



The Relationship Between Open Book Management and Agile Employees' Performance

An Applied Study on Mansoura University Medical Centers' Staff

Research extracted from a Master thesis of Business Administration

By

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Abstract:

Recognizing that very less number of research has been conducted on workforce agility, the current research aimed to examine the effect of open-book management on agile employees' performance for Mansoura University medical centers' staff. A sample of 383 is used from a population that includes 15945 members. Additionally, a stratified random sample of four types of medical centres' staff members include doctors, nurses, technicians, and employees. SPSS statistical program as well as AMOS were used for statistical analysis. The results of the statistical analysis showed that there is a significant effect of open book management on agile employees' performance.

Introduction

Hospitals are of the organizations that are characterized by complexity and operations in dynamic environments, such uncertainties that hospitals might encounter include; COVID-19 pandemic, rapid medical technological advancements, flow of patients, political, and demographical forces, etc. which can be improved by focusing on improving processes (Radnor & Osborne 2013). To deal with such circumstances, agility is helpful and more suitable for things that are challenging to control or plan for (Maskell, 2001; Tolf et al, 2015).

Through investigating previous studies, the researcher found that previous studies examined the relationship between open book management and employee performance (Agbaeze & Nnaji, 2017). Additionally, Al-Taii et al (2020), studied the role of OBM on organizational agility. Employees' agile performance was ignored, and will be examined in this study.

Sherehiy (2008) argues that there is no specific or accurate definition for employees' agility. Nevertheless, argues that agility can be defined from a strategic perspective as the strategic ability of the organization to deal with unexpected and emergent changes in an adaptable way. Additionally, Sherehiy

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(2008) defined agility as an organization's ability to respond quickly to alterations in the both internal and external business environment and to take initiative in response to the changes and utilizing opportunities that arise as a result of this change. The concept of agility also include the proactivity aspect. Likewise, Storme et al (2020) differentiated between agility and adaption where the first implies anticipation and the later implies reaction to a change.

This study focus on the aspect of employees' agile performance, which is defined by Müceldili, Tatar, and Erdil (2020) as employees' ability to adjust and adapt to changes in the workplace, so that they and the firm can profit from them. Additionally, agile employees are knowledgeable and skillful that they can predict the trends and patterns of the environment (Alavi & Wahab, 2013). Agile employees' are comfortable with change, innovation, and emerging technologies and they have the commitment to continuously learn new things (Müceldili, Tatar, & Erdil 2020).

Different researchers including Alavi et al (2014) and Müceldili, Tatar, Erdil (2020) adopted the dimensions used in Sherehiy's (2008) study, hence it will be used in this study as of the following; proactivity, adaptability, and resilience. Proactive behavior was defined by Griffin et al (2007) as "the extent to which individuals engage in self-starting, future-oriented behavior to change their individual work situations, individual work roles, or themselves". Additionally, Parker and Collins (2010) argue that employee proactive behavior is becoming more important to organizational success as self-managed teams and de-centralization grow in popularity, also they contend that ways of promoting proactivity is getting more attention by researchers and practitioners.

Adaptability is about changing or adjusting one's behavior in order to be able to accommodate with a new environment (Sherehiy,2008). Likewise, adaptive performance is a flexible work behavior that support employees' ability to adjust to change by showcasing brilliance in problem-solving, pressure management and handling unexpected events, learning new things, and flexibility related to people, culture, and environment which was also contended by (Park & Park, 2019).

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The final dimension of employees' agile performance is defined by Sherehiy (2008) as working effectively under pressure, yet even with a dynamic environment, or when pursued strategies and solutions do not work. Chonko, Lawrence and Jones (2005) contend that agile workforce has two important aspects which are: the capability of responding to and adapting to change in a timely and appropriate manner and the capability of capitalizing on changes to support the organization. The choice of structure and organizational learning has an important impact on employees' agility, positively and significantly related to it (Alavi et al.,2014).

Ofoedu et al (2019) argued that organizations will not be able to attain significant success in performance in today's changing environment due to modernization, technological advancements, and globalization if it keeps operating in controlling organizations as we live also in a creative and knowledge age with changing trends. Additionally, the survival of any organization is heavily dependent on the individuals who work within it, and significant positive effect of OBM on employee performance is found (ofoedu et al., 2019). Tolf et al (2015) mentioned five enablers for agility in organizations and considered the organic structures that are elastic and responsive as a crucial enabler. Another enabler that focuses on the interaction between the organization and its surrounding context is open book management which enables operations with seamless and rapid transparent information flows and common internal visions and values (Lin et al., 2006).

Some researchers defined OBM as “a way of managing a company that gets everyone focused on helping it make money. Nothing more, nothing less”(Case, 1995). Others defined it from information sharing perspective only (Nikzad & Maryam, 2012), while other researchers defined it with other dimensions of employee empowerment, employee training, and finally contending the importance of employee rewarding (ofoedu et al., 2019). Open book management is a contemporary philosophy. It supports the behaviors of self-confidence, creative as well as free thinking and initiative (Galal, 2021).

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Being self-educating and able to constantly rethink and having the ability to challenge their own work is one of the personal skills that agile employees have (Tolf et al. 2015). Breu et al (2001) contend that agile employees tend to have more responsiveness, competence, and boosted performance on the individual level (Braun et al., 2017). Additionally, less stress and more wellbeing (Laanti, 2013), and more job related satisfaction (Melnik & Maurer. 2006). Despite of these studies and recent popularity of this concept, it is still not well studied and requires further investigation (Sherehiy, 2008), (Müceldili, Tatar, & Erdil, 2020) and (Petermann & Zacher, 2022).

2) Literature review and hypothesis development

Open book management and agile employees' performance:

The managerial concept of open book management has been credited to John case who argues that in today's businesses everybody needs to feel that he is a partner in the business not just a hired hand or mind for the organization (Lloyd &Case, 1998).

Open book management was defined by different researchers, some of them focused on one aspect or dimension which means that the definition is not inclusive, while others provided more inclusive definitions. Additionally, open book management as was described as: "The Great Game of Business is all about promoting clear, effective and open communication in a company" (Stack, 1992).

Case (1995) defined open book management as "a way of managing a company that gets everyone focused on helping it make money. Nothing more, nothing less", this definition focused on the aspect of making profits only which means it neglected other important aspects. Nikzad and Maryam (2012) defined open book management literally as opening a book or notebook, but in management it means disseminating and sharing financial information, industry processes, reports of quality, customer service reports, etc. between staff members in an organization. This definition is better than the definition of Case that it included a variety of information that could be shared, but despite of this, it still describe one aspect which is information sharing.

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Moreover, Alkhamis (2018) defined open book management as a practice that makes an organization's financial data and performance available to employees in order to be aware of its financial position. This definition also focused only on the financial part of information being shared and neglected other types of information.

Open book management is a formal program that empowers employees through communication and learning (Yukl & Becker 2006). Al-Sha'ar (2016) and (Galal, 2021) described open book management as a relatively new managerial philosophy that requires straight forward requirements, but has a profound effect. That means open book management can be easily applied and even with small application can lead to a noticeable change in organizational performance.

Ofoedu et al (2019) provided a more inclusive definition to open book management arguing that it is a simple yet effective approach to business management. Yet, a new managerial philosophy. It denotes a company that disseminates a wide range of financial and other information to employees; teaches employees how to be more business-savvy; gives them the authority to use the information in their work while also trusting them as partners; and recognizes them when the company succeeds.

Employees are one of the crucial assets that an organization has and must be managed carefully. Similarly, Nikzad and Maryam (2012) contend that employees are the main source of competitive advantage. And the success of any business significantly depends on the job performance of employees working on it; hence they are of top priority as a factor of production (Agbaeze & Nnaji, 2017).

The structure of the organization plays an important role in employee's behaviors and reactions. Alavi et al (2014) argued that employees tend to show more proactive behavior with less structured organizations that do not use constrains and limitations to use specific work methods. Hence, employees tend to utilize more creative work approaches to get work done, find new solutions and ideas as well as pursuing diversified knowledge sources.

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Open book management when implemented, no matter how little it is applied still a vital strategy that has the effect of improving employees' performance. Moreover, a significant and positive effect of open book management on employee performance was found (Ofoedu et al., 2019). Al-Sha'ar (2016) and (Galal, 2021) described open book management as a relatively new managerial philosophy that requires straight forward requirements, but has a profound effect. Many researchers including (Muduli, 2017) contended the importance of organizational practices on employee's agile performance. For example, key HR practices such as selection, induction, organizational learning and training, performance management, promotion, rewards and recognition plays an important role on both workforce and organizational agility (Shafer et al. 2001).

Tolf et al 2015 derived five organizational enablers necessary for hospitals to be agile. Transparent and transient inter-organizational links; market sensitivity and customer focus; management by support for self-organizing employees; organic structures that are elastic and responsive; flexible human and resource capacity for timely delivery. Nevertheless, delivering health care to patients relies on the efforts of both medical as well as non-medical staff (Amuche et al., 2019). That requires the exchange of appropriate information related to patients in a timely manner.

Therefore, the following hypothesis is suggested:

H1: There is a significant direct relationship between open book management and agile employees' performance.

Open book management dimensions and employees' agile performance dimension of proactivity:

In terms of the dimensions of open book management: (Information sharing, employee empowerment, and employee training), sharing information can lead to better decisions, but this should be aligned with a reward system that motivates people by linking their salaries with incentive system, moreover, such practices could stimulate entrepreneurial behavior (Aggarwal & Simkins, 2001). Ofoedu et al (2019) contend that sharing vital information with employees makes them feel that they are important, trusted and valued enough which carries a vital message to them.

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Breu et al (2001) and Storme et al (2020), contend that agile employees value collaboration and sharing of information. Moreover, they have the capability of processing information rapidly, highly adaptable rather than reactionary in stressful work environments, and motivated by opportunities for self-development.

Employee autonomy is one of the most important determinants of workforce agility (Sherehiy & Karwowski, 2014). Moreover, employee involvement using higher order involvement practices such as job enrichment; job enlargement; and self-managed teams plays an important role in workforce agility.

The philosophy of employee empowerment represents the new domains of decision making process, additionally, clarified how it can enhance the organizational performance since leaders and employees are both engaged in decision making process (Purnomo et al., 2020).

Employee empowerment is crucial for both employee performance as well as of organization, hence, should be fostered (Yukl & Becker, 2006). According to job demand theory, Job demands are factors that can have a negative effect on employees including high work volumes, short deadlines, ambiguity in roles or goals, etc. While job resources are job positives such as training, coaching, autonomy, using rules and policies that support employees, etc., all of which can increase employees engagement (Amor et al., 2021), satisfaction and performance.

Employees who are empowered are more likely to be strong, confident individuals who are committed to meaningful goals and show initiative and creativity in achieving them. They usually have the freedom to come up with brilliant ideas and the assurance that these ideas will be valued (Lee et al., 2018). Additionally, Lee et al (2018) argued that empowering leadership had a greater positive impact on day-to-day performance of employees with less experience in the organization than employees with more experience. Employee empowerment is a vital success factor for businesses; it promotes employee creativity, work-life balance, teamwork, and organizational effectiveness (Vu, 2020).

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Training can be used to upgrade or even alter or change employees' attitudes and behaviors, moreover, job-related knowledge, skills, and competencies (Waqanimaravu & Arasanmi, 2020). Employees benefit from training in terms of broadening their horizons, their knowledge, skills, and abilities, becoming more effective team members, and advancing their careers (Jun, Cai, & Shin, 2006).

Moreover, Busara (2016) contend that training not only helps in increasing performance, but also develops a competitive advantage through developing employee's skills and competencies.

Employees' training improves employees' performance by filling the gap between their current and desired performance, where performance refers to an individual's ability to perform the job tasks given to him and how this task contribute to the realization of organizational goals (Busara, 2016). Nevertheless, Karre, Hammer, and Ramsauer (2019) contend the importance of learning and training efforts in enhancing agility capabilities. **Hence, the study hypothesis that:**

H1a: open book management has a significant direct relationship with proactivity.

Open book management dimensions and employees' agile performance dimension of adaptability:

Adaptability is about changing or adjusting one's behavior in order to be able to accommodate with a new environment (Sherehiy, 2008). It is related to workforce ability to adapt with interpersonal relations and the culture of their organizations, ability to spontaneously interact with several people regardless of the organizational level, and the ability to learn new knowledge that enables them to deal with new tasks and responsibilities (Alavi et al., 2014).

As a principle of open book management, transparency is a principle that creates a work environment where information on present situations, decisions and actions is available, perceived and understood, and information delivery methods, decisions of policy making are available in a timely and open manner to all parties within the organization (Harb, 2011). Moreover, the study of Beal et al (2003) found that explicitly sharing information with team members creates a positive states of trust, cohesion, which should improve team socio-emotional outcomes and, as a result, team task performance.

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Psychological empowerment as an intrinsic motivation and self-efficacy can promote workforce agility as it produce proactive, adaptive, and resilience behavior among workers (Muduli, 2017). Employee empowerment can be considered as a motivational tool that involves employees in decision making and participation, which in turn increase performance (Hanaysha, 2016).

In the study of Hanaysha (2016), it is found that employee training has a significant and positive effect on organizational commitment; it is an important method to improve the skills and knowledge of the employees. Hence well trained employee will be more efficient in his job performance. More training results in better levels of performance according to (Hafeez & Akbar, 2015). Additionally, knowledge and skills are prerequisites for adaptive performance, employers might provide knowledge or skills training to staff members who need to adapt to novel or unusual workplace circumstances (Park & Park, 2019) in addition to providing training to enhance employees' motivation, learning goal orientation, and self-leadership.

Hence, the following hypothesis is assumed:

H1b: open book management have a positive direct effect with adaptability.

Open book management dimensions and employees' agile performance dimension of resilience:

According to Yulk and Becker (2014) and Vu (2020), they found that employee empowerment has been shown to improve employee's performance, job satisfaction, organizational commitment, customer satisfaction, productivity, and business growth.

Psychological empowerment is more related to individual level, while structural empowerment is more about social structures. Moreover, the first through the later lower the likelihood of feeling burnout, while the latter help employees being more engaged (Amor et al., 2021). Additionally, resilient employees are less likely to be affected by negative job-related circumstances such as burnout, hence, open book management support resilience and in turn agile employees' behavior.

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Rapid technological advancement necessitates firms to provide their employees with training that keep their qualifications up-to-date that grant them tremendous benefits, moreover, sudden crisis such as Covid pandemic required firms to adapt and be resilient with such scenarios and provide them with training suitable for remote-work and an investment opportunity in employee's skills (Martins, 2021).

Open book management through suitable rewarding system motivates employees to be more creative thinkers, initiators in terms of performance, use their diversified acquired knowledge and skills and talents in their performance (Agbaeze & Nnaji, 2017). Proper reward system boosts employees' morale that has a positive relation with employee productivity. It has been found that increased morale in turn improves the job performance of employees (Agwu, 2013). Alavi et al (2014) found that one of the factors that have a positive contribution on the development of agile employees is such policies as skill-based incentives, which is related to the dimension of rewarding employees.

Agile employees have the trait of collecting relevant information that is often characterized by complexity and ambiguity, integrate it, make suitable decisions and take an action, this give them the ability of anticipating and responding to changes, agile in other words (Storme et al., 2020). Nevertheless, employees who are agile tend to be risk takers, which allows them to experiment and test prototypes and turn accumulate big amount of information of value that helps with continuous product and service improvement (Storme et al., 2020).

Employees who can make decisions and initiate changes are more likely to take ownership of their work and are more likely to be encouraged to produce a high-quality product or service (Storme et al., 2020). Moreover, studies that examined the effect of open book management on employee performance and consumer satisfaction are still few, especially in the Arab region and in the industrial sector in particular (Alkhamis, 2018), hence it requires further investigation. Hence, the following hypothesis is assumed: **H1c: open book management have a positive direct effect with resilience.**

3) Research method

3.1. Sampling

According to Saunders et al (2019), considering a margin error equals 5% which is the percentage used in social research, with a confidence level of 95%, the sample size would be at least 376 from a population of 15945 members. A stratified random sample of 383 was used consisting of; Doctors, Nurses, Technicians, and Employees. A questionnaire form was utilized as a data collection tool. Table 1 shows the numbers collected from the population.

Methods

As per the deductive nature of post positivism philosophy, many researchers including contend that quantitative methods of analysis are typically suitable (Saunders, et al., 2019). The quantitative method includes the creation of hypotheses, the use of tools for measuring research variables, data collection, and data analysis mathematically to verify the hypothesis (Creswell, 2009). Quantitative research allows for developing standards to compare similar studies, quick data collection, data accuracy, and less time in data analysis. Furthermore, quantitative research enables the researcher to collect data about a specific sample, analyze the data, and generalize the result to the whole population (Johnson & Onwuegbuzie, 2004). Hence, the quantitative research method will be used to collect data from the targeted population.

Table (1): The numbers of Mansoura University medical centers' staff

	Center	Planned quota				Actual quota				
		Doctors	Nurses	Techn	Employees	Doc	Nur	Tech	Emp	
1	Mansoura university Hospitals	47.7	70.4	15.9	55.7	48	70	16	56	
2	Emergency hospital	1.1	22.9	4.6	18.2	2	23	5	19	
3	Specialized medical hospital	5.1	20.2	7.2	3.3	5	21	7	4	
4	Children's hospital	4.5	11.0	16.9	11.67	5	11	17	12	
5	Gastrointestinal surgery center	1.2	12	4.5	3.8	2	12	5	4	
6	Ophthalmology center	3.1	5.9	2	3.9	4	6	2	4	
7	Oncology center	1.3	14.0	2.7	3.8	2	14	3	4	
	Total	64.25	156.8	54	100.85	68	157	55	103	
			Sample size is 376				Collected 383			

3.2. Research model

The conceptual model of this study as shown in Figure 1 illustrated 4 hypothesized relationships among variables;

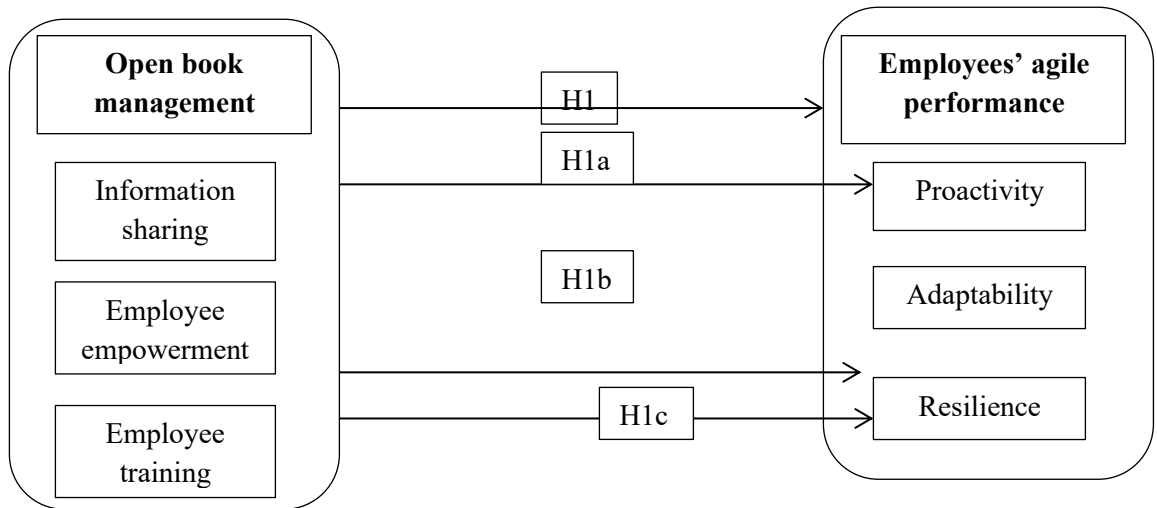


Figure (1): conceptual model

3.3. Measures

Based on extensive review of literature, the survey instrument included items that assessed OBM (20 items), and agile employees' performance (17 items). OBM are measured through the dimensions of: information sharing, employee empowerment, and employee training. Each has 5 items. Agile employees' performance is measured using three dimension: proactivity, adaptability, and resilience. Proactivity was assessed using seven items, adaptability with seven items, and resilience with three items. See Table 2

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Table 2. Measures of research variables

Variable	Measures	Source
OBM	-Information sharing -Employee training -Employee empowerment	Items adopted from (Aggarwal and Simkins, 2001), (Nikzad and Maryam, 2012), (Alkhamis, 2018) and (Galal, 2021)
Employees' agile performance	-Proactivity -Adaptability -Resilience	Sherehiy, (2008)

3.4. Measures' validity and reliability

The content validity of the questionnaire has been ensured through expert comments from industry and academia. Experts in the relevant field were identified and the questionnaire was submitted requesting them to provide comments related to organizational practices, psychological empowerment and workforce agility. The results shown in tables 3 and 4 showed a good level of reliability and validity achieved by the instrument used in the current study; Cronbach's alpha values of all variables ranged from 0.768- 0.886 and present a good level of internal consistency. Factor loadings were also higher than 0.6. Average variance extracted (AVE) values were higher than 0.50. Finally, values of composite reliability were all higher than 0.70 (Fornell & Larcker, 1981) and (Hair et al., 2010).

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Table 3. Results of validity and reliability

Variable	Items	Mean	SD	Loading	AVE	Alpha	C.R
IS	AA1	3.521	1.1051	.814	0.619	.886	0.890
	AA2	3.401	1.0319	.874			
	AA3	3.445	.9806	.826			
	AA4	3.437	.9987	.707			
	AA5	3.414	1.0948	.699			
ET	AB1	3.264	1.1274	.778	0.599	.879	0.881
	AB2	3.173	1.0827	.752			
	AB3	3.086	1.1818	.864			
	AB4	3.128	1.1139	.778			
	AB5	3.408	1.1181	.689			
EE	AC1	3.141	1.2214	.781	0.587	.847	0.849
	AC2	3.141	1.1483	.843			
	AC3	3.086	1.1549	.781			
	AC4	3.147	1.0768	.647			
	BC9	3.665	.9152	.704			
	BC11	3.652	.9401	.736			

Table 3. Results of validity and reliability-continued

Variable	Items	Mean	SD	Loading	AVE	Alpha	C.R
Pro	BA3	3.654	.8850	.631	0.512	.875	0.879
	BA4	3.822	.8448	.726			
	BA5	3.914	.8358	.830			
	BA6	3.901	.8847	.814			
	BA7	3.618	.9081	.678			
	BA9	3.866	.8697	.634			
	BA10	3.736	.9226	.668			
Ada	BB5	3.602	.9328	.790	0.527	.883	0.885
	BB6	3.699	.9026	.852			
	BB7	3.725	.8636	.772			
	BB8	3.783	.7853	.696			
	BB9	3.599	.8476	.717			
	BB12	3.668	.8336	.623			
	BB13	3.864	.9597	.596			
Res	BC8	3.736	.9025	.920	0.628	.768	0.833
	BC9	3.665	.9152	.704			
	BC11	3.652	.9401	.736			

*Notes: **IS**: Information sharing; **ET**: Employee training; **EE**: Employee empowerment; **Pro**: Proactivity; **Ada**: Adaptability; **Res**: Resilience.

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Table 4. Model Validity Measures - Fornell and Larker criterion

	CR	AVE	IS	ET	EE	Pro	Ada	Res
IS	0.890	0.619	0.787					
ET	0.881	0.599	0.714***	0.774				
EE	0.849	0.587	0.697***	0.781***	0.766			
Pro	0.879	0.512	0.346***	0.237***	0.325***	0.716		
Ada	0.885	0.527	0.290***	0.192**	0.236***	0.688***	0.726	
Res	0.833	0.628	0.246***	0.217***	0.171**	0.602***	0.672***	0.792

*Notes: **IS**: Information sharing; **ET**: Employee training; **EE**: Employee empowerment; **Pro**: Proactivity; **Ada**: Adaptability; **Res**: Resilience.

*Significance of Correlations: † $p < 0.100$, * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$

Discriminant validity is the extent to which the construct is actually differing from one another empirically. Different studies used Fornell and Larcker (1981) criterion, in which discriminant validity is established when the square root of AVE for a construct is greater than its correlation with the other constructs in the study. However, recently Henseler et al (2015) disapproved the Fornell and Larcker criterion arguing that it is still lacking in establishing the distinctiveness between constructs and not accurate in capturing the uniqueness among the constructs under study. Hence, discriminant validity in the study will be assessed using Heterotrait-Monotrait (HTMT) Ratio.

Moreover, Malhotra and Dash (2011) argue that AVE is often too strict, and reliability can be established through CR a lone. HTMT values are below 0.85, hence, the discriminant validity criterion has been established. Using HTMT ratio, all ratios were less than the required limit of .85 (Henseler et al., 2015). See table 5.

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Table 5. HTMT Analysis

	IS	ET	EE	Pro	Ada	Res
IS	1					
ET	0.757	1				
EE	0.707	0.801	1			
Pro	0.381	0.274	0.355	1		
Ada	0.275	0.186	0.237	0.726	1	
Res	0.292	0.257	0.228	0.695	0.775	1

*Notes: **IS**: Information sharing; **ET**: Employee training; **EE**: Employee empowerment; **Pro**: Proactivity; **Ada**: Adaptability; **Res**: Resilience.

3.5. Reporting model fit

The model-fit measures were used to assess the model’s overall goodness of fit (CMIN/df, CFI, SRMR, and RMSEA) and all values were within their respective common acceptance levels. Thresholds are based on (Ullman, 2001; Hu and Bentler, 1998, Bentler, 1990). The two-factor model (Open book management, and Employees agile performance) yielded good fit (Table 6) for the data: CMIN/df = 2.207, CFI = 0.927, SRMR = 0.054, PClose = 0.018 and RMSEA= 0.056. All of which are within the acceptable threshold fit.

Table 6. model fit indices

Measure	Estimate	Threshold	Interpretation
CMIN	915.768	--	--
DF	415.000	--	--
CMIN/DF	2.207	Between 1 and 3	Excellent
CFI	0.927	>0.95	Acceptable
SRMR	0.054	<0.08	Excellent
RMSEA	0.056	<0.06	Excellent
PClose	0.018	>0.05	Acceptable

3.6. Hypotheses testing

Hypothesis H1a: open book management have a significant positive direct effect on employees’ proactivity. Regarding the relationship between open book management and employee proactivity, only employee training ($\beta = 0.15$, $t = 2.522$, $p < 0.05$) have a significant positive direct effect on employee proactivity. Employee training significantly explained 13% of the variance in employee proactivity, $R^2 = .138$, $F = 20.23$, $p < 0.05$. see table (7).

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Hypothesis H1b: open book management have a significant positive direct effect on employees’ adaptability. Regarding the relationship between open book management and employee adaptability, the regression analysis surprisingly shows no significant relationships, which result in rejecting this hypothesis. see table (7).

Hypothesis H1c: open book management have a significant positive direct effect on employees’ resilience. Regarding the relationship between open book management and employee resilience, only information sharing ($\beta = 0.212$, $t = 2.311$, $p < 0.05$) have a significant positive direct effect on employee resilience. Information sharing significantly explained 6% of the variance in employee resilience, $R^2 = .067$, $F = 9.118$, $p < 0.05$. see table (7).

Therefore, Hypothesis 3 was partially supported.

Table 7. Regression Analysis: open book management and employees’ agile performance.

Predictor	Outcome	β	SE	t	p	R ²	F
Information Sharing	Proactivity	0.186	0.058	3.202	0.001	0.138	20.23
Employee empowerment		-0.088	0.069	-1.282	0.2		
Employee Training		0.15	0.060	2.522	0.01		
Information Sharing	Adaptability	0.244	0.080	3.054	0.002	0.093	13
Employee empowerment		-0.080	0.094	-0.845	0.399		
Employee Training		0.117	0.082	1.432	0.153		
Information Sharing	Resilience	0.212	0.092	2.311	0.021	0.067	9.118
Employee empowerment		0.124	0.109	1.136	0.257		
Employee Training		-0.032	0.094	-0.344	0.731		

4. Discussion

In this study, a model was developed in order to examine the effects of open book management (information sharing, employee empowerment, and employee training) on employees' agile performance.

H1: open-book management has a significant positive effect on employees' agile performance.

The results of hypothesis testing held expected and unexpected findings. The findings of this study partially support that open book management has a significant direct effect on employees' agile performance. Ofoedu et al (2019) found a significant and positive effect of open book management on employees' performance.

It is noticeable that the managers at the medical centers tend to encourage their subordinates to self-learning which is a positive behavior that should be supported more. Muduli (2017) contended the importance of organizational learning and training, performance management, promotion, rewards and recognition as an organizational practices on both workforce and organizational agility.

Nevertheless, there is a need for more continuous training in order to improve their abilities to understand the issues occurring at their units, and regular meetings to discuss their performance indicators are required. Better levels of efficient performance results from training (Hafeez and Akbar 2015). Additionally, training not only helps increasing performance but also develops a competitive advantage through developing employees' skills and competencies (Busara, 2016). Moreover, learning and training efforts are important in enhancing agility capabilities (Karre, Hammer, & Ramsauer 2019).

The study found that employee training have a significant positive direct effect on employee proactivity ($\beta = 0.15$, $t = 2.522$, $p < 0.05$). This is noticeable in terms of the answers of the medical centers' staff who tend to agree that they address difficulties in their tasks before it becomes major problems, look for the opportunities to make improvements at work, trying to fix things that they do not like, trying to find more effective ways to perform their jobs, designing new procedures or processes for their work areas, and trying to think outside the box in order to solve problems.

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Additionally, it is noticed that the staff stick to what is told or required from them to do at work. Agile employees tend to be more risk takers, which allows them to experiment and test prototypes and use the accumulated large valuable amount of information with continuous product and service improvement (Storme et al., 2020). Additionally, Alkhamis (2018) emphasizes the importance of employee training contending that organizations should prioritize it first before the other dimensions. Hence, employees need more training as discussed before. **Supporting hypothesis H1a: open book management have a significant positive direct effect on employees' proactivity.**

At the information sharing level: medical centers' staff receive information at the needed time, without delay, which tend to be accurate and clear, with less constraints, and there is a confidentiality in information exchange, and feedback about performance level are given from period to another. All of which result in better resilience for the medical centres' staff. **Which support hypothesis H1c: open book management have a significant positive direct effect on employees' resilience.**

Finally, the hypothesis H1b: open book management have a significant positive direct effect on employees' adaptability is surprisingly rejected despite of its importance according to literature. Additionally, the findings are aligned with the findings of researchers such as; Nikzad and Maryam (2012) who argues that information sharing helps reducing employees' resistance to change, employees already know about procedures and what is better for the process. Storme et al (2020) contend that agile employees value collaboration and sharing of information. They have the capability of processing information rapidly, highly adaptable rather than reactionary in stressful work environments, and motivated by opportunities for self-development.

Moreover, Fainshmidt and Frazier (2017) contend the importance that the role of a climate of trust has on the type of adaptability and coordination among members of an organization that resulted in higher sensing, seizing, and reconfiguring capabilities. Additionally, knowledge and skills are prerequisites for adaptive performance. Hence, employers might provide training to staff members in order to adapt to novel or unusual workplace circumstances (Park & Park, 2019) in addition to providing training to enhance employees' motivation, learning goal orientation, and self-leadership.

5. Theoretical implications

The study contributes to the body of knowledge of the existing literature of open book management, agile employees' performance and work related curiosity. The importance of this research is found in the fact that it investigates the effect of open book management on employees' agile performance. The study findings revealed that open book management has a significant positive effect on employees' agile performance. Additionally, this study has one of its aims to check the level of applying a management philosophy such as OBM in a systematic but very important environment such as hospitals in public sector.

These relationships haven't been investigated in earlier research; therefore, this study fills a gap in the literature of open book management and agile employees performance. Furthermore, the prior findings reveals that this study has opened a new path for other researchers regarding the open book management, and agile employees' performance.

6. Practical implications

This study reveals the problems that medical centers' staff face in their work places in terms of four pillars of open book management as a contemporary management style, and how it affects employees' agile performance. The study found that managers in medical centers encourage their subordinates to improve their skills and update their knowledge through self-learning practices, and provide formal training from period to another.

But despite of that, the study found that there is a need for more continuous training in order to improve their abilities to understand the issues occurring at their units and increase their motivations. Hammer, and Ramsauer (2019) contend the importance of learning and training efforts in enhancing agility capabilities. Hence, according to Al-Mzary et al (2015) more training is required for staff members which is suitable for the skills needed at work, equal opportunities should be granted for employees while attending the courses, and using sophisticated training methods. The study also revealed that medical centers' staff need more regular meetings to discuss their performance indicators. Ismael (2018) contend the importance of open communication in order to motivate team members and honestly and openly discuss problems. In addition to preventing information monopoly, rumors, misuse of information by one department.

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Medical centers' staff need more empowerment psychologically, as well as structurally, especially in the areas of their specialization and more in decision making. psychological empowerment help lowering the likelihood of feeling burnout, while structural empowerment help employees being more engaged, which means that resilient employees are less likely to be affected by negative job-related circumstances such as burnout (Amor et al., 2021).

It is noticed that medical centers' staff lack sufficient rewarding systems. With psychological rewards are more dominant but require further improvements. It is recommended Putting in place a reward system based on performance, competence, creative thinking, and innovation. Agbaeze and Nnaj (2017) contend that rewarding employees emotionally plays an important role with motivating employees, it can also be intrinsic or extrinsic, intrinsic rewards is related to praising, recognition, achievement, and personal growth. On the other hand, extrinsic rewards are related to payment or financial based rewards.

7. Limitations and future research

While the current research has some useful theoretical and practical implications, it also has a few limitations that should be taken into consideration. The sample is restricted to Mansoura University medical centers' doctors, nurses, technicians, and employees due to time and budgetary constraints. As a result, the study suggests that future research should include workers. The current study as one of its aims is to check the level of applying a philosophy such as OBM, and agile performance in a systematic environment such as public hospitals. So, it is recommended to make a comparative study with hospitals in private sectors or public hospitals in different governorate.

Moreover, the researcher recommend studying these two variables in a technological work environment that is more applicable. Additionally, there is a limitation in choosing the research method. This study employed quantitative research method. As this study depended on existed theories and aimed to make a generalization for the results depending on numbers and statistics using a questionnaire. Future studies may include different data collection methods such as words and meanings using interviews, focus groups in order to reach more insights.

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