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Comparison of Quality of Life and Comfort Levels in Patients with Three Different Chronic Diseases

Üç Farklı Kronik Hastalığı Olan Hastalarında Yaşam Kalitesi ve Konfor Düzeylerinin Karşılaştırılması

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COMPARISON OF QUALITY OF LIFE AND COMFORT LEVELS IN PATIENTS WITH THREE DIFFERENT CHRONIC DISEASES

ABSTRACT

Aim: This research was conducted to compare the quality of life and general comfort levels of patients with three different chronic diseases.

Method: The study was conducted with cross-sectional design. The research sample consists of adult patients who were treated in the chest diseases service, hemodialysis unit, cardiology service, coronary intensive care unit of two hospitals. The study consisted of 466 patients. In the study, data were collected from the patients with the survey, Quality of Life General (WHOQOL-BREF) and General Comfort Scale.

Results: In the study, when looking at the effect of the WHOQOL-BREF on General Comfort level in 3 chronic disease groups, it is seen that the biggest effect is 21.4% Chronic Obstructive Pulmonary disease (COPD)patients, this is followed by Chronic Renal Failure (CRF) patients with 18.2%, Heart Failure (HF) patients with 14.6%.

Conclusions and Suggestions: In the study, it was found that socio-demographic characteristics and quality of life affect the level of General Comfort in HF patients, COPD and CRF patients.

Keywords: Chronic Obstructive Pulmonary; Heart Failure; Chronic Kidney Failure; Quality of Life; Comfort Level.

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ÜÇ FARKLI KRONİK HASTALIĞI OLAN HASTALARINDA YAŞAM KALİTESİ VE KONFOR DÜZEYLERİNİN KARŞILAŞTIRILMASI

ÖZ

Amaç: Bu araştırma üç farklı hastalığa sahip hastaların yaşam kalitelerinin genel konfor düzeylerine etkisini belirlemek amacıyla planlanmıştır.

Yöntem: Araştırma kesitsel desende yapılmıştır. Araştırma örneklemini iki hastanenin göğüs hastalıkları servisi, hemodiyaliz ünitesi, kardiyoloji servisi, koroner

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yoğun bakım ünitesinde tedavi gören yetişkin hastalar oluşturmaktadır. Çalışma 466 hastadan oluşuyordu. Araştırmada hastalardan anket, Yaşam Kalitesi Genel (WHOQOL-BREF) ve Genel Rahatlık Ölçeği ile veriler toplanmıştır.

Bulgular: Çalışmada 3 kronik hastalık grubunda WHOQOL-BREF'in Genel Konfor düzeyine etkisine bakıldığında en büyük etkinin %21.4 Kronik Obstrüktif Akciğer Hastalığı (KOAH) hastaları olduğu, bunu Kronik Böbrek Yetmezliği takip ettiği görülmektedir. (KRF) hastaları %18,2, Kalp Yetmezliği (KY) hastaları %14,6.

Sonuçlar ve Öneriler: Çalışmada KY, KOAH ve KBY hastalarında sosyodemografik özelliklerin ve yaşam kalitesinin Genel Rahatlık düzeyini etkilediği bulunmuştur.

Anahtar Kelimeler: Kronik Obstrüktif Akciğer, Kalp Yetmezliği, Kronik Böbrek Yetmezliği, Yaşam Kalitesi, Konfor Düzeyi.

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INTRODUCTION

Today, chronic diseases are encountered commonly and also the prevalence of morbidity has increased in the general population within the last ten years (Ge et al., 2019).

Heart disease, stroke, cancer, respiratory disease and diabetes are primary causes of death (63%) worldwide.2 Also chronic diseases lead to various negative outcomes, social problems and economic costs in individuals, society and the healthcare system (Gómez Palencia et al., 2016; Morrissey, Viola & Shi, 2014).

For people with chronic diseases, the ultimate goal of healthcare services is to enhance the general health condition of patients and their quality of life (Ge et al. 2019; Kumsar & Taşkın Yılmaz, 2014). Among such diseases, CRF comes to the forefront as one of the main causes of failure and mortality worldwide. The literature shows that these patients have a medium quality of life (Ku et al., 2012; Lee et al., 2005).

People with heart failure (HF), whose number gradually increases across the world, have a significantly impaired quality of life compared to healthy people or those with other chronic diseases. A bad quality of life is associated with higher hospitalization and mortality rates (Heo et al. 2009). The studies have revealed that HF patients usually have a low or medium quality of life (Aburuz, 2018; Bekelman et al., 2007; Coelho et al. 2005; Hoekstra et al., 2013; Seto et al., 2011). COPD whose prevalence gradually increases in the present day, decreases people's quality

of life (Farag et al. 2018). The studies have indicated that people with COPD have a low quality of life (Farag et al. 2018; Ivziku et al., 2019; Milanowska et al. 2017).

Patients have different comfort needs at physical, psychological, emotional, social and environment levels (Marques et al., 2016). Chronic diseases and functional problems associated with these diseases require planning, applying, and evaluating holistic nursing interventions. Providing a person's comfort, which exists as a current and important concept, is one of the building stones of holistic nursing care practices (Yücel & Ergin, 2020). As people's comfort level increases, their quality of life enhances (Arslan & Şener, 2009). One of the dimensions of the comfort concept is psychospiritual comfort. This dimension comprises of psychological, emotional and spiritual beliefs. Human needs within the scope of the abovementioned dimension should be determined and met by nursing interventions (Yücel, 2011).

Symptoms experienced by patients with renal failure affect their personal independence negatively and restrict their daily life from most aspects. All these negativities affect patients' quality of life and comfort level negatively. As a result of a study, it was found that hemodialysis patients had a medium comfort level (Gülay et al., 2020). Negative symptoms experienced by patients with heart failure cause a decrease in their comfort (Chen et al., 2013). It is crucial to provide or increase the comfort of COPD patients to cope with disease symptoms effectively. In a previous study, it was found that COPD patients had a comfort level above average (Kütmeç Yılmaz, 2020). Knowing the comfort level of patients is an important aspect of care practices and it directs the care provided for patient needs (Coelho et al., 2016).

Removing or decreasing conditions which disturb patients can be possible only by increasing the comfort. It is known that patients with a high comfort level get better more quickly and can cope with the disease process more easily (Kütmeç Yılmaz, 2020). Comfort level is crucial for these patients. It is thought that quality of life is effective on the comfort level of patients. However, upon literature review, no study investigating the effect of quality of life on the comfort level of these patients has been encountered. This study is significant because it is a pioneer study in the literature. Moreover, it is believed that the results of the study will contribute to nurses providing care to these patient groups and to the literature in nursing field.

Aims

This research was conducted to compare the quality of life and general comfort levels of patients with three different chronic diseases.

METHODS

Design: The study was conducted with Descriptive design.

Subjects and settings: The study was conducted in XX University XXX Medical Center and Training and Research Hospital in the city center of XXX between January- October 2021

The population of the study comprised patients with heart failure, chronic renal failure, chronic obstructive pulmonary disease patients who were hospitalized in XX University XXX Medical Center in the city center of XXX. The sample of the study comprised adult patients receiving treatment in the Chest Diseases Service, Hemodialysis Unit, Cardiology Service, Coronary Intensive Care Unit in the two hospitals. The sample of the study consisted of 466 patients who were determined via the power analysis at 95% confidence interval, significance level of 0.05, effect size of 0.25 and population representation power of 0.95. The patients were chosen from the population via the improbable random sampling method.

Inclusion Criteria

- Volunteering to participate in the research
- Being diagnosed with Heart Failure, Chronic Renal Failure and COPD at least 6 months ago
- Individuals over the age of 18

Data Collection Tools

Survey Form: In the questionnaire form, there were 13 questions containing the socio-demographic characteristics of the patients.

Quality of Life Instrument (WHOQOL-BREF): The patients' quality of life was evaluated using the Turkish short form of the WHO Quality of Life Scale. The validity and reliability of the Turkish version was determined by Eser et al. made by The scale consists of 26 questions and 4 fields. It includes the physical (7 items), mental (6 items), social (3 items), and environmental (8 items) areas. It is shown that the higher the field scores, the higher the quality of life. A total score for the scale is not calculated. Scores of 4-20 were used in this study (Eser et al., 1999; Eser et al., 1999). In the study, the Cronbach's alpha coefficient was found to be 0.87.

Shortened General Comfort: The Turkish validity of the scale developed by Kolcaba in 2006 was done by Seyhan et al. The scale consists of the sub-dimensions of relief, relaxation and overcoming problems. The average value is found by divi-

ding the total score in the scale by the number of scale items. The lowest 1 and the highest 6 comfort points are taken on the scale. A score between 28-168 is taken from the scale. The reliability of the General Comfort Scale Short Form; Cronbach's alpha is 0.82 (Çıtlık, Çevik & Özen, 2018). In our research, Cronbach's alpha is 0.80

Data Collection: The data of the study were collected conducting face-to-face interviews with the patients in sickrooms in the Chest Diseases Service, Hemodialysis Unit, Cardiology Service, Coronary Intensive Care Unit in XX University XX Medical Center during working hours on weekdays between January- October 2020. Each interview lasted for approximately 15-20 minutes. The data collection forms were read by the researchers to the patients without making any comment and the answers given were marked.

Variables of the Study

- Independent variable: Quality of life and socio-demographic variables
- Dependent variable: General comfort level

Statistical analysis: The SPSS package program was used in the statistical analysis of the data. Percentage, standard deviation, mean, and regression analysis were used to assess the data. The statistical significance level was accepted to be $p<0.05$.

Ethical Considerations: The research was approved by the İnönü University Ethics Committee (2021/1594). Verbal consent was obtained from the patients before starting the study.

RESULTS

Distribution of introductory characteristics according to patient groups in Table 1.

Table 1. Distribution of introductory characteristics according to patient groups (N =466)

Features	HF		Chronic Renal Failure		COPD	
	N=135	%	N=202	%	N=134	N%
Gender						
Woman	68	50.4	102	50.5	32	23.9
Male	57	49.6	100	49.5	102	76.1
Marital Status						
The married	125	92.6	184	91.1	121	90.3

Single / Divorced	10	7.4	18	8.9	13	9.7
Education Level						
Illiterate	27	20.0	25	12.4	35	26.1
Literate	33	24.4	73	36.1	18	13.4
Primary Education	49	36.3	65	32.2	56	41.8
High School	20	14.8	30	14.9	23	17.2
University	6	4.4	9	4.5	2	1.5
Income Rate						
Good	21	15.6	88	43.6	20	14.9
Middle	109	80.7	102	50.5	110	82.1
Bad	5	3.7	12	5.9	4	3.0
Presence That Helps Care						
Yes	133	98.5	190	94.1	105	78.4
No	2	1.5	12	5.9	29	21.6
Assistant Person						
Spouse	75	55.6	138		71	53.8
Child	47	34.8	37		32	23.9
Other Family Members	13	9.6	14		9	6.7
Smoking						
Yes	25	18.5	15	7.4	8	6.0
No	110	81.5	116	57.4	126	94.0
Presence of Other Chronic Diseases						
Yes	118	87.4	129	63.9	104	77.6
No	17	12.6	73	36.1	30	22.4
Age	63.44±14.69		51.22±14.34		65.83±11.08	
Duration of Diagnosis (Year)	6.10±5.43		3.01±2.58		7.06±8.36	

Table 2. Score Average Comparison of the patient groups on Quality of Life and general comfort scales

Features	Heart Failure	Chronic Renal Failure	Chronic Obstructive Pulmonary Disease	p
	Mean ±SD	Mean ±SD	Mean ±SD	
Physical Domain	36.89±809	48.09±11.26	45.57±9.72	F=50.986 **p=0.000**
Psychological Domain	43.55±14.17	53.25±12.19	52.20±10.49	F=26.829 **p=0.000**
Social Domain	56.66±18.39	58.41±18.86	56.77±17.43	F=.489 p=0.614
Environmental Domain	58.02±9.17	59.97±13.11	63.87±13.21	F=8.005 **p=0.000**
Relief Comfort	22.94±2.45	24.45±2.89	21.62±3.38	F=38.225 **p=0.000**
Relaxation Comfort	23.89±1.77	25.76±2.27	23.80±3.22	F=34.412 **p=0.000**
Transcendence Comfort	27.96±2.63	28.88±2.41	26.26±3.30	F=36.371 **p=0.000**
General Comfort Questionnaire	74.71±4.96	79.10±5.60	71.71±7.94	F=59.485 **p=0.000**

It was determined that there was a statistically significant difference among the patient groups in terms of the physical, psychological and environment domain subscale mean scores of the WHOQOL-BREF. There was a statistically significant difference among the patient groups in terms of the General Comfort Questionnaire and the relief, ease, and transcendence subscale mean scores (p=0.000) (Table 2).

Table 3. The Effect of Quality of Life on the Comfort Level

Model	Heart Failure		Chronic Renal Failure		Chronic Obstructive Pulmonary Disease	
	Beta	Sig	Beta	Sig	Beta	Sig
Physical DomainW	-.317	**.010**	-.226	**.000**	-.173	**.000**
Psychological Domain	.016	.899	-.345	**.012**	-.163	.081
Social Domain	-.250	**.014**	.281	**.001**	.337	.282

Environmental Domain	.172	.138	-.091	**.003**	-.225	.050
p	R sqare=.146 F=4.653 **p=.002**		R sqare=.182 F=10.969 **p=.000**		R sqare=.214 F=7.675 **p=.000**	

In Table 3, the WHOQOL-BREF on the general comfort level in the patient groups was examined. It was determined that the effect of the variables examined on the general comfort level was significant at the level of $p<0.05$. The effect of WHOQOL-BREF on the general comfort level in patients with heart failure was 14.6% ($R^2=0.146$) and this result was statistically significant. The physical domain and social domain subscales were individually effective on the general comfort level ($p<0.05$).

It was determined that the effect of WHOQOL-BREF on the general comfort level in patients with chronic renal failure was 18.2% ($R^2=0.182$) and this result was statistically significant. Physical, social, psychological and environment domain subscales were individually effective on the general comfort level ($p<0.05$).

It was found that the effect of quality of life on the general comfort level in patients with COPD was 21.4% ($R^2=0.214$) and this result was statistically significant. Physical domain subscale was individually effective on the general comfort level ($p<0.05$).

Table 4. General Comfort Level Predictors

Model	**Heart Failure**		**Chronic Renal Failure**		**Chronic Obstructive Pulmonary Disease**	
	Beta	**Sig**	**Beta**	**Sig**	**Beta**	**Sig**
Age	.195	.092	.074	.521	.039	.720
Gender	-.389	**.000**	-.140	.080	-.036	.760
Marital Status	-.191	**.021**	-.098	.287	-.037	.688
Education Level	.035	.729	.036	.679	-.104	.403
Income Status	-.115	.173	-.273	**.002**	.055	.560
Number of Children	.178	**.049**	-.057	.589	-.167	.141
The Presence of the Assistant	-.148	.078	.120	.169	-.061	.598
Duration of Diagnosis	-.108	.195	.144	.063	.321	**.001**
Smoking	.366	**.000**	.249	**.001**	-.024	.803

Presence of Other Chronic Diseases	.081	.317	-.099	.171	.201	**.029**
Physical Domain	-.496	**.000**	-.020	.845	-.150	.156
Psychological Domain	-.133	.219	-.347	**.001**	-.345	**.002**
Social Domain	-.143	.094	.162	**.109**	.350	**.001**
Environmental Domain	.421	**.000**	-.265	**.007**	-.138	.260
p	Rsqare=.557 F=7.451 **p=.000**		R sqare=.295 F=4.521 **p=.000**		R sqare=.490 F=4.467 **p=.000**	

In Table 4, the effect of socio-demographic characteristics and WHOQOL-BREF on the general comfort level in the patient groups was examined. It was determined that socio-demographic characteristics and quality of life affected the general comfort level in patients with heart failure by 55.7% (R^2=0.557) and this result was statistically significant. Gender, marital status, number of children and smoking status among socio-demographic characteristics were individually effective on the general comfort level along with the quality of life subscales ($p<0.05$).

It was observed that socio-demographic characteristics and quality of life affected the general comfort level in patients with chronic renal failure by 29.5% (R^2=0.295) and this result was statistically significant. Income status and smoking status, which are among socio-demographic characteristics, were individually effective on the general comfort level along with the quality of life subscales ($p<0.05$).

It was found that socio-demographic characteristics and WHOQOL-BREF affected the general comfort level in patients with chronic obstructive pulmonary disease by 49% (R^2=0.49). Diagnosis duration and having other chronic diseases, which are among socio-demographic characteristics, were individually effective on the general comfort level along with the WHOQOL-BREF subscales ($p<0.05$)

DISCUSSION

This study, it was determined that there was a statistically significant difference among the patient groups in terms of mean scores of all of the subscales of the WHOQOL-BREF. Additionally in the study it was found that among 3 different chronic disease groups obtained the lowest score from all subscales of the Quality of Life Instrument. As there is no study in the literature examining the WHOQOL-BREF of patients in different chronic disease groups, the study was not discussed with the literature.

This study, it was observed that among all domains of the WHOQOL-BREF, the patients with heart failure had medium scores from the psychological, social and environment domains and the low scores from the physical domain. Also, the patients had the highest scores from the environment domain, which was followed by the social domain, psychological domain, and physical domain, respectively. In their study Aggelopoulou et al., determined that the patients with heart failure had medium scores in the physical and psychological domains of the WHOQOL-BREF (Aggelopoulpou et al., 2017). Also in their study, Wang et al., determined that the patients with heart failure had medium scores in the physical and emotional domains of the WHOQOL-BREF (Wang et al., 2017). In their study, Silavanich et al., determined that patients with heart failure had good scores in the physical and emotional domains of the WHOQOL-BREF, which is not compatible with the present study.(Silavanich et al., 2019) In their study, Beery et al., found that patients had a low level of emotional and physical quality of life, which is not compatible with the present study (Beery et al., 2002) .

This study, it was observed that among all domains of the WHOQOL-BREF, the patients with CRF had medium scores from the physical, psychological, social, and environment domains. Also, the patients had the highest scores from the environment domain, which was followed by the social domain, psychological domain and physical domain, respectively. In a study conducted by Alhajim, it was determined that all domains of the WHOQOL-BREF, had a negative effect on the quality of life of patients undergoing hemodialysis and the physical domain was affected the most (Alhajim, 2019). In a study conducted by Poppe et al., with patients with chronic renal failure, they determined that the patients had a medium physical and mental quality of life (Poppe et al., 2013).

This study it was observed that the patients with COPD had medium scores from physical, psychological, social and environment domains of the WHOQOL-BREF. Also, the patients had the highest scores in the environment domain, which was followed by the social domain, psychological domain and physical domain, respectively. In their study, Ivziku et al., determined that patients with COPD had a low physical and mental life capacity (Ivziku et al., 2019). In a study conducted by Blinderman et al., on COPD patients, they found that the patients had a medium quality of life (Blinderman et al., 2009).

This study, it was determined that there was a statistically significant difference among the patient groups in terms of the General Comfort Questionnaire and the relief, ease, and transcendence subscale mean scores. As one represents the lowest comfort and six represents the highest comfort in the General Comfort Questionnaire, the study revealed that the patients in all four disease groups had a general comfort below average. Moreover, it was determined that among the four disease

groups the highest comfort level was observed in patients with CRF, which was followed by the HF and COPD patients, respectively.

This study, it was determined that the patients with heart failure had a comfort below average in the General Comfort Questionnaire and the relief, ease, and transcendence subscales. Also it was seen that the patients had the highest score in the transcendence subscale, which was followed by the ease and relief subscales, respectively. As there is no study in the literature examining the general comfort of patients with heart failure, the study was not discussed with the literature.

This study, it was determined that the patients with chronic renal failure had a comfort below average in the General Comfort Questionnaire and the relief, ease, and transcendence subscales. Some studies in the literature have found that hemodialysis patients have a medium comfort level, which is compatible with the present study (Gülay et al., 2020; Melo et al., 2017; Orak, Pakyüz & Kartal, 2017). Considering some studies in the literature investigating the comfort level of patients receiving HD treatment, it is seen that the comfort level is low before the intervention (Estridge et al., 2018).

This study, it was determined that the patients with COPD had a comfort below average in the General Comfort Questionnaire and the relief, ease, and transcendence subscales.

In a study conducted by Hohenstein with the elderly suffering from chronic diseases like heart failure, COPD and chronic renal failure it was determined that the elderly had a medium comfort level (Hohenstein, 2018). Accordingly the study finding shows a similarity with the findings of patients with chronic disease in the literature.

This study, the effect of quality of life on the general comfort level in 3 chronic patient groups was examined and the greatest effect was observed in the patients with COPD (21.4%), which was followed bypatients with CRF(18.2%) and patients with HF (14.6%).

In the study, it was determined that the socio-demographic characteristics and quality of life (physical and environment domains) of the patients with heart failure affected their comfort level by 55.7%.

It was determined that the socio-demographic characteristics (income status and smoking status) and quality of life (psychological and environment domains) of the patients with chronic renal failure affected their comfort level by 29.5%. In their study, Gülay et al., determined that the patients' gender and level of income were significantly correlated with their comfort level (Gülay et al., 2020). In their

study, Turgay et al., found that gender and level of income affected the comfort level of the patients (Turgay, Tutal & Sezer, 2017). In their study Melo et al., reported that characteristics such as age, marital status, educational background, gender, level of income, social support and comorbidities affected comfort (Melo et al., 2017).

In their study, Santos et al., determined that pain, severity of pain, constipation, duration of hemodialysis, marital status, educational background, level of income and anxiety affected the general comfort level of patients undergoing hemodialysis (Santos et al., 2020).

It was determined that the socio-demographic characteristics (duration of diagnosis and presence of another chronic disease) and quality of life (psychological and social domains) of the patients with COPD affected their comfort level by 49%.

In the study of Kütmeç with COPD patients; It was determined that there was a statistically significant difference between the socio-demographic characteristics of the patients and the variables of dyspnea severity and the mean GCS total score. In the same study, it was determined that the General comfort levels of patients diagnosed with COPD for 11 years or more were lower than those under 11 years (Kütmeç, 2020). In their study, Kim and So found that quality of life and comfort level of cancer patients were positively correlated. (Kim & So, 2007).

Accordingly, the studies conducted on individuals with different chronic diseases revealed that the socio-demographic characteristics of the patients affect their general comfort level. These results are also compatible with our study.

CONCLUSION

- In the study, it was determined that chronic obstructive pulmonary patients had the lowest scores on the General Comfort Scale and the Relaxation and Superiority sub-dimension score averages.
- In the study, a significant difference was found between the physical, mental and environmental sub-dimensions of the WHOQOL-BREF and the General Comfort Scale and all sub-dimensions between the three disease groups.
- In the study, it was determined that the socio-demographic characteristics and quality of life affected the general comfort level of patients with HF, COPD and CRF.

Based on the results, it is recommended that comfort interventions be planned for individuals with chronic diseases and nursing interventions be implemented to increase their quality of life with a holistic approach. As there is a limited number of related studies it can also be recommended that similar studies be conducted in larger sample groups and in different periods of time in order to increase comfort in chronic diseases. To increase the quality of life and comfort of COPD patients; During the follow-up and treatment process, patients' perceptions of the disease, their symptoms, and their views on the disease should be questioned and evaluated. Interventions should be implemented to change the negative perceptions of the patients, to eliminate the problems related to the disease and treatment, and to increase the adaptation to the disease.

Information training can be given to caregivers of patients with COPD, Heart Failure and Chronic Kidney Failure on treatment, care and interventions aimed at increasing the quality of life and comfort of the patients by increasing the exercise capacity, drug therapy and rehabilitation programs used, relief of symptoms, regulation of lung-heart-kidney functions, exercise capacity.

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Declarations consent to participate

All participants were properly instructed and gave online their informed consent to participate.

Consent for publication

All participants were properly instructed that data gained in the present study will be used for publication in an anonymous form and gave online their informed consent for publication.

Conflict of interest

No conflict of interest has been declared by the authors.

Authors' Contributions

Design of Study: AÜ (%40), GD (%40), EB (%20)

Data Acquisition: AÜ(%40), DG (%40), EB (%20),

Data Analysis: AÜ (%50), EB (%50)

Writing Up: AÜ(%50), DG (% 50),

Submission and Revision: AÜ (%60), GD (%40)

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