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# Organizational behaviour management in clinical laboratory: A literature review

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## Abstract

**BACKGROUND:** The clinical laboratories require organizational behavior management approach that creates a balance between directors' expectations and staffs' needs in this field. This study was aimed to explain the role of organizational behavior management in clinical laboratories and suggest mechanisms for its implementation in these organizations.

**MATERIALS AND METHODS:** In this research, using several Persian and English databases by keywords consist of the clinical laboratory, organizational behavior management, and staff diversity. Three hundred and fifty four references from 1990 to 2020 were studied, and 72 references, including abstracts and full papers utilized for this research, and excluded papers presented at conferences, seminars, and dissertations. Using MESH strategy and Pico's instruction.

**RESULTS:** The results of studies revealed staffs' individual differences in all aspects, including early and secondary dimensions may influenced the style of leadership implemented in clinical laboratories, "job-personality compatibility theory," job satisfaction and job commitment of staffs work in clinical laboratories and the way the directors and managers can develop the job loyalty and improve the organizational productivity in these organizations.

**CONCLUSION:** It is suggested a conceptual model for understanding and assessing the different organizational behaviors of clinical laboratories staffs based on communication skills, staffs' interaction, and socio-political, economic, and cultural elements, which should be more developed in future using the other similar studies.

## Keywords:

Clinical laboratory, organizational behavior, staff

## Introduction

Organizational behavior in the clinical laboratory is known as actions, activities, and attitudes that are examined systematically; that is its studying, measurement and assessment are done based on documents and evidence collection, analysis, and interpretation, which so-called evidence-based cause and effect.<sup>[1]</sup> Some of these activities, actions, and attitudes include motivation, job design, performance assessment, communications, the dynamism of organization's groups,

power, politics, conflict, negotiation, stress, organizational culture, organizational change, job satisfaction, organizational loyalty, work or professional ethics, ethical considerations, staff's emotional satisfaction by the managers, job rotation, absenteeism, job shortage, productivity, and efficiency of laboratories staffs.<sup>[2]</sup>

Understanding of staffs' behaviors and analyzing and interpreting their causes are not possible just through organizational behavior management but also knowledge of behavioral sciences such as psychology, sociology, social psychology, anthropology, and politics are so important.<sup>[3]</sup>

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In general, organizational behavior management follows two major aims in every organization; first staff behavior justification and the other one is prediction and control of their behaviors.<sup>[4]</sup> To achieve these aims, organizational behavior management follows the response to this question that why the staffs behave something, and it seeks to understand or justify this behavior and to discover its cause. It has also noticed future events, prediction of staff behavioral reactions toward organizational actions such as change so that increase staff productivity, skill, efficiency, and quality in the organization.<sup>[5]</sup>

The clinical laboratories require an organizational behavior management approach that creates a balance between directors' expectations and staffs' needs in this field. Clinical laboratories are vital link in the patient care process. Although, the human resources and its organizational behaviors are so important for professional promotion and productivity of the staffs development are related to total organizational performance and success of clinical laboratories.<sup>[6]</sup> Clinical laboratories share a lot of common traits and characteristics through their staffs linked to the public sector and within society as a whole. It seems, the link between concepts, attitudes, diversity of clinical laboratories staffs with their behaviors should be assessed and analyzed, and consequently a set of different and similar behaviors to help improve clinical laboratory performance.<sup>[7]</sup> Regarding foregoing contents, this study aimed to explain organizational behavior management in Iranian clinical laboratories regarding staff diversity and propose mechanisms for its implementation in these organizations.

## Materials and Methods

The aim of the review study is to identify the types of evidence available in a particular field and to identify the general characteristics and main definitions in the subject literature. In fact, the power of review studies is related to the process of intellectual development and creativity. The review study method presents a picture of the current situation. Therefore, an extensive research strategy should be used to achieve maximum relevant resources.<sup>[8]</sup> At first, the appropriate keywords were taken from the title of the research, and in order to achieve all studies related to the research topic, they were retrieved using MeSH strategy and Pico's instruction as below:

("Clinical laboratory" or "Organizational behavior") and ("Organizational behavior" or Health care organizations") and (Clinical laboratory" or Staff differences") and ("Clinical laboratory" or Staffs' conception, attitude and personality types") and (Health care organization or Staffs' differences).

Several English databases of Google, Google Scholar, Scopus, Emerald, Ebsco, Elsevier Science, JSTOR, Science Direct, Social Science Citation Index, Social Science Research Network, Web of Knowledge, and PubMed to access English articles and Persian databases including SID, Magiran, Iran Medex in order to access Persian articles from 1990 to 2020 were applied. Existence of article abstract and access to the full papers and indexing in the databases described as inclusion criteria and abstracts of articles in conferences, seminars, and dissertations were determined as exclusion criteria.

The primary literature searched identified 354 publications that focused on organizational behavior. Abstracts were reviewed, and 215 publications were excluded. A total of 135 abstracts were reviewed for those studies that identified organizational behavior in health care organizations and clinical laboratories, which excluded 63 publications: Full-text documents for the remaining 72 were reviewed for their methods and publications.

## Results

The main question in current research, which is intended to answer by the finding section, is the staff diversity in clinical laboratories impact on the performance of these organizations.

Although ethical or legal consideration has failed to obligate organizations to manage diversity in meaningful ways, winning with diversity theory outlines to respond more effectively to develop in the organization.<sup>[9]</sup> Diversity management is a hidden meanings retail staff has toward behavioral issues.<sup>[10]</sup> Considering the annual conference held at the University of Cardiff in Wales on September 2000 showed that 76 presentations were related to staff differences, feminism, and staff diversity-oriented jobs and decisions, and disability discrimination.<sup>[11]</sup>

Therefore, the occurrence of different behaviors of staff in the organization is due to their individual and cultural differences. Individual and cultural differences affect how staff perceives their job climate and rewards they expect from the organization to pay, and formal communication between staff and each other.<sup>[12]</sup>

Cunningham reported radical diversity was positively associated with objective measures of overall organizational performance.<sup>[13]</sup> Jayne and Dipboye revealed that the diversity of workforce impact on business performance, and several conditions are necessary to manage staff diversity and develop organizational benefits.<sup>[14]</sup>

The diversity of staff in the organization, including clinical laboratories, in the early dimension of differences, means differences in age, gender, race, ethnicity, familial collectivism, physical ability, level of education, monthly income, marital status, and work experience.<sup>[15]</sup> For example, older staff have less hearing, vision, physical ability, and agility than younger staff and require more training to use new technology and instrument.<sup>[16]</sup>

Xu *et al.* showed the moderating effect of familial collectivism and gender differences on the staff relationship in organizations to recognize the importance of the gender role when implementing different human resource management policies.<sup>[17]</sup> Broadly speaking, the organization might either approach staff diversity as a problem of inequality. Staff of organizations should be benefitted from the diversity approaches to a different extent.<sup>[18]</sup> Lauuring and Selman reported demographic staff diversity (age and gender) was unrelated or negatively associated with positive diversity attitudes.<sup>[19]</sup> Furthermore, the number of women has inevitably increased in medical laboratory jobs in recent years. Therefore, the directors' behaviors with women should be different in comparison with men staff for better administration and performance of these organizations.<sup>[20]</sup> This change of directors' behaviors needs the development of effective staffing models and creating a new strategic human resource management.<sup>[21]</sup> Furthermore, the clinical laboratory staff are different from each other in the second dimension, including way of thinking, interaction with organizational climate, personality type, conception, attitude, decision making, creativity, and learning.<sup>[22-27]</sup>

Personality test is one of the most important tests in the employment of staff that can help to predict how staff interacts with managers and colleagues and compatible with the organizational environment.<sup>[28]</sup> Success in organizational performance will require immediate attention to current issues of recruitment, retention, and expansion of medical technologists' role. An analysis of the personality traits of medical technologists may provide insight into work performance as they relate to job satisfaction and willingness to accept the changes in the profession.<sup>[29]</sup> Kanfer *et al.* declared a motivational, self-regulatory conceptualization of job research was used to organize and investigate the relationship between personality, expectancies, self, social, motive and demographic variables, and individual differences in job search behavior and employment outcomes.<sup>[30]</sup> Moreover, Halland created the theory of job-personality compatibility addressed between personality characteristic of staff and their job performance. He believed that the greater the compatibility between the type of job and personality type of the staff, the more their job satisfaction, organizational

commitment, and efficiency will increase.<sup>[27]</sup> Ayatollahi found that personality characteristics, including curious, creative, openness, agreeableness, self-confident, and conscientious, was appropriate for clinical laboratory staff.<sup>[28]</sup>

On the other hand, perception as one of the secondary individual differences is defined as a set of people's perceptions toward identifying the environment and analyzing and interpreting them. Staff perception is influenced by the subject, individual, and situational characteristics.<sup>[29]</sup> Behavioral reactions of staff following their perception of the environment are based on how staff thinks and understand the environment of the organization, which may not necessarily be true and may be considered a misunderstanding.<sup>[31]</sup> Stereotyping, Halo effect, and projection are among the perceptual mistakes that may affect staff performance in clinical laboratories.<sup>[32]</sup>

Xuhui *et al.* found that the leader humility was positively with staff conception which may be provide the guidelines for managers promoting the staff.<sup>[33]</sup> Georgiades reported the conception of staff about the way management can achieve their involvement, highlighting the importance of staff's creation, innovation, and confidence that their involvement is true and valid.<sup>[34]</sup> Although, perception of climate is influenced by several demographic diversity factors.<sup>[35,36]</sup>

However, attitude as an individual differences of staff is the same as person's approach towards work, which can be considered as a negative attitude toward job dissatisfaction, and positive attitude, and job satisfaction. Organizational, group, and individual factors affect job satisfaction or dissatisfaction.<sup>[37,38]</sup> Derby and Mekomen found that 75% of medical technologists showed favorable attitude toward their job in Ethiopia.<sup>[39]</sup> Although Al-Enezi *et al.* indicated that a high percentage of medical laboratory technologists were not satisfied and had a negative attitude with their jobs according to their demographic details [Table 1].<sup>[40]</sup>

## Discussion

The medical technologists are generally faced many hazards at work. They are exposed to a large pool of specimens from patients suffering from so many infections.<sup>[41]</sup> Potential effects of staff diversity, including demographic details, personality, and attitudes, influence the organizational performance and affect their view of the organization.<sup>[42]</sup> Based on previous researches and articles published later, the application of three independent variables is found to be useful in predicting and influencing the staff behavior originating from attitude, demographic profile, and personality.<sup>[43]</sup>

**Table 1: The summary of current research findings**

Authors	Year	Findings	Study type	Conclusion
Cunningham GB	2009	Radical diversity was positively associated with objective measures of organizational performance	Hierarchical regression analysis	Contributions and implications of proactive diversity management
Jayne ME and Dipboye RL	2004	Diverse manpower improves business performance	Review article	To help Human Resource Management (HRM) practitioners achieve the benefits and avoid the problems of diversity efforts
Cunningham GB	2009	The staffs' behaviors are different according to their culture	Path analysis	Value congruence was positively associated with life satisfaction of members of the coaching staff
Carranza AS and Ospina SM	2010	Cultural differences of staffs were a source of collaboration in increasing the efficiency of activities	Review article	Unity versus diversity represents a distinct challenge to the governance of networks that requires strategic action
Lunz <i>et al.</i>	1987	The aspects of staff differences including age, race, gender, physical power, income rate, marital status	Descriptive analytical study	There is a significant positive relationship between employing a higher proportion of certified medical technologists and accuracy of test results
Guo L and Harilaran S	2012	Clinical laboratories staffs have key differences from the other staffs of industry	Literature review	Some solutions are successfully to initiate process improvement for clinical operations
Frankenlauser <i>et al.</i>	1989	Differences related to occupational level and/or sex more found for autonomy and social support at work	Descriptive analytical study	The stress profile of the female managers was considered in terms of possible long-term health risks
Lunz <i>et al.</i>	1992	The staffs who are older and have more work experiences are different from younger staffs	Descriptive analytical study	A strong argument that qualified technologists contribute to maximizing the quality of laboratory services offered to the public
Cortelyou-ward <i>et al.</i>	2011	Laboratory managers need to take action with strategies suggested for overcoming work complexes, increased automation and a graying workforce	Literature Review	Develop effective staffing models with a strategic management culture
Abdollahi <i>et al.</i>	2014	Managers' behaviors with woman comparing men should be different in clinical laboratories	Descriptive and cross-sectional study	More than half of the laboratory errors are related to pre analytical stage. A stage where the number of female staff is higher than that of men
Anonymous	2020	The clinical laboratories staff are different from each other	Literature review	The way of staff thinking and challenge the current mental models in clinical laboratories
Buss <i>et al.</i>	2012	The staff is different from each other in several term	Descriptive and analytical method	The effect of assessment drives learning-driven for the first time to voluntary skill-laboratory training session attendance
Dominelli A and Wheeler M	2006	Personality test can be used in determining the kind's personality of clinical laboratory staffs used for before employment	Descriptive and analytical method	Success in the future will require immediate attention to current issues of medical technologists' role
McClure K	2008	The staff perceive the information in different forms	Qualitative study	Laboratory directors will need to be proactive in the development of career ladders and lobbying for higher salaries for their staff
Bockholt <i>et al.</i>	2019	The laboratories directors should not categorize all staffs based on our special assumed attribution	Participatory tool approach	The managers should not expect to see themselves in laboratory staff

The results of all the above researches show the importance and necessity of familiarizing the directors of clinical laboratories with different dimensions of organizational behavior management and its application in the improvement and providing the best health care performance in these organizations. Having communication skills and preventing any stereotyping and prejudice about their staff are some of the measures that clinical laboratories directors can use to predict and control the behavior of the staff.<sup>[44]</sup>

Directors of clinical laboratories should keep in mind that laboratory staff, despite working in a complex environment and work with the postmodern instrument are not as a robot, and their individual differences must be respected.<sup>[45]</sup>

Although it is necessary to improve the process in any business, it should be noted that in clinical laboratories that provide health care to patients in need, the art of management should be more importance than science, because in laboratories regardless of upgrading technological process, the directors should further enhance staff satisfaction and exceptions originate from their diversity that affects the promotion of laboratory process.<sup>[46]</sup> Because differences related occupational level and staff diversity more found for autonomy and social support at work, competitiveness, gender role, and reported conflict between demands from paid work and other responsibilities, therefore these factors should be considered more in changing of staff attitude.<sup>[47]</sup>

The outcomes of a positive attitude are job satisfaction, which clinical laboratory directors should strive to improve. However, there is a question. How clinical laboratory directors should increase their staff job satisfaction? They need to have an effective reward system according to their staff competency, efficiency, and safe competition and providing an appropriate organizational climate. However, increasing job satisfaction depends on the other factors such as the dynamism of teamwork and the effective communication between leadership style and subordinates, and the relationship between laboratory staff with each other.<sup>[48]</sup>

Negussie and Demissie revealed health workers in Uganda preferred transformational leaders who were positively correlated with their job satisfaction.<sup>[49]</sup> Therefore, teamwork and leadership style are two important factors in enhancing clinical laboratories staffs' job satisfaction.<sup>[50]</sup> Ghorbanian *et al.* indicated among 21 managers and 87 emergency laboratory technicians, a significant correlation was found between the transformational leadership style and staff job satisfaction.<sup>[51]</sup>

High organizational commitment has a challenging view of their job compared with job satisfaction and have a higher staff-esteem and believes the salary received is appropriate for job retention.<sup>[52]</sup>

Furthermore, Blau *et al.* believed job commitment as well as years of laboratory work experiences, highest degree held, and loss job insecurity impact on retention of staff and quality improvement of the laboratory system.<sup>[53]</sup> Therefore, job satisfaction alone is not sufficient for organizational success in clinical laboratories, and other factors such as work commitment and leadership style play an important role in this manner.<sup>[54]</sup> Moreover, it seems the other factors, for example, increased of age and years of work experiences, feeling of job security, organizational identity, work autonomy, and spirituality help staffs to be more committed in clinical laboratory performance.<sup>[55,56]</sup>

Dargahi and Sharifi Yazdi reported quality of work-life, including job security feeling and work autonomy among Tehran University of Medical Sciences hospitals clinical laboratories staffs had an important role on the improvement of total quality management in these organizations.<sup>[57]</sup> On the other hand, corporate identity affects the efficiency of any organization to motivate every member of an organization. It also much improves the discipline of the staffs. As a result, the laboratory directors should devote scientific approaches to this area.<sup>[58]</sup>

Training of organizations staff is confronted with how best to help them conceive their new role in

organizational reform. After completing these training courses, staff will learn to achieve work autonomy and have a positive vision on their organization.<sup>[59]</sup> Paloniemi found the importance of staff's conception in workplace learning.<sup>[60]</sup> Guillon and Cezanne reported the positive relationship between staff conception and their loyalty and commitment. They pointed out staff conception is a source of value for organization for the improvement of organizational performance.<sup>[61]</sup> Also, Asplund *et al.* indicated the important role of staff conception in performance management and implementation of strategic change in organization.<sup>[62]</sup>

Moreover, some personality traits are found to be significant in predicting and controlling of staff performance. Although, some individual differences as gender and age could link the personality type and performance as a mediator variable.<sup>[63]</sup> Sorondo found a positive relationship between extroversion personality type and job satisfaction.<sup>[64]</sup> Thomas *et al.* confirmed the positive relationship between job characteristics, personality, and job satisfaction among 133 participants on the job characteristics inventory.<sup>[65]</sup>

It seems personality type, attitudes, perceptions, and the other individual differences of staff influence the organizational performance and productivity of clinical laboratories due to behavioral differences of staff that will cause differences in organizational personality.<sup>[66,67]</sup> Moreover, high organizational performance and productivity require directors to create an appropriate organizational environment to control, predict, and lead staff behaviors in organizations.<sup>[68]</sup> This will prevent organizational challenges such as nonconstructive conflicts, solve organizational problems, and empower staff participation.<sup>[69]</sup> The special attention of managers and directors of medical laboratories to the individual and behavioral differences of their staff as a human resource management strategy has empowered their psychological, spiritual, and moral skill, and help them how to think and behave and decision making for organizational improvement.<sup>[70-72]</sup>

So far, a complete study on the role of organizational behavior in clinical laboratories has not been published, and therefore this literature review article deals with its application in these organizations for the first time to inform the managers and leaders to laboratories about how employees' behaviors are originated and familiarize them with outcomes of positive and negative employees' behaviors influence the clinical laboratories services and goals of health-care system.

### Limitations

This research have some limitation which tried to reduce to minimum. First, in the introduction of the article, the

context of the discussion and the concepts of the field of organizational behavior and the aim of the research were stated-second, insufficient coverage of evidence and asymmetric use of all of them. Third, lack of integration due to the lack of relevance of reviewed articles. Forth, evidence in this article should be presented in a regular pattern. Fifth, lack of critique of the article on its strengths and weaknesses and Sixth, conclusion based on individual opinions rather than evidence-based research.

## Conclusion

Clinical laboratories directors and directors should provide appropriate organizational climate for staffs' decision-making improvement, using staff viewpoints in changes and encourage them to actively participate and renovate the organization according to the kind of needs, lifestyles, desires and values, cultural and individual differences and personality characteristics. They should avoid using the factors that cause a reduction of staff commitment to the organization that causes reduction of job security and reward payment in an unfair way. Furthermore, they should help to increase productivity and efficiency by making a healthy environment based on ethical principles for the staffs. Therefore, a conceptual model for understanding and assessing the different organizational behaviors of clinical laboratories staffs is suggested based on three elements; three phase of communication in preanalytical, analytical, and post analytical stage, second the organizational and individual factors of staffs interactions, and third the socio-political, economic and cultural in which staffs operate. This proposal model should be further analyzed and interpreted in future research and its results implemented in clinical laboratories.

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## Conflicts of interest

There are no conflicts of interest.

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