“Quantitative Analysis of prevalence level of occupational health hazards in adults”

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Abstract

Because they assist as well as execute greater outpatient operations than other clinicians, grown-ups make up the majority of clinicians and are more likely to be exposed to employment dangers. Adults are more vulnerable to workplace hazards and damages in medical companies due to their diverse and complicated surroundings. Adults face a variety of potential dangers such as chemical, biological, environmental, economic, and emotional danger in relation to the type of their current job, responsibilities, and obligations. Of the 150 sample, it has been found that the 49.33% of adults having mild prevalence level among adults towards occupational health while remaining adults i.e. 50.67% having mild prevalence in the same. It has also found that none of adults having severe prevalence of occupational hazards among adults. It is very important to aware and educate them associated with NGOs, Government Health care center.

Keywords: Assessment, Prevalence, Occupation health hazards and adults

Introduction

To ensure that people, households, and regions achieve or regain ideal wellbeing, professional nurses within the hospitals. As they consult and execute additional bedside operations than other doctors and nurses, adults make up the majority of healthcare professionals and are more likely to be exposed to employment dangers. Adults are more vulnerable to occupational risks and illnesses in insurers due to their diverse and complicated surroundings. Adults face a variety of occupational risks such as chemical, biological, environmental, mechanical, and emotional danger in addition to the nature of their job role, tasks, and obligations.

Stunning somatic and metabolic risks are connected to nursing. Professionals in industrialized countries have reportedly used less personal hard hats (PPGs) than those in developing countries because of a lack of awareness of the risks associated with their jobs. Although extremely effective antibiotics are available today, 14 to 15 adults are admitted to hospitals each year due to a variety of health issues that affect 40 to 50 adults annually. However, about nine workers get severe asthma attacks and respiratory problems per year. After the first week of commencing a welding work, some adults suffer of sneezing and breathing issues, such as throat inflammation.

Review of Literature

Alsheikh GYM et al., (2021), Stunning somatic and metabolic risks are connected to nursing. Professionals in industrialised countries have reportedly used less personal hard hats (PPGs) than those in developing countries because of a lack of awareness of the risks associated with their jobs. Although extremely effective antibiotics are available today, 14 to 15 adults are admitted to hospitals each year due to a variety of health issues that affect 40 to 50 adults annually. However, about nine workers get severe asthma attacks and respiratory problems per year. After the first week of commencing a welding work, some adults suffer of sneezing and breathing issues, such as throat inflammation.[3]

Ashok Kumar Thirunavukkarasu et al., (2021), conducted Stunning somatic and metabolic risks are connected to nursing. Professionals in industrialized countries have reportedly used less personal hard hats (PPGs) than those in developing countries because of a lack of awareness of the risks associated with their jobs. Although extremely effective antibiotics are available today, 14 to 15 adults are admitted to hospitals each year due to a variety of health issues that affect 40 to 50 adults annually. However, about nine workers get severe asthma attacks and respiratory

problems per year. After the first week of commencing a welding work, some adults suffer of sneezing and breathing issues, such as throat inflammation.[4]

Amare TG et al., (2021), conducted a cross- sectional study on exposure to occupational health hazards among nursing and midwifery students during clinical practice at Mekelle University, USA among 151 students. The findings of the study reported that the prevalence of psychosocial hazards, mechanical hazards, biological hazards and physical hazards was 140(92.7%), 128(84.8%), 100(66.2%) and 100(66.2%) respectively.[5]

Amal Ahmed Elibilgapy et al., (2019), conducted quasi-experimental research on occupational hazards and safety nursing guidelines for pediatric adults in the health care setting at Mansoura University, Egypt among 173 Pediatric adults. The study's findings showed that physical hazards exposure caused weariness, back discomfort, and leg pain in more than two thirds of the adults who were evaluated (77.9 percent, 69.5 percent and 56.8 percent respectively). 6 In the Bhubaneswar Block of the Khordha district in the state of Odisha, from January to December 2017, a cross-sectional study comprising 172 medical professionals working in 22 urban primary health centers and four community health centres was carried out. Semi-structured interview questions were used to gather pertinent data. Results The majority of participants—143 (83.1%)—reported seeing employment health risks, with 89 (51.7%) facing biological risks and 130 (75.6%) confronting non-biological risks. The most frequent causes of needlestick injuries (34.3%), stress (38.9%), assault (38.4%), and direct exposure to harmful specimens (32.6%)[7]

David Chinaecherem Innocent et al., (2022), conducted a cross- sectional study on Examination of common occupational hazards among health worker in a university healthcare center in South-eastern Nigeria. A total of 94 respondents who participated in the study and among the participants, 33.3% (31) of the respondents were aged 31 - 40 years, and the majority of the health workers, 43.6% (41) had stayed between 1 - 5 years. Also, 92.6% 87) of the health workers have heard of occupational hazards. The study showed that 84.0% (79) of health workers had good knowledge of common occupational hazards. Biological hazards among health workers are 47.9% (45) cuts and wounds, 29.8% (28) direct contact with contaminated specimens/hazardous materials, and 26.6% (26) sharp related injuries, while for non-biological hazards, 44.7% (42) have slipped, tripped or fallen, and 35.1% (33) have been stressed. Common safety measures include 86.2% (81) washing their hands regularly; 78.7% (74) using hand gloves; and 85.1% (80) agreeing they use face masks.[2]

Ewnetu Ayenew et al., (2022), conducted a cross- sectional study on prevalence of work- related health hazards and associated factors among health workers in public health institution of Gambella Town, western Ethiopia. Risks to industrial hygiene were present in 36.5 percent of clinical staff (95 percent CI: 31, 42). Working more than eight hours per day (AOR = 7.9, 95 percent CI: 3.1, 19.7), functioning the late shifts (AOR = 8.1, 95 percent CI: 2.5, 26.1), not having safety gear (AOR = 3.6, 95 percent CI: 1.5, 8.4), and not having effective leadership in the health facility (AOR = 5.2, 95 percent CI: 1.9, 14.5) were factors linked to the occurrence of.[1]

Rathish Rajan (2017) undertook a cross-sectional study to evaluate the risk variables and occurrence of occupational hazards among people working in the medical institute of medical sciences in Thiruvananthapuram. among 323 staff adults working in different setting of the hospital. The finding shows that 72.9% had needle stick injuries, 78.6% had musculoskeletal disorder, 38.4% had allergy and 39.3% staff adults had some sort of infections.[8]

Purpose of the study: The main aim of the study is to assess the prevalence of occupationalhazards.

Research methodology

Research approach and Design: - Quantitative descriptive approach and Descriptive Research design have been used in the study.

Setting of the study: - The study has been conducted in Narayana clinic, Gurugram

Population: - All the adults working in different wards of Narayana clinic, Gurugram

Sample: - All the adults working in different wards of Narayana clinic, Gurugram and who has present at the time

of data collection.

Sample Size: 150 adults worked at clinic.

S**ampling technique:** Probability simple random sampling technique has been used for this study.

Research variables: age, gender, qualification, designation, year of experience, department,occupational status, immunization, work load.

Criteria for selection of samples:

Inclusion criteria: All the adults who will be working in different wards (general wards, ICUs, Paediatric ward, pulmonary ward, OT, cancer ward, radiation therapy ward, chemo ward) of Narayana Clinic, Gurugram. All the adults who will be available and willing to participate for data collection.

Exclusion criteria: Those adults who were not available to participate in this research study.

Data collection process: The procedure will be carried out after obtaining prior permission from authorized person of Narayana clinic, Gurugram, Haryana. Data collection will be done for a period of 15 days. After getting written informed consent from the subjects, data will be collected by using self-structured questionnaires.

Validity of the tools: It will be determined by nursing and research expert.

Reliability of the tools: Split- half method

Characteristics of study: Administrations of Self structured questionnaire.

Type of study: Single centered.

Results

To analyze the prevalence of occupational health hazards among adults working in selected clinic, gurugram

Table 1 Prevalence of the different occupational hazards among the study participants

Hazard prevalence	Frequency (No.)		Percentage (%)	
	Yes	**No**	**Yes**	**No**
Biological Hazards				
a) Needle Stick Inquiry	137	63	68.5	31.5
b) Exposed with communicable diseases	84	116	42.0	58.0
c) Sick due to hospital environment	98	102	49.0	51.0
d) Cut or laceration while breaking glasses	158	42	79.0	21.0

Physical Hazards				
a) Back Pain while handling heavy patients	101	99	50.5	49.5
b) Cramps in leg due prolonged standing	119	81	59.5	40.5
c) allergy in the hands	90	110	45.0	55.0
d) slip or fall due to slippery floor	50	150	25.0	75.0
e) exposed to radiation	80	120	40.0	60.0
f) health affected due to sounds in wards	68	52	74.0	26.0
g) electric shock during handling electrical equipment	52	148	26.0	74.0
h) fatigue or tiredness due to overcrowding	109	91	54.5	45.5
Chemical Hazards				
a) skin allergy	86	114	43.0	57.0
b) irritation in the eyes/nose and pharynx	101	99	50.5	49.5
c) exposed to anaesthetic materials	63	137	31.5	68.5
d) allergic reactions	92	108	46.0	54.0
Psychological Hazards				
a) sleeping deprivation	122	68	61.0	39.0
b) anxiety and stress	130	70	65.0	35.0
c) Feeling of emptiness	60	140	30.0	70.0
d) verbal abuse or physical violence by patients relative	128	72	36.0	64.0
Social Hazards				
a) Family relation difficulties'.	57	143	28.5	71.5
b) Insensitivity towards others	53	147	26.5	73.5
c) Social life	63	137	31.5	68.5

difficulties ***d)*** Uncontrolled aggressiveness	58	142	29.0	71.0

a) Regarding the Biological hazards, among the 200 staff adults, 68.5% had needle stick injuries while the remaining 31.5% percent never had needle stick injuries. 42% of adults were exposed with communicable diseases whereas 58% never exposed with such diseases. Furthermore, 49% participants of the study became sick and remaining 51% doesn't felt sick due to hospital environment. Around 79% adults had cut or laceration while breaking glasses while 21% doesn't had the same.

b) In regard to Physical Hazards, 50.5% adults had while 49.5% hadn't had back Pain while handling heavy patients. 59.5% had cramps in their legs due prolonged standing and 40.5% doesn't have the same issue, 45% participants had allergy in the hands whereas 55% adults don't have it. Small portion of adults around 25% slip or fall due to slippery floor while 75% doesn't slip or fell due to same reason. 60% were not exposed to radiation whereas 405 were exposed the same. Around 74% adults' health affected and 26% participants' health wouldn't be affected due to sounds in wards. Around 26% had electric shock during handling electrical equipment while 74% doesn't faced such shock in handling such equipment's. 54.5% adults were suffered from fatigue or tiredness due to overcrowding while remaining 45.5% doesn't suffered the same concerns.

c) In the above table, the chemical hazards reveals that among the 200 staff adults, 43% had skin allergy while the remaining 57% percent never had skin allergy. 50.5% of adults were gets irritation in their eyes/nose and pharynx whereas 49.5% never gets irritation from the same. Furthermore, 31.5% participants of the study were exposed to an aesthetic materials and remaining 68.5% were not exposed with the same materials. Around 46% adults had allergic reactions while breaking glasses while 54% doesn't had such reactions.

e) The above table reveals in psychological hazards section that 61% adults had issues like sleeping deprivation while the remaining 39% percent never had the same issue. 65% of adults were suffered from anxiety and stress whereas 35% never gets anxiety and stress in their life. Furthermore, 30% participants of the study had a feeling of emptiness and remaining 70% doesn't have such feeling. Around 36% adults had faced verbal abuse or physical violence by patients relative while 64% doesn't faced such violence in their environment.

e) According to the Social Hazards statistical descriptive statistics in the above table, 28.5% adults had Family relation difficulties 'while the remaining 71.5% percent never had the same issue. 26.5% of adults become Insensitivity towards others whereas 73.5% never felt the same for others. Furthermore, 31%.5 participants of the study had difficulties in social life and remaining 68.5% doesn't have such difficulties in the same scenario. Around 29% adults had no controlled on anger while 71% had controlled on their anger.

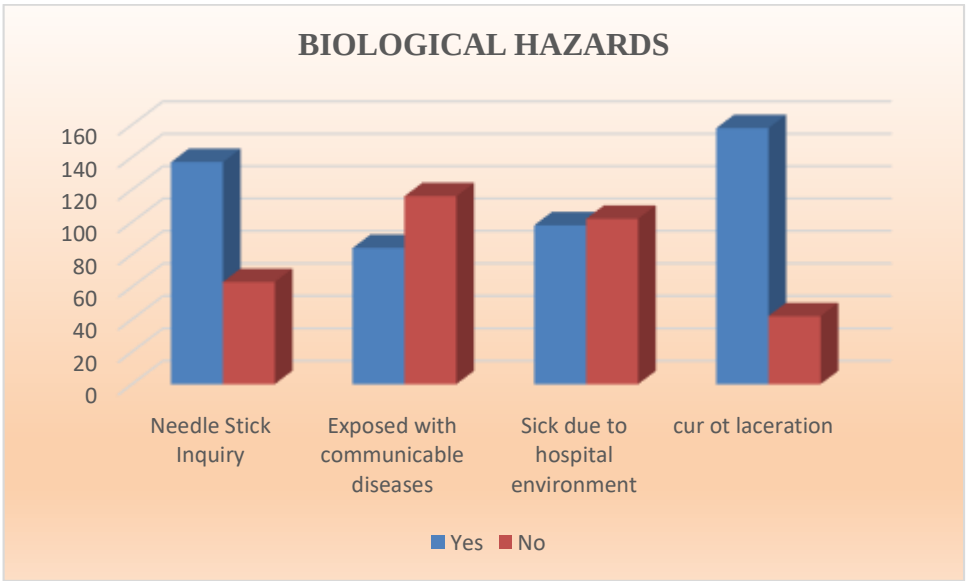

Figure 1

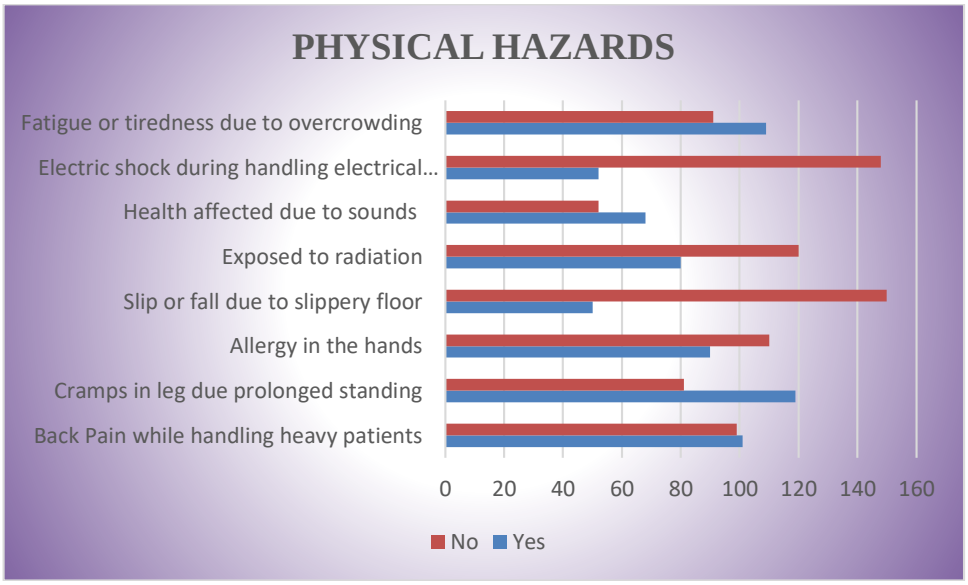

Figure 2

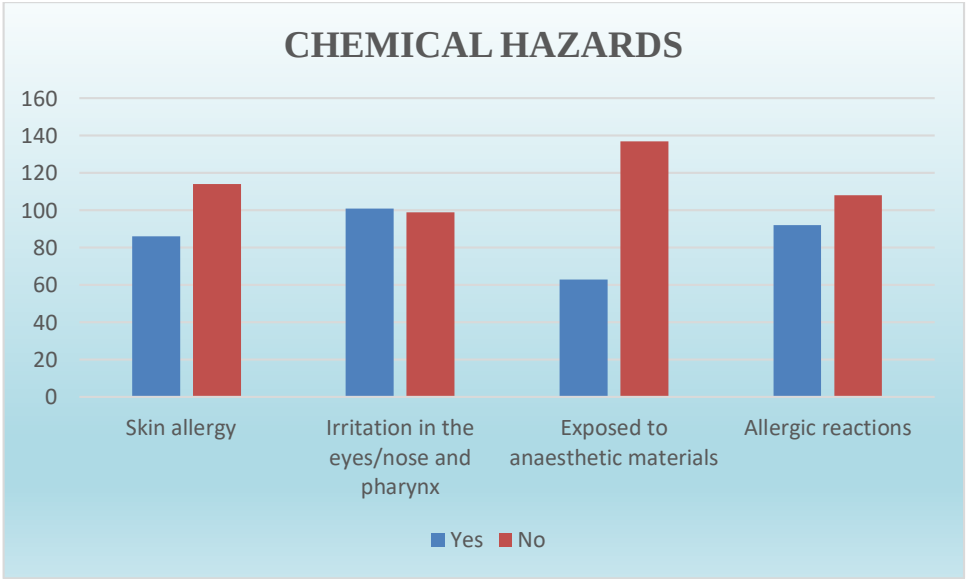

Figure 3

Figure 4

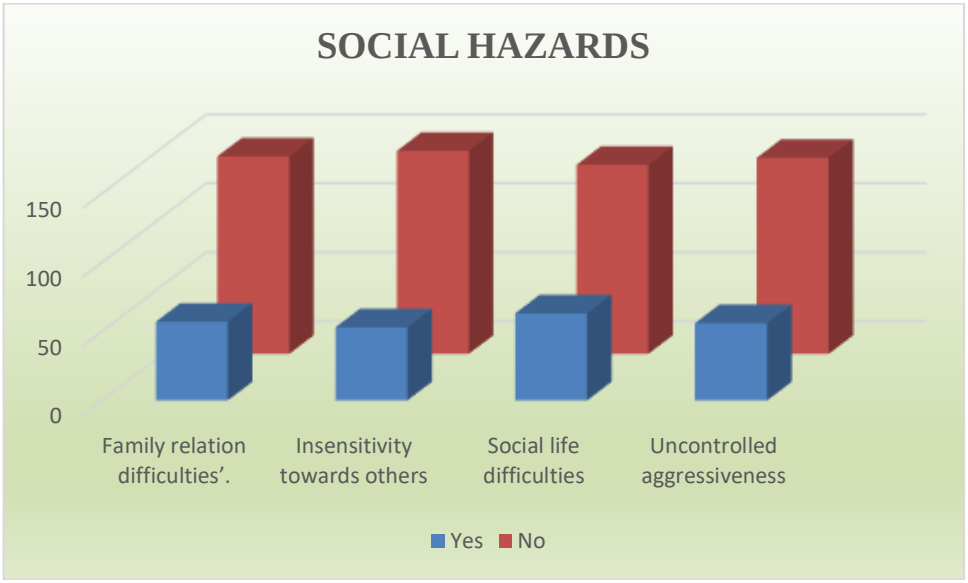

Figure 5

Table 3 To assess the prevalence of occupational health hazards among adults

Prevalence Level		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mild	167	83.5	83.5	83.5
	Moderate	33	16.5	16.5	100.0
	Severe	-	-	-	-

The present table projected the category of prevalence level with marks scored provided by selected adults regarding occupational health hazards. The prevalence category has been allocated on the basis of total 24 (100%) marks which further divided into 5 parts of prevalence levels. The existed prevalence level under 3 categories such as mild, moderate and severe was measured in a given study.

In the present study, the level of prevalence among adults regarding occupational health hazards was assessed about 167 (83.5%) adults who had mild prevalence regarding occupational hazards, about 33 (16.5%) adults who had moderate prevalence regarding the hazards. None of them were having severe prevalence of occupational hazard among the staff adults.

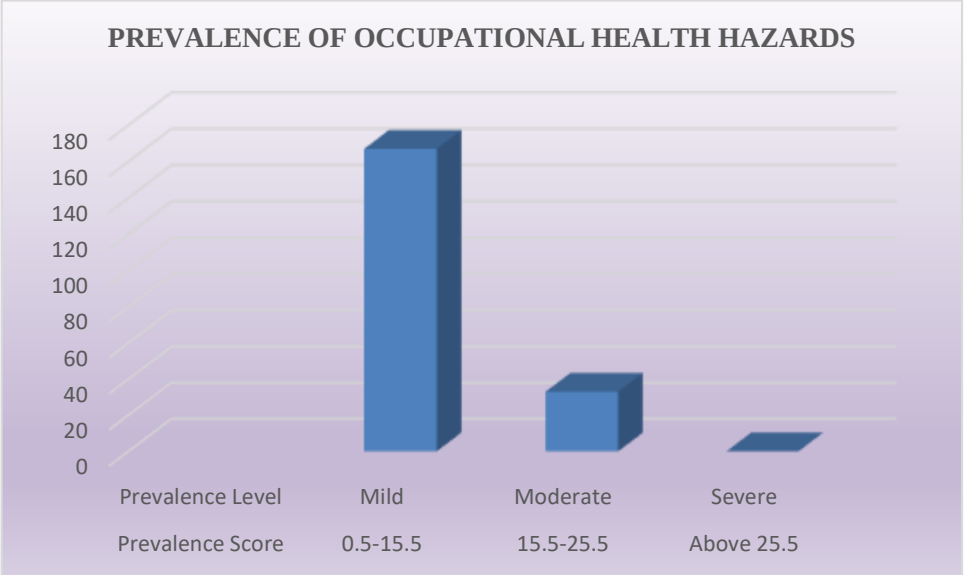

Figure 6

Table 4. Mean, Median, SD and Mean % of prevalence scores among staff adults

Domain	Max Score	Range	Mean	Median	SD	Mean%
Prevalence Score	24	23	10.79	11	4.73	53.95

In the present study, the mean, standard deviation, median and the mean percentage was calculated on the prevalence scores regarding occupational health hazards among staff adults. The mean score for the prevalence of adults was 24 with a mean % of 53.95 whereas a median and standard deviation was 11 and 4.73 respectively.

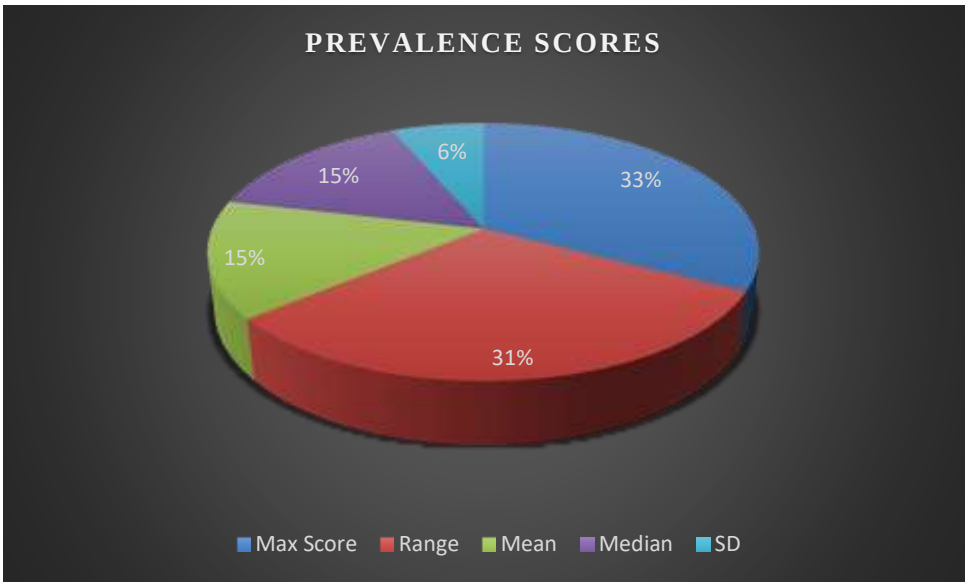

Figure 7

Conclusion

The main purpose is to investigate the prevalence level of occupational health hazard among the adults. The analysis has been done using SPSS IBM 22.0 version. It has been found that half the adults having moderate prevalence of

occupational health hazards and rest having mild prevalence among adults. Because they assist and perform greater bedside operations than other healthcare workers, adults make up the majority of healthcare professionals and are more likely to be exposed to employment dangers. Adults are more vulnerable to occupational risks and injuries in healthcare companies due to their diverse and complicated surroundings. Adults face a variety of occupational risks such as chemical, biological, environmental, physical, and cognitive danger in addition to the nature of their job role, duties, and obligations.

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