Driving and hindering forces for team work in a Material and Sterilization Center of a teaching hospital

FORÇAS IMPULSORAS E RESTRITIVAS PARA TRABALHO EM EQUIPE EM UM CENTRO DE MATERIAL E ESTERILIZAÇÃO DE HOSPITAL ESCOLA

FUERZAS IMPULSORAS Y RESTRICTIVAS PARA TRABAJO EN EQUIPO EN CENTRO DE MATERIALES Y ESTERILIZACIÓN DE HOSPITAL ESCUELA

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ABSTRACT

The objective of this descriptive, cross-sectional study was to analyze the driving and hindering forces for team work at a Material and Sterilization Center (MSC) of a teaching hospital, through an approximation of Kurt Lewin's Field Theory,in Goiânia, Goiás. Participants were 35 professionals, who answered a self-administered questionnaire based on the referred theory, which establishes that group situations are permeated by forces that have a positive or negative influence on the individuals' movements, and concern the subjects' involvement (*I*), the groups interaction (*Other*) and the working environment (*Evnironment*). The data were submitted to content analysis, and distributed in the predefined dimensions. Results consolidated 1990 registers, with most (59.3%) being categorized as driving forces, mostly in the *I* dimension. It was observed there was balance between forces in the *Other* and *Environment* dimensions. Outlining the force field permitted an objective, concrete view of the strengths and weaknesses of the studied team, and the possibilities to promote changes.

DESCRIPTORS

Sterilization
Health personnel
Nursing
Interprofessional relations

RESUMO

Estudo transversal descritivo exploratório que objetivou analisar forças impulsoras e restritivas para trabalho em equipe em um Centro de Material e Esterilização (CME) de um hospital escola, a partir de aproximação da Teoria de Campo de Kurt Lewin, em Goiânia, Goiás. Participaram 35 profissionais, que responderam a um questionário autoaplicável, baseado na referida teoria, que prevê que situações grupais são permeadas por forças que mobilizam positiva ou negativamente seus movimentos e dizem respeito ao envolvimento do sujeito (*Eu*), a interação do grupo (*Outro*) e ao ambiente de trabalho (*Ambiente*). Foi utilizada análise de conteúdo no tratamento dos dados distribuídos nas dimensões predefinidas. Os resultados consolidaram 1.990 registros, categorizados como maioria (59,3%) de forças impulsoras, predominantes na dimensão *Eu*. Nas dimensões *Outro* e *Ambiente* observou-se equilíbrio entre as forças. O delineamento do campo de forças permitiu uma visão objetiva, concreta das limitações, potenciais da equipe estudada e possibilidades para promover mudanças.

DESCRITORES

Esterilização
Pessoal de saúde
Enfermagem
Relações interprofissionais

RESUMEN

Estudio transversal, descriptivo, exploratorio, que objetivó analizar fuerzas impulsoras y restrictivas para trabajo en equipo en Centro de Materiales y Esterilización (CME) de hospital escuela, partiendo de aproximación de la Teoría de Campo de Kurt Lewin, en Goiania-GO. Participaron 35 profesionales que respondieron cuestionario autoaplicable, basado en la referida teoría, que prevé que situaciones grupales son alteradas por fuerzas que movilizan positiva o negativamente sus acciones y testimonian la inclusión del sujeto (*Yo*), la interacción del grupo (*Otro*) y el ambiente de trabajo (*Ambiente*). Se utilizó análisis de contenido en tratamiento de datos, distribuyéndoselos en las dimensiones predefinidas. Los resultados consolidaron 1990 registros, categorizados como mayoría (59,3%) de fuerzas impulsoras, predominantes en la dimensión *Yo*. En las dimensiones *Otro* y *Ambiente* se observó equilibrio entre las fuerzas. El delineamiento del campo de fuerzas permitió una visión objetiva, concreta, de limitaciones potenciales del equipo estudiado y posibilidades para promover cambios.

DESCRIPTORES

Esterilización
Personal de salud
Enfermería
Relaciones interprofesionales

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Português / Inglês
www.scielo.br/reeusp

Received: 05/05/2010
Approved: 02/07/2011

INTRODUCTION

The Sterile and Material Processing Department (SMPD) is the health services sector designated for reprocessing dental, medical, and hospital articles of multiple uses[1]. To ensure the safety of processes and efficiency in the sector, not only is state-of-art equipment required, but also committed professionals and efficient teamwork[1]. Recent studies[2-5] show that among the aspects that compromise the work within the SMPD are: inadequate infrastructure, poor dynamics of human relationships, poor qualification of professionals, and stress that results from the repetitive nature of the reprocessing work processes, in addition to the productivity demanded.

In such a context, there is a risk that the team will become unmotivated and dissatisfied, which in turn compromises the quality and safety of reprocessed articles, consequently harming patients, the professionals themselves and the institution[6-8]. Managing the SMPD's teams has been a challenge due to professionals' lack of qualification required in the sector[4-6]. Research in the field to improve the performance of these teams, considering the existing interdependence of work, is needed[9].

Recent studies show that among the aspects that compromise the work within the SMPD are: inadequate infra-structure, poor dynamics of human relationships, poor qualification of professionals, and stress

Aspects that positively or negatively influence the teamwork in the SMPD is investigated based on Kurt Lewin's Field Theory. The justification is the fact that the work in this sector is focused on the strong interdependence of individual action in favor of a collective outcome. In Brazil, and in other countries as well, most of this work is manually performed and because there are no technologies that facilitate it, the workload involved in it is considerable. This is in addition to other occupational risks, resulting in occupational stress and requiring a finely tuned teamwork[11].

Even though Kurt Lewin's theory was proposed in the first quarter of the 20th century, it allows us to understand the complexity of group phenomena in the scope of organizations applied to many fields of knowledge[10,12-14]. For this reason, the theory is current and relevant when the need to find ways to improve interactions to strengthen teamwork is considered.

Kurt Lewin's field theory[10] addresses the complexity and dynamics of human groups, which can be analyzed through their *force field*. Human behavior in this process is explained as being a result of a set of factors co-existing in the organizational environment that may compromise the performance of groups. Hence, the *force field* is defined by the movements presented within and can either boost or restrict the execution of tasks and consequently, facilitate cohesive teamwork or impede it, as well as its results[10,14].

The force field is dynamic and represents the space of life that contains an individual and his/her psychological environment, where objects, people and situations can acquire positive or negative valences[10]. The terms *driving forces* and *restraining forces*, created based on this relationship, are used in this study and are related to three dimensions that involve the *Self* (factors that relate the person as an individual: motivation, talents and timidity); *Another* (factors concerning the relationship established with other people: leadership, competence, conflicts, sympathy); *Environment* (elements that do not concern people but the physical environment, material resources, organizational dynamics)[15].

Use of the force field concept is asserted as an advantageous framework to construct a stronger process for the implementation of desired changes in the organizational field[12,14,16]. We opted to invesitgate the difficulties presented in the organizational dynamics in the health field, more specifically in SMPD. In accordance with the previous discussion, this study analyzes the driving and restraining forces presented to teamwork within an SMPD of a university hospital from the perspective of Kurt Lewin's field theory.

METHOD

This descriptive, exploratory and cross-sectional study was carried out in a Sterile and Material Processing Department of a public university hospital in Goiânia, GO, Brazil. The population was composed of the team working in this sector, corresponding to 35 (100%) workers who met the inclusion criteria: having a permanent contract with the SMPD's team and at least one year of experience in the sector.

Data were collected from June to August 2008 through a self-applied instrument composed of two parts: the first addresses personal information to characterize the participants[16] and the second contained questions based on the principles of Group Dynamics and Field Theory[10,15]. Such questions asked the participants to indicate three driving forces and three restraining forces that influenced teamwork related to each predetermined dimension both from the personal (Self) and interactional point of view (Another), focusing on the components of motivation, communication, leadership, innovation and interpersonal relationship. They should also indicate both driving and restraining forces in relation to the physical environment (Environment) concerning structure and organization. This process is recommended when the purpose is to determine a diagnosis of force field[15].

The instrument was validated in relation to its form and content by an organizational psychologist and a nurse, both specialists in group dynamics, and also by a nurse specialist in SMPD. A pilot test was applied to a group of

workers of a SMPD from another facility with similar characteristics, which indicated its pertinence and adequacy.

Data were collected in the participants' workplace during all shifts. When the study's objectives were clarified, free and informed consents forms were signed, and the participants were instructed how fill out the instrument and when to return it.

Data were organized and distributed in a spreadsheet according to the pre-established dimensions: *Self*, *Another* and *Environment*[10,15]. After this stage, thematic content analysis[17] was conducted for each dimension and after an exhaustive reading, core meanings that revealed categories related to driving and restraining forces affecting teamwork in each dimension were identified[10,15]. The content of these categories was described, the number of pertinent answers was delineated and the percentage these represented in relation to the total number of answers included in each dimension was determined.

A group of experts, among them one psychologist, who endorsed the consolidation of the categories within each dimension, refined the analysis, including validating the content, delineating the force field. The project from which this study originated was analyzed and approved by the Ethics Committee in Human and Animal Medical Research at the Federal University of Goiás, *Hospital das Clinicas*, protocol nº 156/07.

RESULTS

Characterization of the studied group

All the workers who met the inclusion criteria consented to participate in the study: a plurality were between 36 and 45 years old (40.0%), followed by individuals between 25 to 35 years old (25.7%); and between 45 to 50 years old (22.9%), in addition to a small number of individuals older than 55 years old (11.4%). Female workers 29 (82.9%) and nursing technicians (48.0%) were in the majority. Two (6.0%) workers, working in functions other than those to which they were hired—general services and kitchen assistant—were identified.

In relation to time since graduation, ten workers (28.6%) had completed the program between six and ten years ago; found in an equal percentage were those who completed the program between 16 to 20 years ago. Two individuals had conclucompleedded it more than 21 years ago. Most of the professionals worked in the day shift because the SMPD functions only with the on-call night shift; 20 (57.1%) workers reported having more than one job.

Forces working within the SMPD

The obtained results indicated a total of 1,990 records distributed in the predetermined dimensions *Self* 304 (15.3%), *Another* 1,023 (51.4%) and *Environment* 663 (33.3%). After analysis, most were categorized as driving forces 1,180 (59.3%), while restraining forces comprised 810 (40.7%) records, mainly concentrated in the dimension *Another* as shown in Table 1.

Table 1 – Distribution of forces working in the Sterilizing Material Processing Department of a public university hospital in the dimensions *Self*, *Another* and *Environment* – Goiânia, GO, Brazil - 2008

Dimensions	Total		Driving Forces		Restraining Forces	
	N	%	N	%	N	%
Self	304	15.3	268	88.2	36	11.8
Another	1023	51.4	537	52.5	486	47.5
Environment	663	33.3	375	56.6	288	43.4
Total	**1990**	**100**	**1180**		**810**	

In addition to the larger number of answers concentrated in the dimension *Another*, Table 1 shows a greater distribution of driving forces in the dimension *Self*. Content analysis of answers distributed in each dimension permitted the organization of categories, which are separately presented for a better visualization of data. Table 2 specifically presents the dimension *Self* in which the restraining and driving forces are listed, totalling 304 (15.2%) answers.

Among the driving elements influencing teamwork related to the dimension *Self* as presented in Table 2, the category *Individual qualities of each team member to spur the whole* stood out with 127 (47.4%) answers. This category emerges from answers related to the individuals' perceptions concerning their personal qualities boosting team performance, which included collaboration, initiative, ethics, commitment, and good sense, among others.

Table 2 – Distribution of categories related to driving and restraining forces influencing teamwork in the Sterilizing Material Processing Department of a public university hospital in the dimension *Self* – Goiânia, GO, Brazil – 2008.

Dimension *Self*					
Driving Forces			**Restraining Forces**		
Categories	**N**	**%**	**Categories**	**N**	**%**
Individual qualities of each team member to spur the whole	127	47.4	Personal restrictions as hindering factors for team productivity	18	50.0
Motivation as potential force	73	27.2	Sense of exclusion	11	30.5
Knowledge concerning the SMPD's dynamics	28	10.4	Excessive load of responsability	07	19.5
Positive co-existence	25	9.4			
Perception concerning the relevance of the work performed at SMPD	15	5.6			

Another category reflecting driving forces was *Motivation as potential force* which comprised 73 (27.2%) answers related to the descriptions of factors that contribute to one's satisfaction at work, overcoming difficulties and motivation for being a member of the SMPD's team. The third category in this dimension, *Knowledge concerning the SMPD's dynamics*, obtained 28 (10.4%) answers that indicate the importance of specific knowledge and professional experience in ensuring teamwork is effective. *Positive co-existence* also emerged as a category that favors teamwork with 25 (9.4%) answers, referring to a spirit of camaraderie, respect and professional ethics. The category *Perception concerning the relevance of the work performed in the SMPD* with 15 (5.6%) answers highlights the importance of the worker seeing him/herself as an essential element to achieving the unit's work results and his/her relevance for care delivered exemplified by the expression: *knowing that my work is important for the patient's recovery*.

Eighteen (50%) out of 36 answers related to restraining elements within the dimension *Self* refer to the category *Personal restrictions as hindering factors to the team's production*, characterized by expressions such as: stress, lack of motivation, tiredness, lack of trust, and difficulty learning. Another category, *Sense of exclusion*, obtained 11 (30.5%) answers that express difficulties of not being recognized, listened to or included in the decision-making process. Finally, the category *Excessive load of responsibility* with seven (19.5%) answers reflected how uncomfortable professionals feel when they face limitations in meeting the needs of clinics that depend on the department's service, which affects the performance of the facility as a whole.

The dimension *Another* comprises the field of relationships occurring in the routine of teams, linking elements that determine the relational dynamics both in relation to driving and restraining forces influencing teamwork. This dimension obtained the highest number of answers, 1,023 (514%), which were distributed in categories presented in Table 3.

Table 3 – Distribution of categories related to driving and restraining forces influencing teamwork in a Sterilizing Material Processing Department of a public university hospital concerning the dimension *Another* – Goiânia, GO, Brazil – 2008.

Dimension *Another*					
Driving Forces			**Restrictive Forces**		
Categories	**N**	**%**	**Categories**	**N**	**%**
The team facilitates the work process	318	59.2	People within SMPD represent a barrier CME	262	53.9
Positive managerial postures and stragegies	106	19.8	Lack of knowledge concerning the SMPD's integral dynamics	89	18.3
Cooperation among support and outsourcing, and users	77	14.3	Depend on support and outsourcing services and users	66	13.6
Teamwork is facilitated by theoretical-practical knowledge	36	6.7	Negative managerial postures and strategies	46	9.5
			Team has limited potential given the restrictions of some members	23	4.7

The driving forces in this dimension were represented by 537 (52.5%) answers while restraining forces obtained 489 (47.5%) answers. The analysis of the driving forces resulted in the category *The team facilitates the work process* with the largest number of answers, 318 (59.2%), characterized by expressions such as: it is an integrated, harmonious, motivated team, with good communication, competent and committed to the SMPD and receptive in relation to changes.

The category *Positive managerial postures* comprised of 106 (19.8%) answers and refers to nurses (manager and supervisors) as being accessible, democratic, flexible,

committed, partners, and encouraging professionals with a comprehensive view of the sector. The third category *Cooperation among support and outsourcing services, and users* obtained 77 (14.3%) answers, indicating the interdependent nature of teamwork within the SMPD and its relationship to support services and other units in the hospital. The last category *Teamwork is facilitated by theoretical-practical knowledge* included 36 (6.7%) answers such as: team experience, some master all the techniques and some know how to work in teams.

The forces that restrain teamwork related to the dimension *Another* were based on 486 (47.5%) answers. *People within SMPD represent a barrier* was the category with greater representativeness and is characterized by expressions such as: demotivated, stressed, disorganized, and irresponsible professionals who make injudicious decisions, hinder the service and waste material. The category *Lack of knowledge concerning the SMPD's integral dynamics* obtained 89 (18.3%) answers exemplified by: some do not have knowledge of all the sectors, which negatively impacts the SMPD.

The category *Depend on support and outsourcing services and users* obtained 66 (13.6%) answers that report elements related to a lack of knowledge concerning the department's dynamics on the part of professionals from others services: delay in providing service and maintenance. The category *Negative postures and managerial actions* gathered 46 (9.5%) answers that emphasized restraining aspects related to the management of the SMPD such as: lack of managerial strategies to replace intractable employees, professionals who do not have the profile to work in the sector, and also the requirement of new demands without planning for supplies. Finally, 23 (4.7%) answers generated the category *Team with limited potential given the restrictions of some members*, which stressed the health problems of some professionals, professionals' lack of identification with the area to which they were allocated, and an inability to competently perform prescribed tasks.

The dimension *Environment* totaled 663 (33.4%) answers that concern the physical, logistic and organizational structure. Of these, 375 (56.6%) were characterized as driving forces and 288 (43.4%) as restraining forces, the distribution of which is contained in Table 4.

Table 4 – Distribution of categories related to driving and restraining forces influencing teamwork in the Sterile and Material Processing Department of a public university hospital concerning the dimension *Environment* – Goiânia, GO, Brazil – 2008.

Dimension *Environment*					
Driving Forces			**Restraining Forces**		
Categories	**N**	**%**	**Categories**	**N**	**%**
Good infrastructure resources	249	66.4	Lack of resources as an element that overloads the team	173	60.0
Lack of recording in the work organization and direction	96	25.6	Lack of organizing strategies to better deal with restraining factors influencing work in SMPD	70	24.3
Satisfactory organizational environment	30	8.0	Environment	45	15.7

Among the set of driving forces, the category *Good infrastructure resources* was composed of 249 (66.4%) answers concerning air conditioning the unit in which boxes are prepared, partially satisfactory physical structure, availability of Personal Protective Equipment (PPE) and material resources. The second category *Lack of recording in the work organization and direction* with 96 (25.6%) answers refers to the means of communication used in the unit such as: correct and complete printed records, and control books used in work organization. The third category *Satisfactory Organizational Environment* gathered 30 (8.0%) answers that highlighted: the joy you experience in the SMPDs, harmonious, humanized, welcoming and democratic environment, equal workload for everyone and rotating work schedule.

Among the restraining forces related to the dimension *Environment*, the category *Lack of resources as an element that overloads the team* stood out with with 173 (60.0%) answers that indicate: lack of material resources and equipment, malfunctioning autoclaves, lack of bathrooms in the sector, lack of human resources, and lack of a place for the night team to rest. The category *Lack of organizing strategies to better deal with restraining factors influencing work in the SMPD* obtained 70 (24.3%) answers that indicated: lack of access to the psychological service, motivational campaigns or suggestion box. Finally, the category *Environment* gathered 45 (15.7%) answers that indicated: occupational risks, stressing dynamics, accelerated rhythm of work, closed environment, work overload, and devalued sector.

DISCUSSION

Categorizing the professionals working in the studied SMPD is essential to understanding the dynamic process determined by the set of this specific group within this context and by the work they perform. These elements compose the psychological environment created from the interaction of individuals, their relationship with the group, and environmental factors from a given situation, in this case, the work performed in the SMPD[10]. The results indicate a relatively young group, mainly composed of women, which caught our attention given the physical effort required by the tasks in the unit. Studies report that

the excessive expenditure of energy has caused posture problems, general fatigue and various other health problems among these workers[5-6,8,18].

It is worth noting that most part of these workers have more than one job and two (6.0%) of them have not graduated with a nursing degree. The fact that 57.1% of the professionals have more than one job reflects a reality revealed in another study[18] and the situation of nursing workers in general. In relation to a lack of specific educational background, the study highlights the same reality[4], which reinforces the contrast of this result with what is recommended in the literature that recommends specific qualifications for professionals working in the sector[4-6]. The fact that most professionals work on the day shift reflects the context and work demand of the SMPD; most surgeries and material demanded from the remaining units occur in this period[8].

The analysis concerning the force field of the nursing team working in the SMPD, as displayed in Table 1, shows a large number (51.4%) of answers directed to the dimension *Another*, which shows that the participants mainly hold the team's interactions responsible for the outcomes, relegating to the background their individual characteristics (15.3%), characteristics that can also interfere in the group's performance. The difficulty of people realizing and acknowledging their limitations related to teamwork is common among human groups. When individuals do realize how individual characteristics influence the group's performance, they tend to overvalue their qualities and fail to see their limitations[10,15]. This analysis shows that 88.2% of the answers distributed as driving forces are included in the dimension *Self*.

Another phenomenon observed in data presented in Table 1 is called *quasi-stationary equilibrium*, a movement characterized by the stabilization of driving and restraining forces[10]. Such a phenomenon can be observed in the dimensions *Another* and *Environment*, which shows a certain stagnation of teamwork suggesting the need for interventions to change this context and also to work with the restraining forces[10,15-16]. Breaking the process when forces are in balance is necessary because the group is not aware of the forces at work and may not be open to a process of change [10,15-16].

A positive aspect is identified in the distribution of forces in Table 1. Most (59.3%) of the answers were related to driving forces, which suggests this is a group working in a psychological environment favorable to changes[10,13]. Studies[10,12-14] using field theory indicate that individual change is facilitated and encouraged in the context of a group, as opposed to when individuals seek change individually. In the face of a diagnosis such as the one identified in the studied SMPD, it is up to the manager working with interventions to break the *quasi-stationary equilibrium* and propose a collective effort aimed to enhance driving forces and minimize the restraining ones.

The distribution of categories in the dimension *Self* presented in Table 2 helps one to understand in detail the aspects the team considered to be driving forces. Personal attributes, motivation, knowledge concerning the SMPD's dynamics were the most relevant elements reported concerning this dimension. The perception of the nursing team working in the SMPD concerning these elements can favor a harmonious and interconnected work, especially when these workers are clear on the role they play and of how their actions account for the service's quality as well as the importance of professional qualification in achieving goals[8,19]. Since motivation depends on individual attitude and interests, devising managerial actions and organizational projects and objectives is essential for people to develop[3,9].

Even though the categories emerging from the answers that indicated restraining aspects related to the dimension *Self* (Table 2) appear in smaller proportion, they point to personal restraints, a sense of exclusion, and the excessive load of responsibility as aspects that compromise individual actions in relation to teamwork. Researchers[6,8-9] state that the performance of workers is influenced by individual limitations such as physical and psychological problems that compromise their performance, which indicates that the personal valorization of these workers in the workplace and good ergonomic conditions can encourage their performance.

Categories related to driving forces in the dimension *Another* highlighted: the team as an element that facilitates the process, positive managerial posture and relationships with support services and users. This result reveals that from the participants' perspective, the relationships established among professionals influence the team's performance. Investigations carried out in the SMPD's context reveal that good interpersonal relationships, satisfaction at work, and an appropriate profile of workers are factors that facilitate teamwork[6-9,16]. These results corroborate findings of other studies that show that the use of participatory management models encourage changes, innovations, growth, and professional satisfaction as well as quality of life at work[4-6,9,11].

The categories related to restraining forces in the dimension *Another* encompass a smaller set of data though similar to the ones related to driving forces. These indicate that people working in the SMPD represent a barrier, their lack of knowledge concerning the SMPD dynamics and dependency on the relationships established with support and outsourcing services and users are aspects that restrain teamwork. These findings indicate a dubious perception of professionals concerning the team's behavior. They see themselves as individuals who have initiative, good sense, and commitment but they report the opposite concerning the team. This can be explained by the fact that the behavior of people within organizations is determined, among other aspects, by personal characteristics and objectives such as learning skills, motivation,

attitude, emotions and values as well as aspects resulting from the environment and organizational characteristics[15].

The dimensions *Self* and *Another* suggest that people consider themselves to have great potential in individual terms though in collective terms, the team appeared both as a facilitating and a hindering factor. It shows that valorization of individual potential is not understood to the same extent as collective potential is. Interaction within teams is complex and constantly triggered by contact reactions, in which there is communication, feelings of attraction and rejection, conflicts, and competition, among others[10,14-15]. Such a result requires managers to develop skills to deal with interpersonal situations and see them from different perspectives, in addition to devising appropriate and nonstandard solutions[5,14-15]. Given this context, greater understanding concerning the team's dynamics is desirable in order to reduce personal barriers and render the group to a more cohesive and productive team[10,12,14-15].

Similar to the dimension *Another*, results revealing dualism in the perception of workers concerning the same aspects are identified in the dimension *Environment*. The categories show that driving factors include good infrastructure resources, recording of work organization and the organizational environment, while the restraining factors include lack of resources and strategies to diminish the team's limitations and of the environment itself.

A relative equilibrium between driving and restraining forces is observed in this dimension, though driving forces are more related to the effort of the team to maintain a favorable organizational environment. Studies addressing the SMPD environment indicate the need for adjustments and implementing measures designed to improve the sector and make it a visible unit, with improved working conditions. Currently, the inhospitable characteristics of this environment tend to demotivate workers and, consequently, lead to a poor performance[5-6,8,11].

The content of restraining forces also shows a certain team resistance in the face of real problems as well as its resilience in relation to infrastructure problems, such as lack of material and appropriate equipment, frequent problems presented by autoclaves, lack of washers and thermal disinfection equipment, lack of air-conditioning, among other limitations that impede better performance of the team as identified in other studies[5-6,8]. Finally, it is worth noting that the content of answers distributed in the dimensions *Self*, *Another* and *Environment* reveal the dynamics of people, of the group, and of the forces and psychological needs. These represent *dynamic wholes* that result from behavior caused by multiple interactions occurring among the elements of the social situation, including the environment, at the very moment they are observed and interpreted[10].

CONCLUSION

This study analyzed the driving and restraining forces acting on the teamwork of the Sterile and Material Processing Department of a university hospital based on Kurt Lewin's field theory. Such an analysis revealed that the participants' answers mainly focused on driving forces in the dimension *Self*. An equilibrium was observed between forces in the dimensions *Another* and *Environment*, which indicates the need to minimize restraining aspects and strengthen the driving ones.

The category *individual qualities of each team member to spur the whole* was highlighted as a driving force in the dimension *Self*, suggesting that team members have a positive self-perception, which favors the proposition of changes. The fact that the category *the team facilitates the work process* is identified as a driving force in the dimension *Another* at the same time the opposing category *People within SMPD represent a barrier* related to restraining forces is identified suggests that there is not, from the team's perspective, opportunity to negotiate the relationships established in the group. It shows the need to intervene to encourage team development in order to improve relationships to improve collective performance.

The results related to the dimension *Environment* show that the team acknowledges that good infrastructure resources, internal organizational records, and organizational environment are essential for the team to achieve good performance. However, they also indicate that a lack of human and material resources, as well as the environment itself, restrains the work process, suggesting the need to devise solutions with the support of managers and the institution. We conclude that the delineation of the force field provided an objective and concrete view of both the limitations and the potential of the studied team and indicated possibilities to promote changes.

The analysis of the force field signals there is a great challenge for the managers of the studied service to overcome since the psychological environment shows dynamic and contradictory situations. These are mostly composed of driving forces; hence there is an environment favorable to changes. On the other hand, the identified diagnosis also reveals a quasi-stationary equilibrium that needs to be broken to promote effective transformation and improve team performance.

This study's results, unpublished in the context of a SMPD, can support actions in this sector to improve the team and its performance, considering that teamwork is essential in this context. The use of this theoretical framework and its application in the organizational context of a SMPD led to an innovative view of teamwork in this unit and can be applied in other contexts as well, especially considering the tendencies of public policies in the health field.

Conducting this study was based on the adopted theoretical framework, which ensured methodological rigor and adequacy related to the studied context. It also proved to be a tool that identifies problems related to people, interactions and environmental factors and can, for this reason, be an efficient tool to be used in the management of work performed in the SMPD, providing many indicators for team development. Therefore, this study can help other researchers seek the improvement of team performances in other contexts.

We also recommend that those developing continuing education projects for the members of the SMPD team take into account the importance of relational dimensions and technical improvement. These are essential to aligning a nursing team's specific knowledge with advancements in the field as a way to ensure the quality of the articles processed by the SMPD and patient safety.

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