' and supervisors' attitudes to silence and communication opportunities on performance among frontline nurses through the mediatory role of work engagement. To comprehensively compare and evaluate the impact of the organizational climate of silence on performance, the study disaggregated performance into contextual and task following Borman and Motowidlo [7].

Additionally, the moderating effects of supervisor support on the association between work engagement and job performance are examined. This study breaks new ground in the health management literature by introducing a systematic model with a crucial emphasis on the relationship between the climate of silence and job performance. It also contributes to the literature and the expectancy theory by investigating the mediating role.

Practical implications

This study makes several recommendations for improving nurse performance. Top managers and supervisors must create an environment where employees can express their opinions and contribute thoughts about a pending issue. To avoid silence, managers must create opportunities for communication and formalize the exchange of information and ideas. Milliken et al [45] found that employees who have suggestions but are unsure how and where to approach their superiors can submit them to an authorized officer. Additionally, managers must consider organizational silence as a critical factor when examining the organizational climate to improve organizational performance. Finally, supervisors must strengthen their support for frontline nurses to increase their engagement in work-related activities and performance in the health sector. Violations of this policy can undermine work engagement and negatively impact performance.

Conclusion

This study examined the effects of organizational silence on contextual and task performance among frontline nurses. Results showed that work engagement played no role in mediating top managers' and supervisors' attitudes toward silence and task performance. However, work engagement served as a full mediator between top managers' and supervisors' attitudes. Supervisor support acted as a moderating factor in the relationship between job engagement and task performance but failed to moderate the relationship between work engagement and contextual performance. The study provides theoretical and practical contributions based on the findings.

Abbreviation

WE: Work Engagement; SS: Supervisor Support; EE: Employee Engagement; JP: Job Performance; OCS: Organizational Climate of Silence; CO: Communication Opportunity; TMAS: Top Management Attitude to Silence; SAS: Supervisor Attitude to Silence; SPSS: Statistical Package for the Social Science

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Availability of data and materials
Data will be available by emailing amponwirekosabina@gmail.com

Authors' contributions

SYO and SA-W developed the concept of the study and contributed to the design of the research article, data collecting, and analysis. SYA and AD were also involved in data analyses and drafted the manuscript. All authors were involved in the revision of the manuscript. We can also confirm that the co-authors have approved the final version of the manuscript.

Ethics approval and consent to participate

The study was conducted in accordance with the ethical principles of the Declaration of Helsinki (2013). Ethical approval was guaranteed by the corresponding institution. Moreover, permission to collect the data from the fourteen hospitals and fifteen health centers, and Community-based Health Planning Services (CHPS) in the Western Region of Ghana was guaranteed. A cover letter suggesting confidentiality and anonymity was maintained. The participants were informed that participation was entirely voluntary and could withdraw from the study at any time without any disadvantage to the respondents. Participants were further assured that their personal information was protected, including protecting their privacy in line with the dictates of the ethical clearance obtained. All respondents willingly partook in the study. The participants provided written informed consent. Informed consent was obtained from all the participants of the study.

Consent for publication

Not applicable

Competing interest

The authors declare that they have no competing interests.

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