

Policy Options for Adapting Health Care Providers to New Situations in the Workplace During the Covid-19 Pandemic in Iran

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Research

Keywords: Covid-19 pandemic, Health care provider, Employees adaptation, Critical Care, New workplace

Posted Date: March 1st, 2021

DOI: <https://doi.org/10.21203/rs.3.rs-248143/v1>

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Abstract

Background

The rapid change in the situation of health care centers following the sudden onset of the Covid-19 pandemic led to working challenges, role changes, and the transfer of staff to a new and unfamiliar workplace. The aim of this study was to develop policy options to adapt health care providers to the new situation in the workplace during the Covid-19 pandemic as health system planners and policymakers prepare and implement an intervention action plan with more confidence in choosing the best and most effective strategies.

Methods

To identify the problem or issue and developing a policy document, first a comprehensive review of literature was carried out using national and international databases. The keywords used were "Health care provider", "Employees adaptation", "Professional adaptation", "Managing roles", "Covid-19", "SARS-Cov-2", and "Critical Care". The views of health care providers in the Covid-19 pandemic, personal observations and experiences were also used. Finally, in order to categorize the interventions and present policy options, seven national health system experts were consulted to comment on policy options until the interventions were substantiated and a policy document was developed and presented.

Results

According to the criteria of effectiveness, feasibility, appropriateness, sustainability, flexibility, cost-effectiveness compared to policy options, 31 interventions were found. After consulting experts to categorize the interventions and strategies, based on the defined criteria including appropriate to the target population, culturally and ethically acceptable, acceptable to the officials and stakeholders and context compatibility, three policy options were considered for implementation. These three policy options include; creating an activation system of flexible and efficient employees with adjustment of personnel roles, adequate training of health care personnel about working conditions with Covid-19 patients, and creating a supportive and motivational work environment.

Conclusions

The developed policy options in our study, while highlighting the potential benefits and challenges of each option, provide key policy directions for adapting healthcare providers to the new workplace situation during the Covid-19 pandemic and other future crises. None of the policy options are considered alone, but using options together will be effective.

Introduction

Covid-19 pandemic is certainly one of the most significant crises have been seen in the last fifty years(1). The pandemic made an unprecedented impact on the workplace and various organizational practices

and forced millions of people around the world to change their work patterns (2). The outbreak has also challenged the healthcare sector worldwide, leading to unprecedented and unexpected pressures on healthcare system (3). Significant changes have taken place in the provision of health services, including the cessation of routine services, changing site of clinical settings, the transfer of staff to unfamiliar and new work environments, recruiting physicians and nurses who had no infectious disease expertise to provide care to patients with COVID-19 and in some cases the rationing of equipment and services (4). In order to respond to these immediate changes in health care centers, there was a little time to decide how to prepare to reduce the sudden impact of the Covid-19 pandemic on health care centers, staff and patients. It was necessary to determine the assignment of Covid-19 patients, hospitalization units and the creation of new staff teams and their roles (5).

Problem statement

Following the sudden onset of the Covid-19 pandemic and rapid change in the situation of health care centers, development of new management policies and the need to adjust the provision of care in unusual ways, created significant challenges for health care provision and management in health care centers (6). Challenges of health care personnel faced by new and different working conditions include multiple responsibilities and roles, increasing workload, long hours working with personal protective equipment, working in unfavorable conditions with Covid-19 patients, fear of becoming infected or infecting others, and worrying about performance at work or making mistake (4, 7, 8).

However, working challenges, role changes, and transfer of staff to a new and unfamiliar workplace are stressful that further affect the mental health of individuals. This affects the performance and efficiency of staff and the performance of the organization (9). On the other hand, traumatic events or adverse conditions during natural disasters, crises, and pandemics may lead to burnout (10). Burnout, as a stress in the workplace that leads to mental fatigue, depression, and decreased sense of personal success, is associated with negative effects in staff and patients on clinical care decision makings (11).

Around the world, regardless of the nature of job, the process of employees adapting to new situations in the workplace is considered as a vital period in a person's life. The main focus of this process is usually to help the novice to adapt and accept the habits and procedures of the organization (12). Therefore, physical safety and mental stability of health care personnel should be a priority (13). In this regard, the establishment of psychological coping workgroups and support platforms for comprehensive support of health care professionals and experts, may play a role in meeting the needs of staff and maintaining their mental health (8, 14). Employees should be able to achieve common goals through transparency and cooperation at all levels of the system, while maintaining the benefits of the system and creating a strong and sustainable health care system, they can respond quickly to unpredictable and ever-changing environmental challenges (15). Plans and policy interventions must be adapted to the new circumstances and supporting staff more than ever to overcome the Covid-19 pandemic crisis (9). Therefore, due to lack of integrated, transparent and scientific coping strategies to provide a suitable work environment, the aim of this study was to develop policy options to adapt health care providers to the new situation in the

workplace during the Covid-19 pandemic as health system planners and policymakers prepare and implement an intervention action plan with more confidence in choosing the best and most effective strategies.

Context

The first COVID-19 cases in Iran were officially reported on February 19, 2020 (16). However, a typical mortality rates at the end of 2019 suggest that the pandemic had started earlier (17). The sudden explosion of suspected COVID-19 cases in the first week in several provinces put significant pressure on designated hospitals very quickly (18). Among various health care centers in Iran including public, private, social security, charity and military, public hospitals (n=739) are the centers with the highest number of patients with COVID-19 (19). In Iran, COVID-19 deaths in the hospital workers are considerable (n=164) (20). Until 1 Feb 2021, the nurses in Iran health care centers, along with physicians are forming a team of health advocates to fight the corona, while more than 32,000 nurses have been infected with the virus. In fact, they must also take care of themselves in addition to providing medical and care measures for patients. At the moment, the standard of nursing staff per bed in 24 hours is about 0.7 to 0.8. There is an excess distance with 2.5 people. As a result, the nurse faces so many patients, and in some cases the care process may not be satisfactory. From the beginning of the outbreak of Covid-19 disease, as the bed occupancy rate rose sharply in the first wave, universities began to recruit the required nurses and medical staff (21).

Methods

This policy brief reports policy practical interventions to adapt healthcare providers to the new workplace situation during the Covid-19 pandemic in Iran. To collect data, a comprehensive review of literature was carried out using databases including PubMed, Scopus, ProQuest, Science Direct, Google Scholar, Cochrane Library, Magiran, SID, and Iranmedex. The keywords used were "Health care provider", "Health care workers", "Employees adaptation", "Professional adaptation", "Climate change adaptation", "Managing roles", "Covid-19", "SARS-Cov-2", and "Critical Care" and a combination of the mentioned keywords. After searching databases, hand searching was done to review manually a number of reputable journals. In addition, the references of selected articles were also searched. To collect the available literature, the search was limited to studies published between December 2019 and January 2021. Inclusion criteria were publication of articles between this time period, articles that dealt with the adaptation of health care providers to the new workplace situation during the Covid-19 pandemic or related issues, published in English language, and full text available. Exclusion criteria were papers presented at conferences, seminars and educational papers without paper review process, or papers published in less creditable journals. Results of this search were 1826 articles. The title and abstract were reviewed independently by two reviewers. Out of 53 related articles, after reviewing the whole text and evaluating them using CASP (Critical appraisal skills program) by two independent reviewers, 37 articles were omitted due to lack of inclusion criteria. Finally, 16 fully related studies were completely reviewed (Figure 1). After careful study of full text of the articles, all the interventions used to adapt health care

providers to the new work environment during the Covid-19 pandemic were identified and extracted. Then, in order to consider all possible factors, the opinions of health care providers in the Covid-19 crisis situation, personal observations and experiences were used. Finally, in order to categorize the interventions and present policy options, seven national health system experts were consulted to comment on policy options according to the criteria of effectiveness, feasibility, appropriateness, sustainability, flexibility, cost-effectiveness.

Based on extracting the required information from the review, utilizing the views of health care providers and personal observations and experiences to provide policy options, 31 interventions were found. After consulting experts to categorize the interventions and strategies, based on the defined criteria including appropriate to the target population, culturally and ethically acceptable, acceptable to the officials and stakeholders and context compatibility, three policy options were considered for implementation.

Results

A list of the policy options for adapting health care providers to new situations in the workplace during the covid-19 pandemic in Iran, advantages, disadvantages, and implementation considerations of each option is provided in Table 1.

- Creating an activation system of flexible and efficient employees with adjustment of personnel roles

Managing individuals and their roles is critical to adapting to respond to a pandemic due to the rapid pace of changes and requires rapid role adjustment and strengthening of health care personnel to deal with and treat Covid-19 patients in critical situations. One of the options suggested by experts was to carefully survey the duties of health care providers and quickly adjustment of their role, including adding reserve personnel and forming new teams to meet demand. For example, Expert No. 3 said, "*During corona peak periods, health care providers are not prepared enough to handle the large number of clients with covid-19 disease, it is suggested to use volunteer staff from other centers to provide treatment*". For this purpose, support roles must be defined during the pandemic. These roles include assisting front-line personnel, providing information to families through the patient portal program, providing Covid-19 PCR test results to attending physician or nursing supervisor to manage hospital beds, identifying team members to follow patients at home, coordinating care actions with primary care providers and nursing homes, and identifying occupational health personnel to monitor infected staff (22, 23). Health care managers, according to the workload and specialized fields of individuals should ensure effective work, adjust the work schedule of personnel by considering mid-level and inexperienced personnel along with some experienced or specialized personnel in the health care units (24, 25). To increase communication between various levels of clinical and non-clinical staff to provide the best care, multidisciplinary crisis management team including health care center managers, nursing manager, preventive medicine, microbiology, and medical, ICU, and other acute and intensive care units chiefs would be formed to come together on existing problems and relevant solutions for staff (22). In order to increase the capacity of the workforce, in case of increase of Covid-19 cases, usual works of clinical services and all unnecessary

activities of personnel such as unnecessary compulsory training, evaluations and job programs should be eliminated (26, 27). Depending on the different levels of staff, these resources should be transferred quickly from areas with additional personnel to required areas (26). Clinical staff in administrative positions should return to clinical care as much as possible (28). Potential extra staff who can work in high-volume work units related to Covid-19 acceptance, should be identified and from them those who have work experience in emergency situations, cardiorespiratory, and intensive cares should be given priority for transfer (29).

- Adequate training of health care personnel about working conditions with Covid-19 patients

Training should be provided to solve challenges and respond to emergency crises in an appropriate and effective manner (24). According to some experts, training and empowering staff is an important option to increase the tolerance threshold or better adapting to new conditions. Expert No. 7 stated that, *"Physicians, nurses and other health care providers have been stressed about working in new situations because of their illness or transmitting it to family members, so training self-care skills for them can be effective"*. A half-day centralized training in person or online in the field of knowledge and skills of self-protection, professional knowledge and skills, and preventive psychological counseling, based on policies and national guidelines in the form of videos, slides, manuals and illustrations should be provided to all health care personnel before starting work in units related to Covid-19 (29-31). Educational content includes; how to use personal protective equipment, hand hygiene, ward disinfection, medical waste management, sterilization of patient care devices, and occupational exposure management (32). In order to successfully providing of safe and effective clinical services, it is important that unit personnel be trained on the characteristics of Covid-19 disease, treatment methods, and way of care to report any abnormal cases. For example, radiology technologists should be familiarized with the radiographic features of Covid-19, and examine all chest x-rays for any evidence of pneumonic changes, and if abnormal, contact radiologists for immediate reporting (26). To prepare health care personnel, especially physicians and nurses, quick learning of the skills of working in the ICU, with new ventilators to care for critically ill Covid-19 patients, should be provided step by step in the first stage (23).

- Creating a supportive and motivational work environment

A supportive environment means the support received from officials, senior managers, colleagues and the organization's operational plans for personnel (33). In order to personnel adapting with work in a new environment in which they are exposed to physical and mental health threats (15), a 24-hour psychological support system is required for personnel during the Covid-19 outbreak period through an independent permanent telephone line with the ability to transfer to psychiatrists' mobile phones, so that personnel with psychotic symptoms can receive required counseling and psychiatric interventions by phone or support text message (23, 32). A clinical psychologist should visit the units regularly to counsel and review the mental condition of patients and staff, and hold weekly meetings with the voluntary presence of staff to share their experiences (15). Allocation of personnel and the adjustment of their work shifts should be flexible and scientifically appropriate to the pandemic and patients' conditions in the

clinical wards of Covid-19, to reduce workload, improve the quality of care and promote physical and mental health during the Covid-19 pandemic (24). Holding managers feedback sessions with staff provides an opportunity for health care workers to participate in workplace decision making (9). Additionally, in these meetings, leaders must articulate expectations of staff in a transparent and compassionate manner in order to promote resilience, self-care, and reduce staff stress. They inform personnel from adequate supply of protective materials and equipment, proper allocation of human resources, work schedules, and attention to their sleep and rest at work (28, 34). To increase staff motivation to work in a new and stressful environment, encouraging and supporting employees by considering physical rewards such as reducing overtime, reducing working hours, flexible planning and psychological rewards such as financial support, recompensation to the family in case of staff illness or death due to work are recommended (35). Study experts recommended that in order to better management of working environment during the COVID-19 pandemic and to provide a suitable work environment, accountable management with good relationships with employees should be strengthened, tasks and resources should be distributed fairly, and payments should be adequate, timely and depending on the specific mental and physical conditions of each employee. Expert No. 6 said "*Managers should not use aggressive and assertive behavior, instead they have a cordial relationship with front-line personnel and value their opinions*". Expert No 2 stated, "*Managers should reassure staff that they will have adequate standard personal protective equipment*".

Table 1 Policy options, advantages, disadvantages and implementation considerations for adapting health care providers to new situations in the workplace during the covid-19 pandemic in Iran

Policy option	Creating an activation system of flexible and efficient employees with adjustment of personnel roles	Adequate training of health care personnel about working conditions with Covid-19 patients	Creating a supportive and motivational work environment
Advantages	<ul style="list-style-type: none"> - Improving the efficiency of personnel and increasing their performance - Provide better and qualified care - Prevent medical errors and patient adverse outcomes - Access to accurate data to guide decision making - Mutual support of personnel to each other in new critical situation - Reducing staff workload - Increasing the capacity of employees as increasing Covid-19 cases and being responsive to demand in critical situations 	<ul style="list-style-type: none"> - Increasing infection control measures and reducing the risk of infection of personnel in the workplace - Successful provision of safe and effective clinical services - Ensuring the competence of personnel to work with new conditions and prepare the medical team to care for critically ill Covid-19 patients 	<ul style="list-style-type: none"> -Reducing patients' stress and improving the mental health of staff working in the new work environment and overcoming fear - Promoting the physical and mental health of personnel and improving the quality of care during the Covid-19 pandemic - Creating a positive feeling in employees about work and the ability to cope with stress in a new work environment - Prevent fatigue and burnout during weeks or months of the epidemic - Increasing the motivation of staff to work in a new and stressful environment
Disadvantages	<ul style="list-style-type: none"> - Limited time to decide how to prepare health care centers to deal with the Covid-19 crisis - Need to increase 	<ul style="list-style-type: none"> - Lack of access to equipment, training materials, and the Internet - The need for human resources for principled training of personnel - The need for interdisciplinary coordination and cooperation 	<ul style="list-style-type: none"> - The need for cooperation of psychiatrists and clinical psychologists with the organization - The need for competent employees to

	<p>financial resources</p> <ul style="list-style-type: none"> - Resistance of personnel to transfer to work in an unfamiliar and stressful environment - No licensing for selected clinical services 		<p>work in critical situations</p> <ul style="list-style-type: none"> - Need for financial resources - Impossibility to hold in person meetings with staff due to the special features of Covid-19
Implementation considerations	<ul style="list-style-type: none"> - Forming a support team by changing the role of personnel along with defining duties (20) - Setting the work schedule of personnel as presence of young and inexperienced personnel along with specialized and experienced personnel (22, 23) - Establishing effective communication at different levels of clinical and non-clinical staff by creating one team and teamwork (5, 20, 27) - Reducing the volume of routine works and eliminating all unnecessary activities of employees (24, 25) 	<ul style="list-style-type: none"> - Providing a half-day centralized training by the training unit of centers in cooperation with the relevant faculties in person or online for all novice front line personnel before starting work in the corona section on potentially harmful situations and working environment conditions (27-29) - Providing training to the personnel of the units based on the specialized field and place of activity in relation to the characteristics of Covid-19 disease, treatment methods, and way of care (24) 	<ul style="list-style-type: none"> - Making an independent permanent telephone line with the ability to transfer to psychiatrists' mobile phones for 24-hour access for staff to receive psychiatric interventions in case of psychotic symptoms (21, 30) - Clinical psychologists daily visits of units to consult and review the mental health status of staff and patients and to hold weekly meetings with the voluntary presence of staff to share experiences (5, 15) - Setting a flexible shift schedule for clinical units personnel (22) - Direct support of organization's managers to the staff by holding weekly meetings with the staff in person or online (26, 34) - Encouraging staff by considering physical and psychological rewards (33, 35)

Note: None of the policy options are considered alone, but using options together will be effective.

Discussion

Rapid change in health care centers following the Covid-19 pandemic crisis, due to changing procedures and policies by the government and other health institutions and the immediate formulation of new policy decisions, created significant challenges for health care providers to adapt to unfamiliar and stressful workplaces (6, 28).

Due to lack of comprehensive and consistent policy interventions to adapt health care providers to the difficult conditions of new work environment during the Covid-19 pandemic, the current policy document was developed with three policy options based on local and global evidence gathering through systematic literature review and consultation with national experts. Most of the studies that have been conducted on the adaptation of personnel to the new and difficult work environment in times of crisis have been mainly about the lack of a supportive work environment (4, 5, 7, 36). A supportive environment is the support received from the organization's officials, senior managers, colleagues and operational plans. Therefore, organizational structure, organizational culture, organizational leadership style, rewards and benefits help employees adapt to a new work environment (33). Other studies have significantly mentioned the creation of a crisis management team, a support team with clear plans and flexible employees (22, 23, 28). The results of Chemali et al. (2019) showed that creating support groups to provide an environment which people freely share their information and experiences, is effective in reducing burnout and adaptation to the workplace (10).

Increasing the capacity of the employees and training personnel are also mentioned as an intervention in this field (26, 29). In this way, Ghannam et al. (2020) in a study stated the effect of stress management training as one-day workshop on burnout of health care providers(37). Darban et al. (2016) also mentioned the effect of communication skills training as a two-day workshop in this regard (38). Thus, upgrading flexibility skills, that is, changing workplace dynamics, communication skills, and problem-solving skills through training, greatly increases employees' adaptation to a new work environment (39).

Four strategies have been proposed to prepare different groups of health care personnel to work in the Covid-19 pandemic crisis; 1- To form the medical team personnel an ideal model of intensive care physicians be created for patients admitted to the ICU using intensive care experts and specialists from all fields; 2- Results of special researches related to Covid-19 conducted by faculty members should be provided to clinical service providers for use of them; 3- Working skills in critical situations and intensive care unit to be trained for nursing staff; and 4- Appreciate non-clinical staff of units related to the Covid-19 patients to support them(23). In fact, adaptation should occur when there is a change at the organizational level like change in job descriptions, goals, values and technological advances, or when one feels that change directly (39). Therefore, in order to empower health care providers while maintaining the benefits of the system and creating a strong and sustainable health care system to respond quickly to unpredictable and ever-changing workplace challenges, policies need to be tailored to new working conditions and staff support in Covid-19 pandemic crisis.

Conclusion

To adapt health care providers to new situations in the workplace during the covid-19 pandemic, the developed or identified policies and strategies should be not only effective but also up-to-date, evidence-based, targeted, flexible, and context-specific. Creating a flexible system with adjustment of personnel roles, training of health care providers and creating a supportive and motivational work environment are the main policy options presented in our study. The developed policy options in our study, while highlighting the potential benefits and challenges of each option, provide key policy directions for adapting healthcare providers to the new workplace situation during the Covid-19 pandemic and other future crises. None of the policy options are considered alone, but using options together will be effective.

Abbreviations

Not applicable

Declarations

Ethics approval and consent to participate

Consent for publication

Not applicable

Availability of data and materials

Not applicable

Competing interests

The author(s) declare that they have no competing interests.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Authors' contributions

NB and LD contributed to the design, literature review, data analysis and write-up associated with this policy brief. LD revised it critically. NB and MA contributed to drafting of the article. All authors have read and approved the final version.

Acknowledgements

The authors wish to acknowledge the cooperation of health care providers at the forefront of corona and experts, in the selection and present policy options.

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Figures

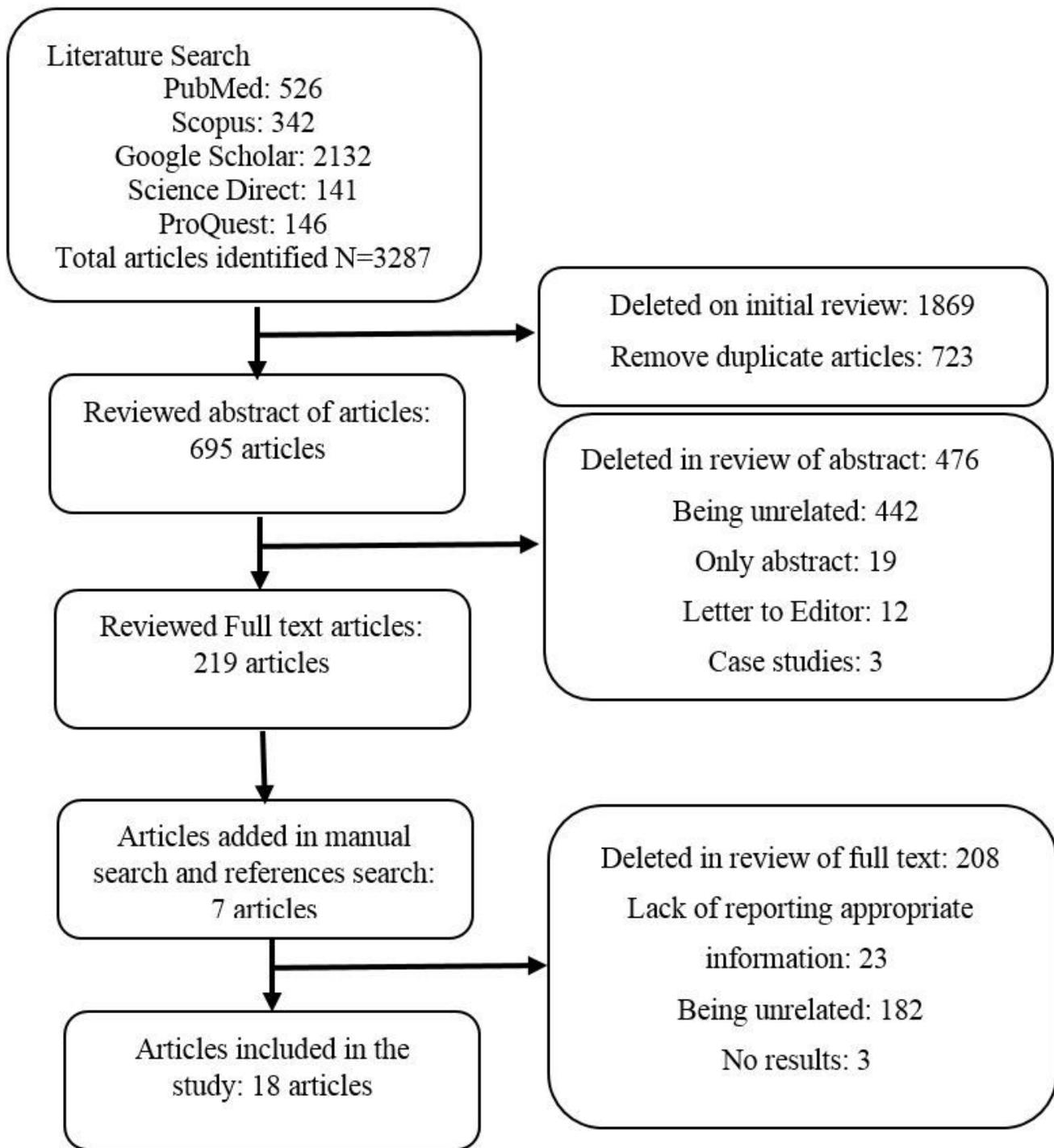


Figure 1

Flowchart of systematic literature review.