

**THE RELATIONSHIP BETWEEN
POLYPHARMACY AND LOSS OF APPETITE
IN OLDER PATIENTS**



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PLAN

 **Loss of Appetite and Malnutrition**

 **Polypharmacy**

 **Aim and Importance of Research**

 **Material and Method**

 **Results**

 **Discussion**

 **Conclusion**

 **References**

**Pathological
Changes**

- **GIS Diseases**
- **Demans**
- **Inflammation (IL-1, IL-6, TNF- α)**

• **DRUGS** → ?

**Enviromental
Changes**

- **Poverty**
- **Financial constraints**
- **Social isolation**

Physical Activity↓

**Psychological
Changes**

- **Depression**
- **Apathy**

**Physiological
Changes**

**Changes in
Gastrointestinal
Tract**

- **Gastric emptying**
- **Intestinal hormones**
- **Ghrelin**
- **Taste and smell**
- **Oral**

Hypothalamus

- **Anorexic
Neurotransmitters↑**

APPETITE↓

MORBIDITY↑

MORTALITY ↑

POLYPHARMACY

❖ Use of 5 or more drugs

Drug Side Effects

- Dry mouth
- Metallic taste
- Nause
- Vomiting
- Constipation
- Diarrhea

HYPERPOLYPHARMACY

❖ Use of 10 or more drugs

Drug-Drug Interactions

- Colchicine and clarithromycin- colchicine toxicity
- Amiodarone and haloperidol- arrhythmias
- Simvastatin and ketoconazole- statin toxicity

Drug-Food Interactions

- Alcohol-Antidepressants, Acetaminophen, Phenobarbital
- Tetracyclins- Dairy products
- Warfarin-Vitamin K rich foods

AIM AND IMPORTANCE OF RESEARCH

The aim of our study is to determine the relationship between polypharmacy and appetite in geriatric patients.

METHOD

- ❖ The study is **retrospective and cross-sectional study**.
- ❖ File data of patients who applied to **Bezmialem Vakıf University** Faculty of Medicine, Department of Geriatrics outpatient clinic, including **demographic information, medications, chronic diseases, and appetite test results** were scanned.
- ❖ Data from **November 2018 to January 2021** were used.

Inclusion & Exclusion Criteria

Inclusion Criteria

Older than 65 years of age

Patients with complete drug data

Exclusion Criteria

Younger than 65 years of age

Individuals who have severe vision and hearing impairment that prevent communication and understanding commands during the examination

Individuals who refuse to complete a geriatric assessment

Individuals who have terminal disease, a life-threatening disease in the last 6 months or those hospitalized for major surgery

Dementia and a mini mental test score (MMS) <23

CNAQ TEST

- ❖ The test is evaluated out of 40 points in total.
- ❖ In the Turkish validation of the test, the cut-off value was determined as <28 based on the **Mini Nutritional Test**.

 <p>BEZMİALEM VAKIF ÜNİVERSİTESİ HASTANESİ</p>	GERİATRİ BİLİM DALI HASTA TAKİP FORMU			
Doküman Kodu: HB.FR.107	Yayın Tarihi:-06.01.2020	Revizyon No:02	Revizyon Tarihi:05.01.2021	

İŞTAH DEĞERLENDİRME SKALASI

- İştahım**
 - Çok kötü
 - Kötü
 - Orta
 - İyi
 - Çok iyi
- Yemek yediğim zaman,**
 - Yalnızca birkaç lokmadan sonra doydüğümü hissederim
 - Yaklaşık üçte birini yedikten sonra, doymuş hissederim
 - Yarisından fazlasını yedikten sonra, doymuş hissederim
 - Çoğunu yedikten sonra tamamen doymuş hissederim
 - Hepsini yesem bile zorlukla doydüğümü hissederim
- Aç hissederim,**
 - Çok nadiren
 - Nadiren
 - Bazen
 - Çoğu zaman
 - Her zaman
- Yemeklerin tadı**
 - Çok kötü
 - Kötü
 - Orta
 - İyi
 - Çok iyi
- Gençlik zamanıma göre, yiyeceklerin tadı**
 - Çok kötü
 - Kötü
 - O zamanki gibi
 - Daha iyi
 - Çok daha iyi
- Normalde, yerim..**
 - Bir öğünden daha az
 - Günde Bir öğün
 - Günde iki öğün
 - Günde üç öğün
 - Günde üç öğünden fazla
- Yemek yediğimde kendimi hasta hissederim ya da midem bulanır**
 - Çoğu zaman
 - Sıklıkla
 - Bazen
 - Nadiren
 - Hiç
- Çoğu zaman duygu durumum**
 - Çok kötü
 - Kötü
 - Ne iyi ne kötü
 - Mutlu
 - Çok mutlu

MEDICATIONS LIST

GERİATRİ BİLİM DALI HASTA TAKİP FORMU				
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Tarih: 28/02/23

Adı ve Soyadı: **Tatma BAŞAR**
Doğum tarihi: **1947**
Kiminle yaşıyor: **Esi ile**
Medeni Durum: **Evlü**
Mesleği: **Ev hanımı**
Sigara kullanımı: **⊖**
Bakım veren durumu: **⊖**
Araba kullanımı: **⊖**
Yardımcı Cihaz: **✓** Bazılık, **✓** Diş Protez, **✓** Baston, Walker, Tekerlekli Sandalye

Şikayet:
2 sene önce شیر otagi? sonrası
kekelenen şekeli kalmış
Ağrıları kiti, alınlık mevcut
Baş ağrısı

Tedavi

1. losaxen 1x7mg
2. protorex 1x40mg
3. Trankebuscas 1x10/10mg
4. Desyrel 1x70mg
5. Buspan 1x7mg
6. Beupin 1x4mg
7. monoket long 1x70mg
8. Corospin 1x300mg
9. Lewkran 1x100mcg
10. Hylaar Fort 1x100/25mg
11. Desmont 1x7/10mg

Komorbit Durumlar ve süreleri

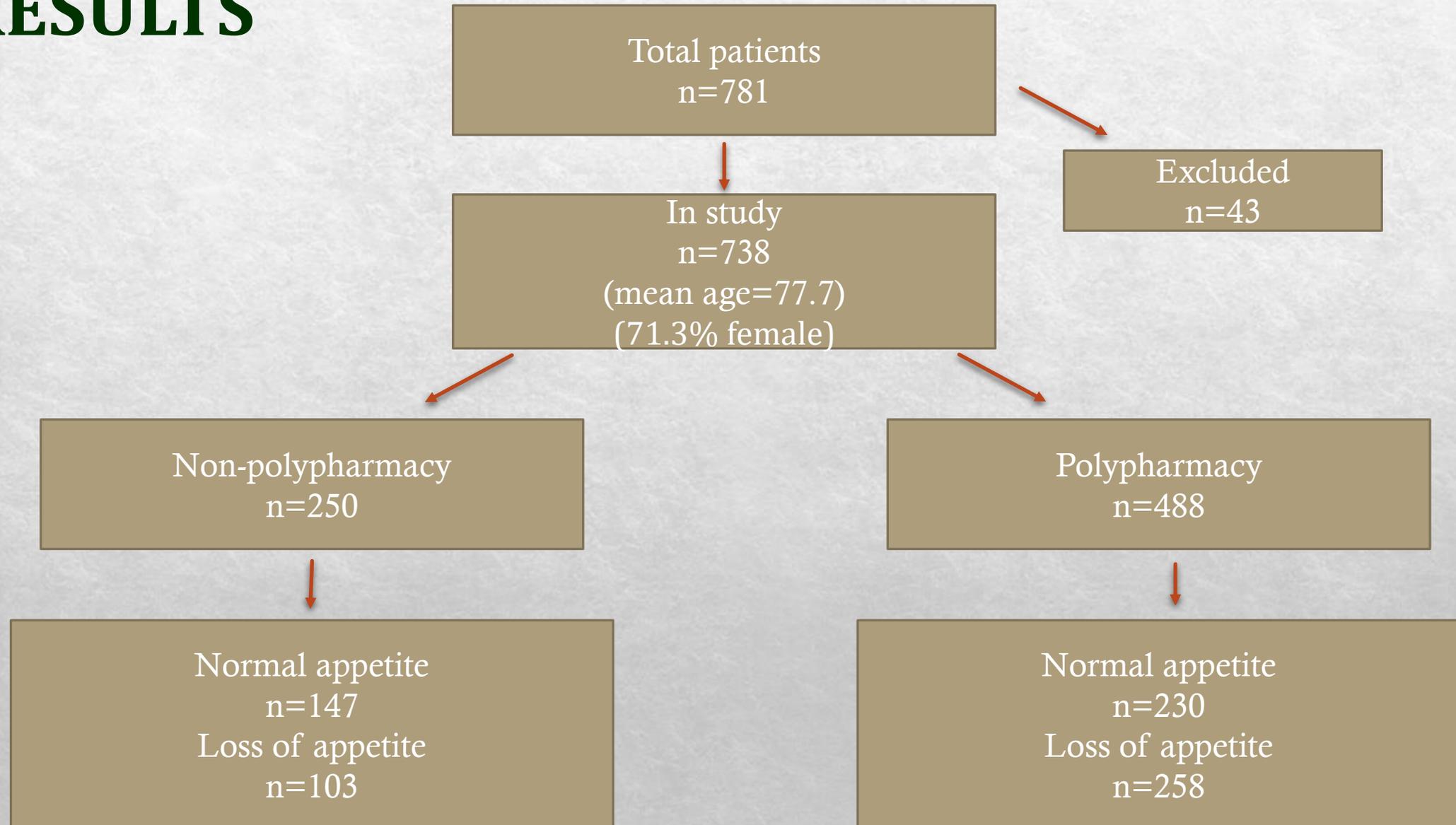
1. HT
2. Hipotiroidi
3. İKH
4. Svo - iskemik.
5. Astım.
- 6.
- 7.



ANALYSIS of DATA

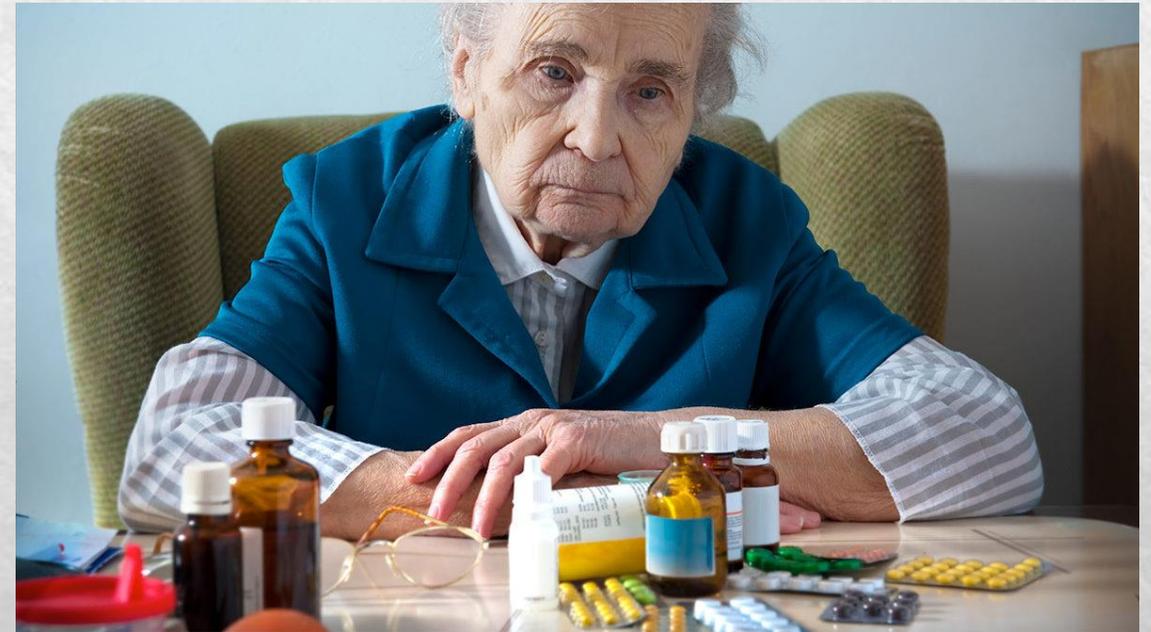
- IBM SPSS statistics 20.0 (IBM SPSS, Turkey) program was used.
- The conformity of the variables to the normal distribution was evaluated with the Shapiro Wilks test. While evaluating the study data, in addition to descriptive statistical methods (mean, standard deviation, frequency) in the evaluation of quantitative data, **Paired Sample T test** was used according to distribution in comparison of the variables with normal distribution between 2 groups. **Chi-square test** and **Fisher chi-square test** were used for the comparison of qualitative data.
- Pearson correlation analysis was used in the evaluation of the relationship between the data in cases with normal distribution, and Spearman Rho correlation analysis was used in cases that did not show normal distribution. Significance was evaluated at the $p < 0.05$ level.

RESULTS

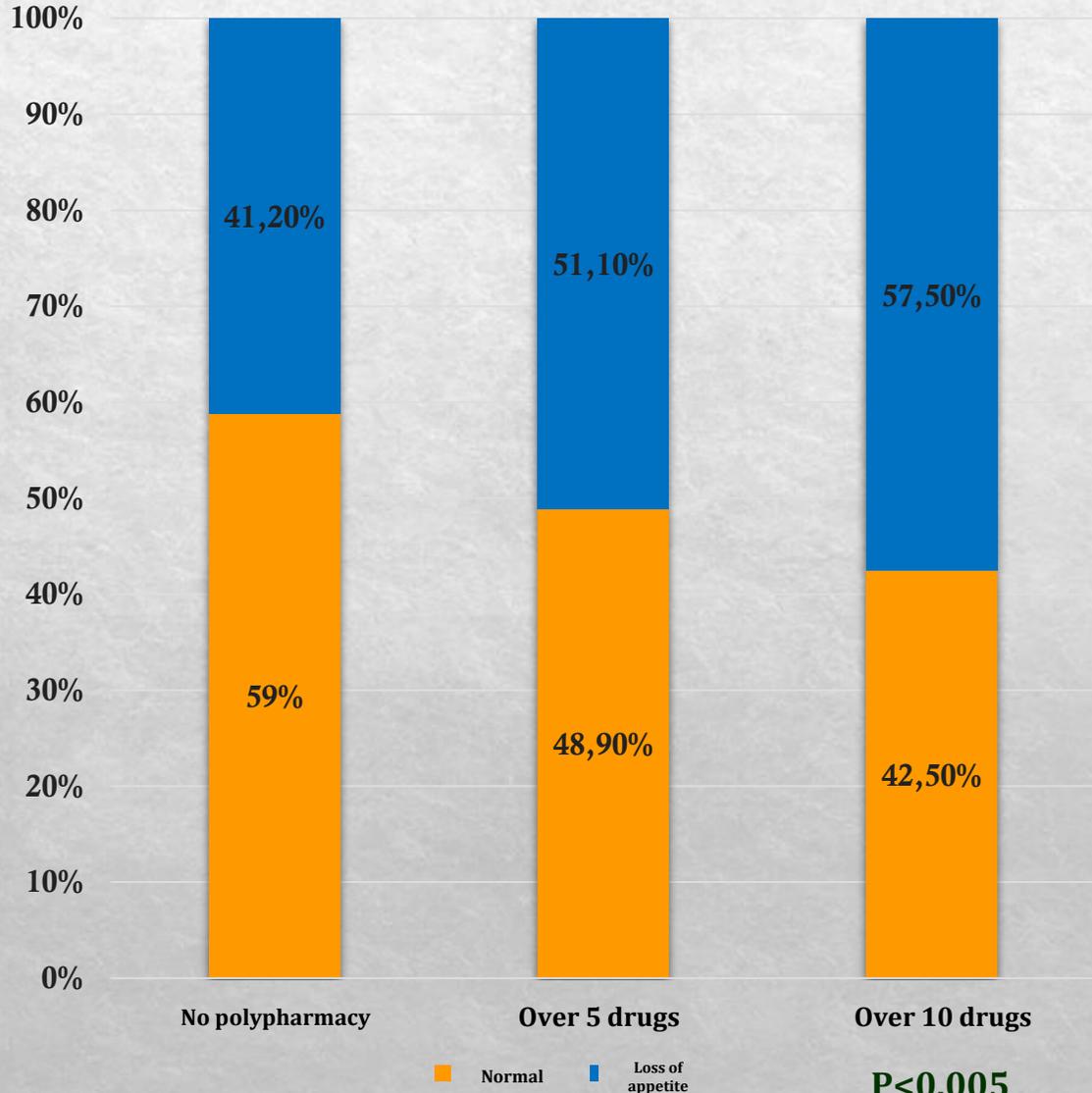


- ❖ **18.2% hyperpolypharmacy**
- ❖ **66.2% polypharmacy**

- ❖ **48.9% loss of appetite**
- ❖ **51.1% normal appetite**



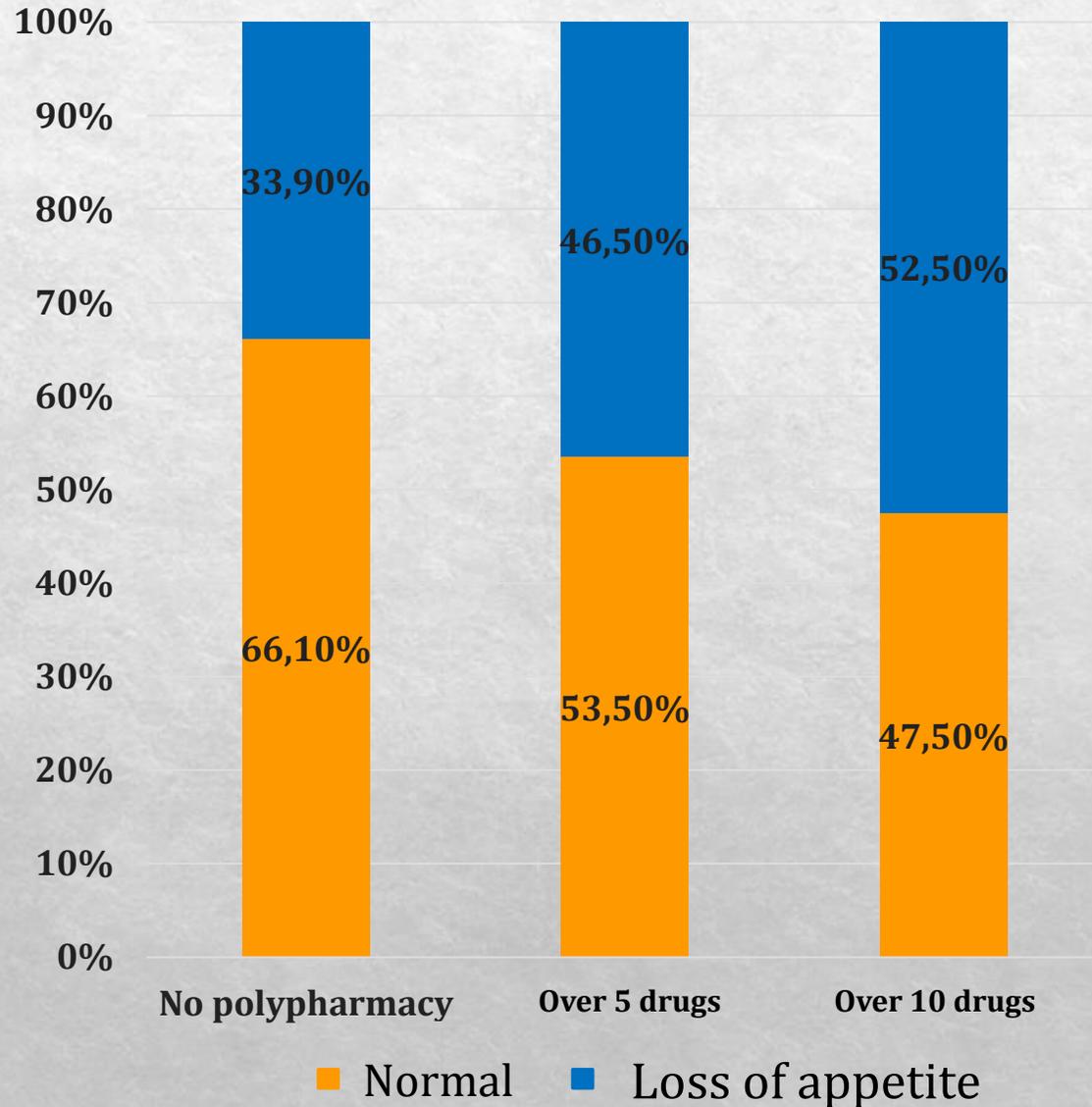
POLYPHARMACY AND APPETITE



1.6 times more likely for loss of appetite in patients with **polypharmacy** and loss of appetite were found related.

This rate was **1.9** for **hyperpolypharmacy** **P<0.005**

patients without malnutrition (n=630)



Polypharmacy and loss of appetite were found related also without malnutrition.

P<0.001

Cause of reduced appetite;
Diseases or medicines ?

COMORBIDITIES AND APPETITE

Comorbidities %	Normal	Loss of appetite	P value
Hypertension	53,70%	46,30%	0,598
	50,00%	50,00%	
Diabetes Mellitus	52,00%	48,00%	0.515
	50,00%	50,00%	
Coronary Artery Disease	50,80%	49,10%	0,951
	51,00%	49,00%	
Chronic Obstructive Pulmonary Disease	51,80%	48,20%	0,82
	39,20%	60,80%	
Cardiovascular Disease	50,70%	49,30%	0,754
	52,60%	48,40%	
Chronic Heart Failure	51,10%	48,90%	0,768
	49,30%	50,70%	
Peripheral Vascular Disease	51,00%	49,00%	0,757
	47,60%	52,40%	
Parkinson's Disease	50,70%	49,30%	0,718
	53,50%	46,40%	
Cancer	51,00%	49,00%	0,782
	49,00%	51,00%	
Urinary Incontinance	53,80%	46,20%	0,133
	48,30%	51,70%	
Constipation	55,40%	44,60%	<0.05
	45,80%	54,20%	

DISCUSSION

Limitations and Strengths

- ❖ Evaluation of drug ingredients
- ❖ Sample Size
- ❖ Using the CNAQ Test to assess appetite
- ❖ Lack of similar studies on loss of appetite in the literature
- ❖ Evaluation of many comorbid diseases with polypharmacy

Review
Polypharmacy and Malnutrition Management of Elderly Perioperative Patients with Cancer: A Systematic Review

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Abstract: Malnutrition, which commonly occurs in perioperative patients with cancer, leads to decreased muscle mass, hypoalbuminemia, and edema, thereby increasing the patient's risk of various complications. Thus, the nutritional management of perioperative patients with cancer should be focused on to ensure that surgical treatment is safe and effective, postoperative complications are prevented, and mortality is reduced. Pathophysiological and drug-induced factors in elderly patients with cancer are associated with the risk of developing malnutrition. Pathophysiological

Observational Study  OPEN

Polypharmacy is associated with malnutrition and activities of daily living disability among daycare facility users

A cross-sectional study

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Abstract
Polypharmacy influences malnutrition and activities of daily living (ADL) in older individuals owing to side effects such as anorexia. This study aimed to examine whether polypharmacy (5 or more drugs) is associated with malnutrition and ADL disability among daycare facility users. This cross-sectional study was performed in a daycare facility specializing in rehabilitation. Malnutrition was defined according to the Global Leadership Initiative on Malnutrition criteria and ADL disability according to the "criteria for determination of the daily life independence level (bedridden level) of elderly with disabilities."

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ELSEVIER 

Meta-analysis
The association between polypharmacy and malnutrition(risk) in older people: A systematic review

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SUMMARY
Background & aim: Malnutrition adversely influences a broad range of physical and psychological symptoms. Although polypharmacy is often mentioned to be associated with malnutrition, especially in older people it is unclear to what extent. The aim of this systematic review was to investigate the extent of the association between polypharmacy and malnutrition in older people.
Methods: The methodology followed the guidelines of the Cochrane Collaboration. Literature search was performed in PubMed, CINAHL and Embase. The population of interest for this systematic review were people of 65 years and older with polypharmacy. Because there is ambiguity with regard to the actual definition of malnutrition and polypharmacy in this systematic review all articles describing malnutrition prevalence rates were included, regardless of the criteria used. Both observational and intervention studies were screened for eligibility. Selection and quality assessment of the included full text studies was assessed by two reviewers independently. A level of evidence and methodological quality

CONCLUSION

- ❖ Polypharmacy and loss of appetite were found related.
- ❖ The presence of loss of appetite, even if it does not progress to malnutrition, is an indication of weakness.
- ❖ In this direction, the drug treatments of the patients should be reviewed regularly and the unnecessary drugs should be tried to be reduced.

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Thank you for your attention

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