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Effect of Team Building Training Program on staff Nurses' Communication Skills at Zagazig University Hospitals.

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Abstract. **Background:** Team building in health care provides opportunities for organizational improvements, increases employee and customer satisfaction, as well as improves patient outcomes. Team building is essential in every existing to develop and enhance open and positive communication among members and team motivation **Aim:** The aim of this study is to determine the effect of team building training program staff nurses' communication skills at Zagazig University Hospitals. **Research Design:** a quasi-experimental design was utilized. **Setting:** the study was conducted in Zagazig University Hospitals. **Sample:** a simple random sample (94) from staff nurses who worked in the previously mentioned setting. **Tools:** three tools were used for data collection, 1. Teambuilding knowledge questionnaire 2. Team building skill questionnaire and 3. Organizational communication questionnaire. **Results** there is a highly statistically significant difference between the studied nurses' total team building knowledge pre and post program intervention as well as there was significant improvement in head nurses' communication skills mean score after the program implementation. **Conclusion:** there were statistically significant improvement on staff nurse's teambuilding knowledge and skills after program intervention. In addition, there was a statistically significant improvement in all types of organizational communication after program implementation. **Recommendations:** Enhance assertive communication between workers and managers in order to identify areas for improvement, planning and carrying out organizational changes together. **Keywords:** team building .communication skills and organizational communication

Introduction

Team building is a philosophy of job design in which employees are viewed as members of interdependent teams instead of as individual workers. Also, it is an effort in which a team studies its own process goals with the organizational goal. *Team building* also defined as the process of enhancing the bonds between members of a group to help them accomplish their goals more efficiently. This management technique often involves activities or events that occur outside of the typical workday. During a team-building event, employees may learn about their teammates and develop skills to help them interact effectively (Azab & Abd-el azeem, 2017). Purposes of team building are to increase long - term team effectiveness by improving the process of members working together. Team building is considered as an important component of the delivery of health care. Patient care always involves input from member of different professions who work together to coordinate care across multiple settings and during various stages of health and illness (Gray & Sullivean, 2021). Nursing is a

professional care based on interactive relationships and performed primarily through communication. Communication is an interpersonal process in which participants express something about themselves through verbal or non-verbal signs with the aim of influencing the other's behavior, and it determines the kind of relationships that people will develop with others and with the surrounding world. It is the act of conveying a message to others and also the main skill for the effective functioning of health professionals (Murray, 2017). Organizational Communication is a technique usually intended for exchanging messages between individuals, groups and organizational levels within the organization, with a view to implement the objectives of individual and collectively. It is vital to create and maintain a relationship as well as it has the ability to influence employee attitudes to be involved and committed to the organization (Kolcun et al., 2024).

Communication skill is a core skill for all healthcare professionals and particularly for head nurses (Kourkouta & Papathanasiou, 2024). The nursing unit is an independent unit operated by the nursing unit manager (head nurse) and is affected via complicated elements such as the surroundings of each unit, traits of team members, diversity of resources, and interactions among organizational members (Choi et al., 2018). Organizational commitment concept is multidimensional in nature, has three conceptualizations mentioned in the literature (affective, normative and continuance commitment). Affective commitment is conceptualized as identification or attachment, normative commitment is conceptualized as responsibility to repay a debt or commitment to norms and continuance commitment is conceptualized as sacrifice and investment that increases an individual's cost of leaving (Matin et al., 2020).

Significant of the study

Patient care today is more complicated than ever due to an increasingly large aging population that has one or more chronic conditions, with teams made up of different nurses, physicians and other healthcare professionals, it is important that they clearly and effectively communicate with one another to build strong work relationships, share resources and solve problems. Therefore, to meet the demand of a new health care system, the researcher realized the need for developing and implementing training program for staff nurses about team building to increase Staff nurses' knowledge and skills for improving their teamwork, and their communication skills.

Aim of the study

The aim of this study is to determine the effect of team building training program on staff nurses' communication skills at Zagazig University Hospitals throw:

1. Identify staff nurses knowledge and skills regarding team building pre and post program implementation.
2. Evaluate staff nurses' communication skills pre and post program implementation.

Subjects and Methods

Research Design: A quasi-experimental design was used to conduct the present study. One group pre-test , post- test design.

The Study Setting:

This study e conducted at Zagazig University Hospitals. Which include two sectors El alam sectors include four hospitals and the emergency sectors include five hospitals.

Subjects:

The convenience sample consisted of 94 staff nurses who worked in the previously mentioned setting.

Tools of Data Collection:

Data was collected through three main tools as the following:

Tool (I): Teambuilding knowledge questionnaire: It consists of two parts:

The first part is personal and job characteristic data sheet to collect data about staff nurses such as age, gender, educational qualifications, year of experience in the current job and marital status.

The second part: is a self-administered questionnaire sheet was developed by Ahmed (2013) to assess staff nurses' knowledge regarding teambuilding it consists of 45 questions, Multiple Choice Question (20 items), True & False (15 items) & Matching (10 items).

Scoring system: - The responses were scored as "1" for correct, and "zero" for incorrect so the total scores (45). The score of each participant was categorized into two categories, satisfactory that had score more than 70% and unsatisfactory that had score 70% or less.

Tool (II): Team building skills (observational checklist):

It is a self-administered questionnaire developed by **Ahmed, (2013)** to assess staff nurses' skills regarding teambuilding, it consisted of 59 items divided into seven dimensions: Commitment (8 items), Contribution (12 items), Communication (10 items), Cooperation (5 items), Connection (7 items), Conflict management (7 items), Change management (10 items).

Scoring system: - The responses were scored as "done" for correct, and "not done" for incorrect answer so the total scores (59). Scoring system divided into three categories, low level of staff nurse's opinions related to teambuilding skills less than 50%, moderate level of staff nurse's opinions related to teambuilding skills ranged from (50-70%) and high level of staff nurse's opinions related to teambuilding skills more than 70%.

Tool III: Organizational communication questionnaire: was developed by **Abdel-Ael (2010)** to assess staff nurses' communication skills, relationships with various members of the organization, and the forms of communication skills of staff nurses, it consists of 44 items grouped under eight main components namely: communication climate (7 items), supervisors communication (5 items), horizontal communication (5 items), subordinate communication (8 items), personal feedback (4 items), organizational perspective (4 items), organization integration (4 items) and media quality (6 items).

Scoring system: The responses were scored on a five-point Likert scale rating from 1 (strongly disagree) to 5 (strongly agree). Scoring system based on Albertic cut of point divided into three categories, low level of staff nurse's opinions related to organizational communication less than 50%, moderate level of head nurse's opinions related to organizational communication ranged from (50-70%) and high level of head nurse's opinions related to organizational communication more than 70%.

Validity and Reliability

The researchers adapted, modified, and translated the contents of the three instruments into Arabic, and the content validity was evaluated by five juries of experts in the field. Based on their recommendations, the necessary changes were made.

The reliability of tools was tested through measuring their internal consistency 0.870 for knowledge questionnaire, 0.916 for team building skills, 0.896 for organizational communication questionnaire.

Pilot study

A pilot study was conducted in July 2023 to assess the applicability, feasibility and clarity of the included tools, as well as to estimate the time required to complete the study tools. It was done on 10% of the total number of research participants (n=94 staff nurses). The pilot study was included into the study subjects as no modifications done.

Fieldwork

The actual fieldwork took place across three months, from August to October 2023. The researchers gathered data by meeting with nurses on the shift and explaining the study's aim. Staff nurses were questioned during morning and evening working hours and according to their availability for three days per week; the daily number of staff nurses interviewed daily ranged from 10 to 12. The questionnaires took from 20 to 30 minutes to answer. Completed forms were gathered on time and double-checked for accuracy to avoid missing data.

Administrative design:

Before starting any step in the study, an official letter was obtained from the Dean of Faculty of Nursing, Zagazig University and Zagazig University Hospitals administration, for permission and cooperation to conduct the study. After an explanation of study objectives, an individual written consent was also obtained from each participant in the study

II. Statistical Design:

Personal Computer (PC). Computerized data entry and statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 22. Data were presented using descriptive statistics in the form of frequencies, percentages, and Mean SD. A correlation coefficient "Pearson correlation" is a numerical measure of some type of correlation, meaning a statistical relationship between two variables. A t test is a statistical test that is used to compare the means of two groups. Chi-square (χ^2) is a statistical test used to determine the relationship between categorical variables. Analysis was used for assessment of the interrelationships among quantitative variables. P-values which were less than (0.01) were considered as highly statistically significant, P-values which were less than (0.05) were considered significant respectively and P-values which were (0.05) or more were considered Non-significant. The given graphs were constructed using Microsoft Excel software.

Results

Table 1: revealed that, the studied nurses' mean age was \bar{x} S.D (33.2±57.23), (45.7%) of them had ages ranging between (30 to less than 40 years old). Moreover, the majority of study sample (67%) were females and (69.1%) of them worked at the Emergency sector while (30.9%) of them worked at EL Salam sector.

Table 2: revealed that there is a highly statistically significant difference between the studied nurses' total team building knowledge pre and post program intervention at ($p < 0.00$).

Figure 1: revealed that (86.6%) of the studied nurses had total satisfactory knowledge posttest while only (37.2%) of them had total satisfactory knowledge pre-test

Table (3): illustrate the staff nurses skills regarding teambuilding awareness of total domains pre and post educational program. This table shows that during the post program phase, the studied staff nurses had a high level of agreement percentage toward total skills regarding team building compared to preprogram phase. The highest domain score of team building skills is contribution within the teamwork (20.76), the lowest domain is cooperation within the teamwork (8.76) mean score.

Figure (2) this figure illustrates that the highest percentage of nurses (41.5%) had a low level of teambuilding skills before implementation of the program, while (50%) of them had a high level after program implementation.

Table (4): The table shows that during the post program phase, the studied nurses had a high level of agreement percentage regarding organizational communication compared to preprogram phase. Additionally, there was statistical significant difference ($p < 0.05$) in supervisor's communication, horizontal communication, subordinate communication, personal feedback. On the other hand, no statistically significant difference between the studied nurse's pre and post intervention regarding their total communication climate, organizational perspective and organizational integration to perform work in the hospital at ($p > 0.05$).

Figure (3) this figure illustrates that the highest percentage of nurses (51.1%) had a low level of organizational communication before implementation of the program, while (52.1%) % of them had a moderate level after program implementation.

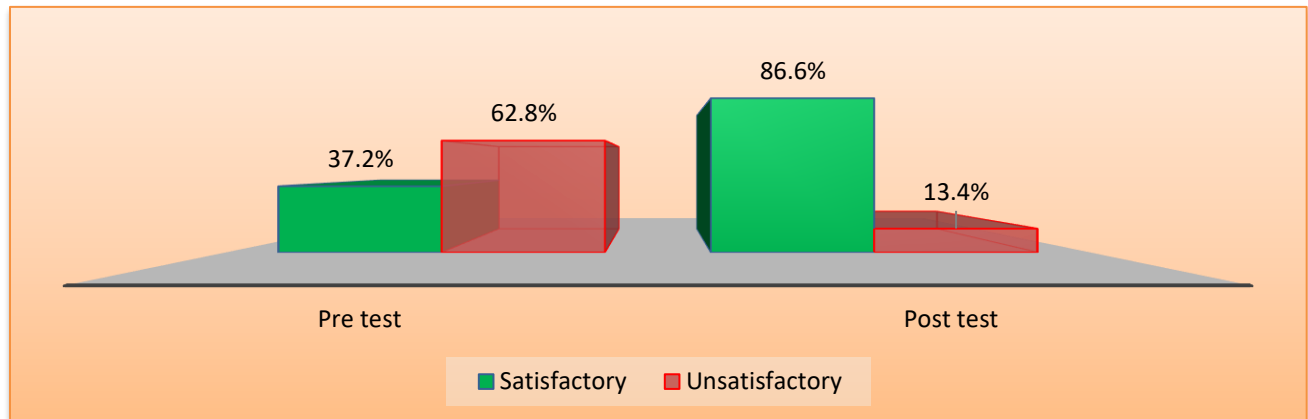
Table (5): shows that there is a highly significant statistically positive correlation between the studied nurses' total knowledge and their total team building skills at ($p = 0.000$). On the other hand, , there is no significant statistically positive correlation between the studied nurses' total knowledge and their total perception of organizational communication at ($p=0.061$).

Table 1: Percentage distribution of the studied nurses according to their demographic characteristics (n=94).

Demographic characteristics	N	%
Age		
20-<30	23	24.5%
30-<40	43	45.7%
40-<50	26	27.7%
50-<60	2	2.1%
\bar{x} S.D 33.2±7.23		
Gender		
Male	31	33.0%
Female	63	67.0%
Hospital name		
Accident sector	65	69.1%
Al slam sector	29	30.9%
Marital status		
Single	16	17.0%
Married	68	72.3%
Divorced	6	6.4%
Widow	4	4.3%
Educational level		
Nursing diploma	22	23.4%
Technical institute of nursing	39	41.5%
Bachelor nursing degree	29	30.8%
Master nursing degree	3	3.2%
Doctorate degree	1	1.1%
Nursing experience years		
1- <5 years	19	20.2%
5- <10 years	36	38.3%
> 10 years	39	41.5%
\bar{x} S.D 12.53±1.68		
Attended training courses about team building		
Yes	19	20.2%
No	75	79.8%

Table (2): Percentage distribution of the studied nurses according to their total Knowledge about the team building (n=94).

Total knowledge	Pre test		Post test		X ²	P
	N	%	N	%		
Satisfactory	35	37.2%	81	86.6%	9.846	0.00*
Unsatisfactory	59	62.8%	13	13.4	7.253	0.01*

Figure (1): Percentage distribution of the studied nurses according to their total Knowledge about team building (n=94).**Table (3):** Percentage distribution of the studied nurses according to their total compliance of team building skills domains pre and post program implementation (n=94).

Total skills	Pre test		Post test		X ²	P
	Mean	SD	Mean	SD		
1.Commitment within the teamwork	10.04	2.36	14.73	1.64	13.24	0.00**
2.Contribution within the teamwork	15.99	4.41	20.76	2.54	6.89	0.027*
3.Communication within the teamwork	11.38	3.26	15.53	2.21	9.87	0.02*
4.Cooperation within the teamwork	6.98	1.21	8.76	0.86	3.37	0.48
5.Conflict management within the teamwork	9.09	2.12	12.44	1.32	11.38	0.001**
6.Connection within the teamwork	10.42	2.45	13.14	1.24	5.25	0.041*
7.Change management within the teamwork	13.74	3.21	15.81	2.12	0.95	0.21
Total team-building skills	77.64	13.56	101.17	6.15	12.43	0.00**

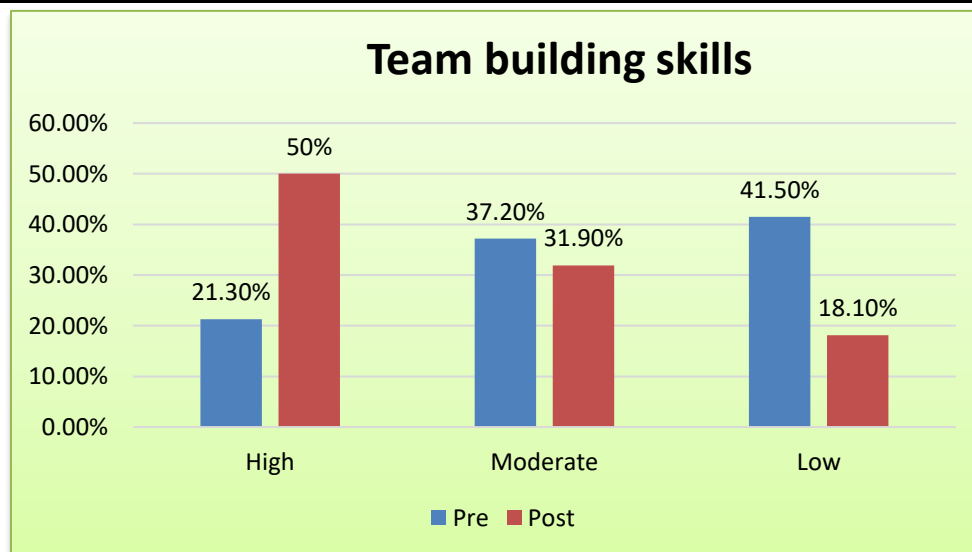
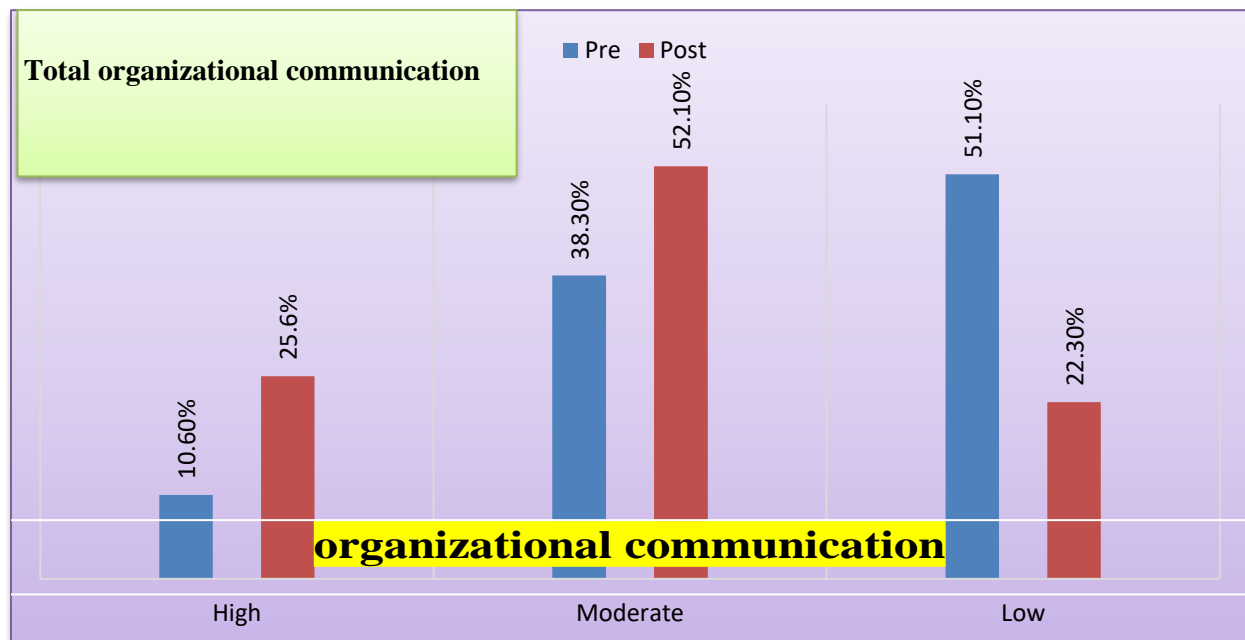
**Figure (2)** level of studied nurses according to their total compliance of team building skills (n=94).

Table (4): Percentage distribution of the studied nurses according to their total organizational communication (n=94).

Items	Pretest		Post-test		X ²	P
	Mean	SD	Mean	SD		
1.communication climate	28.42	6.31	32.24	4.21	0.87	0.35
2. supervisors communication	17.41	3.54	20.59	2.1	4.35	0.04*
3.Horizontal communication	18.6	3.19	22.26	1.35	6.97	0.02*
4- subordinate communicate)	28.78	6.29	34.12	3.45	5.78	0.032*
5- personal feedback	15.14	2.97	16.51	1.48	1.85	0.07
6- organizational perspective	13.82	3.49	15.1	2.07	1.23	0.12
7- organization integration	13.46	3.24	14.34	3.18	0.98	0.21
8- media quality	23.04	3.65	24.33	2.67	3.36	0.05*
Total	158.67	29.37	179.49	22.75	8.34	0.05*

**Figure (3)** level of studied nurses according to their total organizational communication (n=94)**Table (5):** Correlation between the studied variable (n=94).

		Total knowledge	Total team building skills
1) Total knowledge	r		
	p		
2) Total team building skills	r	.864	
	p	.000**	
3) Total perception of organizational communication	r	.126	.357
	p	.061	.05*

(**) Statistically significant at $p < 0.01$. r Pearson correlation

Discussion

A nursing team is made up of two or more staff nurses who collaborate to provide nursing care and manage critical patients. As with professional healthcare providers, teamwork among staff nurses is critical to providing high-quality nursing care, which has a favorable impact on job attractiveness and retention (**Goh et al., 2020**). Nursing work team is a group of nurses have complementary skills, equally committed to common goals and working in harmony like a symphony to provide well-organized comprehensive patient care. It is important for nursing work team to share information, knowledge, and experience, take the initiative to keep other team members informed and work as a unit. Building team is important not only for gathering the right nurses but also for getting them to collaborate together for the benefit of work (**Atia, 2018**).

In the present study, data on the demographic characteristics of the participants were evaluated. The percent of female participants were greater than males; this may be due to that entry of males in the field of nursing is new in the recent years in Egypt. Also, the majority of participants of the staff nurses were 31-40 years old: this indicates that Zagazig University Hospitals have financial issues and budgeting. married and more of them had technical institute of nursing & nursing experience more than ten years with (\bar{x} S.D 12.53±1.68), the most of staff nurses not attended team building program.

This finding was in agreement with **Sorour, et al., (2019)** who Studied Management Program about Strategies of Building Effective Work Team on Nursing Staff Performance at Intensive Care Units, most of participants were females with an average age of worked more than 30 years and Nursing staff not attended team building program. As well, the current result is supported by **Abou Shaheen and Elsaheed, (2023)** who studied Nursing Team Work Effectiveness and Organizational Commitment among Intensive Care Units Staff Nurses, most of participants were females with an average age of worked more than 30 years.

The finding of the current study reveals that the highest percentage of the staff nurses were unsatisfactory level of knowledge about teambuilding before implementation of the program. This could be due to one of the following reasons: they didn't have adequate training for teambuilding than before or negligence or lack of use teaching strategies that enhance teambuilding knowledge for staff nurses, and may be due to lack of interest from staff nurses to acquire new knowledge. Also it may be due to that the hospital administration did not allow for staff nurses to participate in the interest from staff nurses to acquire new knowledge. Also it may be due to that the hospital administration did not allow for staff nurses to participate in the teambuilding process.

After implementation of training program, the present study finding revealed that improvement in staff nurse knowledge level about teambuilding. Highest percentage of the staff nurses were satisfactory level of knowledge. This improvement could have attributed to utilizing creative teaching approaches that facilitated the interactions and collaboration in the learning process and the availability of relevant media that gave more illustration for understanding the text and frequent repetition and motivation them to share in the program. In addition to, during sessions the staff nurses showed an interest to the program content revealed by the teambuilding process. Moreover, these findings agreed with a study conducted by **Khademian et al., (2020)** who studies Effect of Training on the Attitude and Knowledge of Teamwork among Nursing Students. Teamwork knowledge of the participants was weak before the intervention, which was significantly improved after the intervention. In addition, the findings showed that training improved teamwork knowledge in the students. Similarly in other studies, training and workshops significantly increased the teamwork knowledge in medical, nursing, and other healthcare related students.

The result of the present study clarified that, there were statistical significant improvement in all types of organizational communication after implementation of the program this could be due to communication program is helpful in positively influencing staff nurses' organizational communication, and also due to they participate in decision making, they channel of communications at hospital, had more years of experiences, and they are emotionally attached to their organization. Also the highest percentage of nurses had a low level before implementation of the program, while they had a moderate level after program implementation

This result was agreed with **Chu et al., (2017)** who conducted a study An Interprofessional Communication Training Program to Improve Nurses' Ability to Communicate with Stroke Patients with Communication

Disorders to evaluate change in nurses' knowledge, attitudes and behaviors after an inter professional (IP) Communication training program, found that nurses' attitudes toward and knowledge about communication strategies improved after program implementation. In this respect, **Dehaghani et al., (2022)** entitled Assessing the Effectiveness of Interpersonal Communication Skills Training on Job Satisfaction among Nurses in Al-Zahra Hospital of Isfahan, and found the same results.

Conclusion

In the light of results of the current study, it can conclude that, there were statistically significant improvement on staff nurse's teambuilding knowledge and skills after program intervention. In addition, there was a statistically significant improvement in all types of organizational communication after program implementation.

Recommendations

- Enhance assertive communication between workers and managers in order to identify areas for improvement, planning and carrying out organizational changes together.
- In-service training and education programs must be a continuous process for refreshing and increasing nurse's knowledge and skills about the team building process especially newly employed nurses
- Professional organizations should create a climate that will support the autonomy of the profession and colleague solidarity without ignoring the traditional roles of nurses.

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