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Medical writing:
articles, bachelor's thesis, oral presentation



ALWAYS



SEEK



KNOWLEDGE

Objectives

- Regulations: when? how? where? who?
- Structure: what do we write in each section?
- Mistakes to avoid
- Stylish recommendations

Authors

- Who can / should be considered author?
- Any person who has made a significant contribution to the article
 - is responsible for the results of the research
- significant contribution:
 - have participated
 - in writing/conception of the protocol of the research
 - in writing the manuscript
 - in interpreting the results
 - have approved the final version

- First author
 - performed the essential work
 - coordinates the research
 - drafted the manuscript
- Coauthor
 - listed in the order of contribution

- Last author
 - the initiator of the research
 - person who obtain the research funds
 - the principal investigator
 - the supervisor of the research
- Corresponding author
 - submit the article
 - responsible for ensuring that all the authors' contact details are correct
 - who takes primary responsibility for communication with the journal and to the other authors

Content

- contain at least the titles of all chapters
- the page number on which each chapter begins
- Word - option to automatically create a table of contents
 - [Quick guide](#) from Microsoft

Content - example

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General part of the bachelor's thesis

- Current state of knowledge in the field of the subject of the license thesis
 - select the existing information on the subject of interest in the literature
 - presenting
 - correctly
 - completely
 - synthetically
 - organized
 - original
- about the hypothesis of the research
 - what is currently known about the subject of interest
 - what has not been fully elucidated

General part of the bachelor's thesis

use

- present tense
- past tense

the information included should be supported by

- current references (last 5 years)

General part of the bachelor's thesis

Parts:

- importance of the chosen topic
- state of research in the field
 - NOT all existing studies in the literature related to the respective topic should be described, some being without scientific value
- unresolved issues
- contradictions regarding the chosen topic
- synthesization of the data presented

General part of the bachelor's thesis

The common mistakes

- statements without references to the specialized literature
- statements unrelated to the title of the bachelor's thesis
- Chaotic presentation
- All references older than 5 years

Tables/Figures

- with number and title
- the source of the data is specified below the table/figure,
 - the name of the first author et al. (if there are several authors), the year of publication
 - e.g. Kirkwood et al., 2001
- Each table/figure must be referenced in the text

Histopathological aspects – descriptive histology

Representative sections from rats' periodontium, obtained by histopathological analysis demonstrates that the presence of a silk ligature around the lower incisor, in a submarginal position, induced a characteristic microscopic aspect for periodontitis. Intense inflammatory cell infiltration, the presence of osteoclasts and an obvious bone resorption activity were detected (Fig. 2).

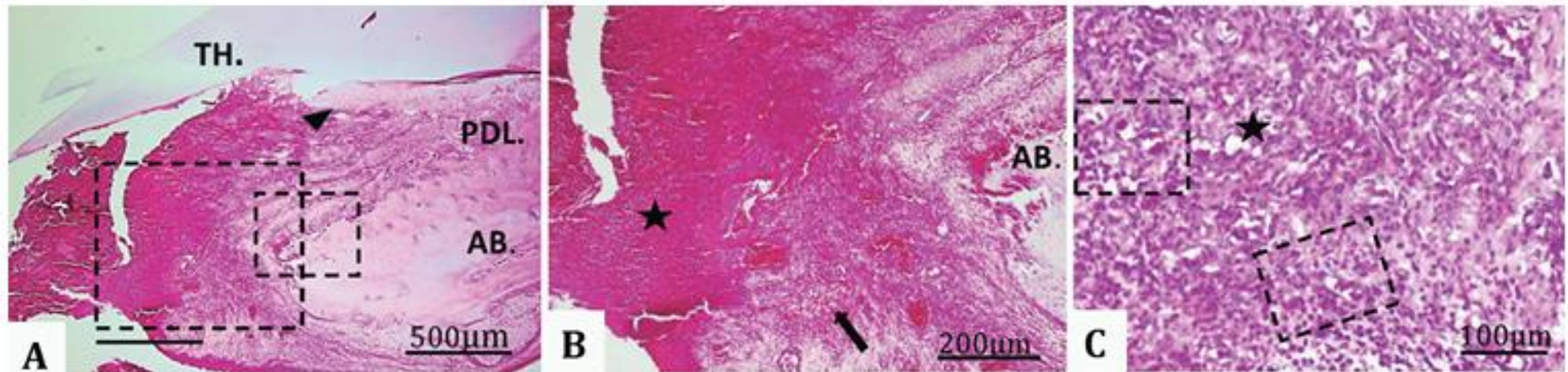
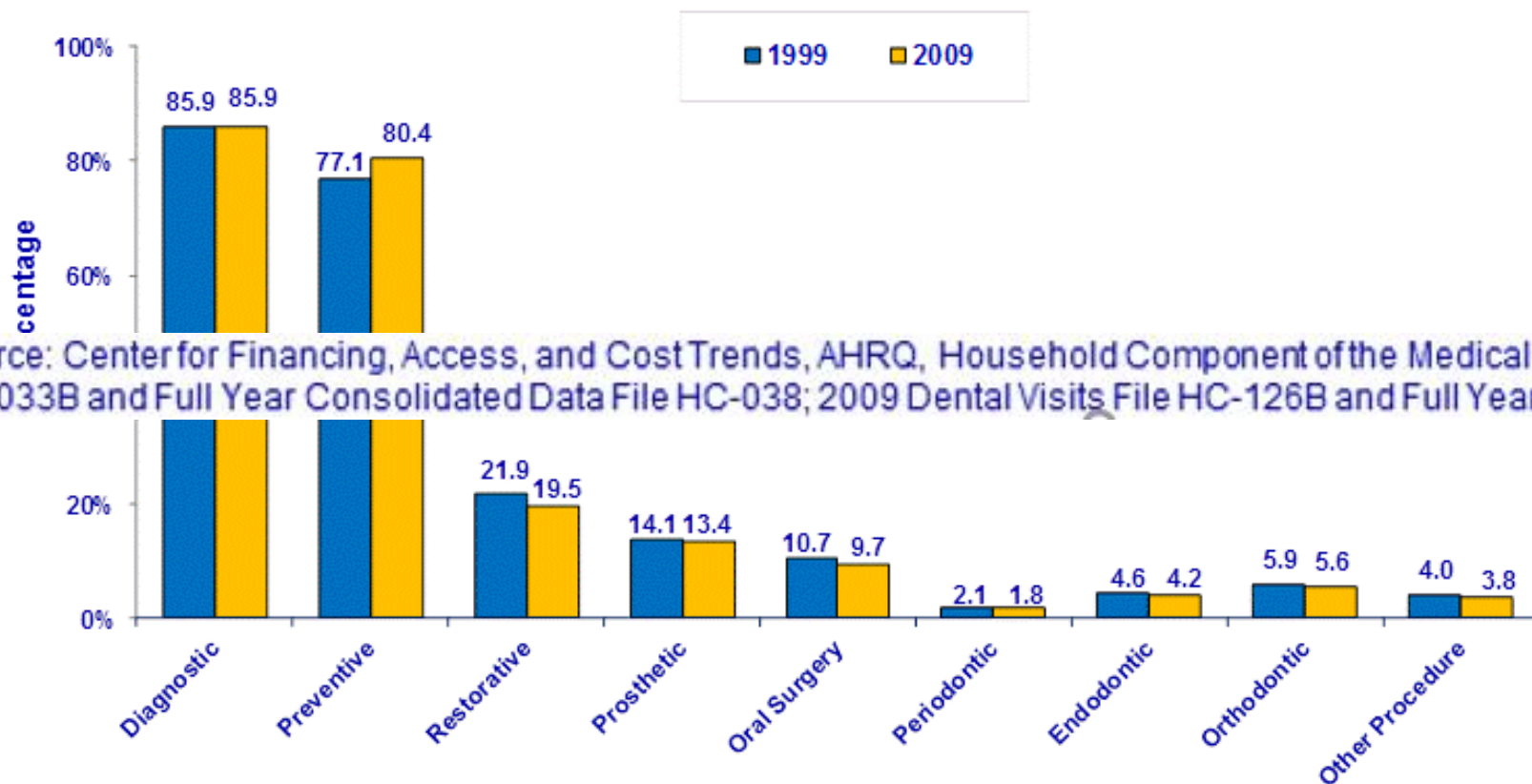


Fig. 2. Histopathological aspects of the periodontal region of rats after periodontal disease induction. **A.** The section of the periodontal space of rat incisor- tooth (TH), periodontal ligament(PDL) and alveolar bone (AB). **B.** This image captures a histopathological detail of the area marked by the large square from figure A, which reveals the presence of a rich mixture of cellular debris and neutrophils (noted by a star). The arrow marks the presence of granulation tissue with an inflammatory character, in different stages of maturity, with numerous leukocytes. **C.** The subjacent region is dominated by the inflammatory granulation tissue; blood vessels with different calibers (star), leukocyte infiltration and a fibrous connective tissue with lax aspect can also be observed. **D.** Detailed aspect of the area delimited by the small rectangle from panel A; a severe alveolar osteolysis was detected characterized

Figure 3. Percentage of persons with at least one procedure,⁺ U.S. civilian noninstitutionalized population, 1999 and 2009



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey: 1999 Dental Visits HC-033B and Full Year Consolidated Data File HC-038; 2009 Dental Visits File HC-126B and Full Year Population Characteristics File HC-123

+ For persons with a visit.

Other includes other procedures not otherwise reported.

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey: 1999 Dental Visits HC-033B and Full Year Consolidated Data File HC-038; 2009 Dental Visits File HC-126B and Full Year Population Characteristics File HC-123

Example

– General part for:

The effectiveness of myofunctional therapy on facial expression recovery post-orthognathic surgery

I. Facial expression post-orthognathic surgery

- importance
- impact on the patient quality of life

II. Therapies for facial expression post-orthognathic surgery

- enumeration
- description
- comparisons

III. Myofunctional therapy

- description
- usage

IV. Myofunctional therapy treatment for facial expression recovery post-orthognathic surgery

- historical
- evidence
- effects

Problem 2

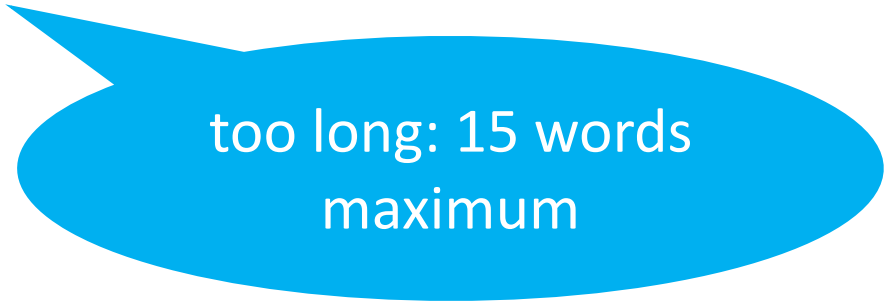
What's wrong with this title?

Prevention of hospital-acquired infections by bathing with chlorhexidine gluconate-impregnated towels in intensive care units: a systematic review and meta-analysis of randomized crossover trials

Problem 2

What's wrong with this title?

Prevention of hospital-acquired infections by bathing with chlorhexidine gluconate-impregnated towels in intensive care units: a systematic review and meta-analysis of randomized crossover trials



too long: 15 words
maximum

Problem 3

This paragraph is part of the general part. What's wrong?

The prevalence of osteoarthritis increases with age, and the prevalence is likely to increase in the future due to the increase in the elderly population.

Problem 3

This paragraph is part of the general part. What's wrong?

The prevalence of osteoarthritis increases with age, and the prevalence is likely to increase in the future due to the increase in the elderly population.



Is a statement. Need
reference

Articles

Special part of bachelor's thesis

Articles / Special part of the bachelor' thesis

The language used

scientific

clear

exact

concise

the tense of the verbs

past tense

with minor exceptions

The thesis is not a literary creation, it is a scientific creation

Language! we do not use literary language

figures of speech are not allowed:

- hyperbole,

- onomatopoeia,

- personifications

- etc.

vocabulary should not be very extensive (8th grade level)

- we lose clarity

repetitions are allowed and encourage

- make the text easier to read

Problem 4

- Aquatic exercises are great for people with osteoarthritis. Hot baths are like a panacea from the gods: they reduce pain, reduce stiffness in the musculoskeletal system, and cause muscle relaxation.

Problem 4

- Aquatic exercises are extraordinary for people with osteoarthritis. Hot baths are like a panacea from the gods: they reduce pain, reduce stiffness in the musculoskeletal system, and cause muscle relaxation.
- Words from medical vocabulary – if use they should be explained or avoided by replacing with their definitions
 - osteoarthritis
 - osteoarthritis
 - musculoskeletal
- stylistic figures
 - extraordinary,
 - panacea from the gods

Introduction

- Informative purpose
- presents the topic
- from the general aspect to the particular aspects of the subject
- gives the reader (anyone) the knowledge necessary to read the thesis
- presents the interest of the work
- why should we read it?
- presents the motivation of the work
- why was the study necessary?

Introduction

Important:

- ends with the purpose and objectives of the research
- Required
 - the last paragraph of the introduction
 - contains the purpose and objectives of the study

Introduction

- Use the present tense
 - for stating accepted facts in scientific literature
- Use the past tense
 - for citing an author
 - for stating purpose and objectives

Introduction

Mistakes to avoid

- no history of the subject
- very extensive bibliography
- we are not writing a book
- not to exaggerate with the didactic – explanatory style
- we are not writing a book
- formulate statements and there is no reference to them

Introduction

Mistakes to avoid

- contain information that is not on the research topic
- contain the results of the study
- overlap with the discussions

1 Introduction

Interactions between teeth and the tongue can break down food prior to its entry into the digestive system. Incomplete chewing of food as a result of problems in the mouth can increase the burden on the stomach and intestines, harming health [1, 2]. Dental diseases can adversely affect the normal functions of the mouth cavity and thus physical and mental health. Among these diseases, periodontal disease is the most common type that significantly affects mouth cavity function. Periodontal disease is also related to other diseases such as cardiovascular disease and diabetes. Relevant studies have shown that pathogens of periodontal diseases damage the vascular walls, resulting in cardiovascular inflammation and blockages, as well as severe heart disease [3]. In addition, patients with both diabetes and periodontal diseases have a higher risk of destructive periodontitis [4, 5]. A study by Drisko [6] implicated dental plaque as a cause of gingivitis, which can lead to periodontal disease if it is not completely removed. According to Slots and Genco [7], the main bacteria in periodontal diseases are facultative anaerobes; the mucosal damage and tissue necrosis caused by these bacteria can easily induce infections in surrounding tissues [8]. Patients with periodontal diseases must, therefore, constantly control the number of facultative anaerobes to maintain periodontal health. To those who are under attack by facultative anaerobes, it is crucial to eliminate the dental bacteria effectively. The research of Merriam *et al.* [8] indicated that facultative anaerobes hide deep inside dental pockets, which are the trickiest places to clean; ordinary toothbrushes are inefficient in wiping out these bacteria. Therefore, in this paper, we proposed a cavity-cleaning device that uses oxygen microbubbles and

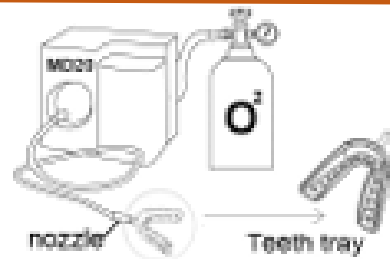


Fig. 1 Modified oxygen microbubble generator and the soft tooth-tray (made from medical silicone)

substitutes for a toothbrush to remove facultative anaerobes. It was modified from the commercially available Braun MD20 oral irrigator, and its inlet valve was connected with the outlet of an oxygen cylinder. The machine pumped oxygen into water and emitted oxygen microbubbles to a soft tooth tray that fits the shape of human teeth (Fig. 1). The device was used to eject water with oxygen microbubbles and cleanse dentures that had been soaked in facultative anaerobe solution. The residual anaerobes on the surfaces of the synthetic teeth were collected to calculate the total number of anaerobe-free tooth surfaces and examine the effectiveness and feasibility of using this device to clean the dentures. We surmised that the effectiveness of anaerobe removal would be affected by flow volume and discharge velocity, as well as the size and oxygen content of the microbubbles, all of which might be influenced by the speed of the rotor and the number and size of holes in the nozzle. Therefore, this paper manipulated three design variables and conducted a cleaning experiment on dentures to determine the optimal combination of variables for anaerobe removal.

2 Methods

To understand the optimal cleaning outcome of the oxygen microbubble generator, this study manipulated device design variables and tested different combinations of them. An experiment was carried out emitting water in different ways to clean the dentures in a soft tooth tray and remove the facultative anaerobes, aiming to investigate whether the oxygen microbubbles produced by this generator were effective in removing facultative anaerobes and determine which combination of design variables cleaned most efficiently. The effects of three design variables—water speed

Efficacy of using oxygen microbubble device for facultative anaerobe removal

Pei-Ju Lin , Ming-Chuen
Chuang, Szu-Chung
Chang

1 Introduction

Interactions between teeth and the tongue can break down food prior to its entry into the digestive system. Incomplete chewing of food as a result of problems in the mouth can increase the burden on the stomach and intestines, harming health [1, 2]. Dental diseases can adversely affect the normal functions of the mouth cavity and thus physical and mental health. Among these diseases, periodontal disease is the most common type that significantly affects mouth cavity function. Periodontal disease is also related to other diseases such as cardiovascular disease and diabetes. Relevant studies have shown that pathogens of periodontal diseases damage the vascular walls, resulting in cardiovascular inflammation and blockages, as well as severe heart disease [3]. In addition, patients with both diabetes and periodontal diseases have a higher risk of destructive periodontitis [4, 5]. A study by Drisko [6] implicated dental plaque as a cause of gingivitis, which can lead to periodontal disease if it is not completely removed. According to Slots and Genco [7], the main bacteria in periodontal diseases are facultative anaerobes; the mucosal damage and tissue necrosis caused by these bacteria can easily induce infections in surrounding tissues [8]. Patients with periodontal diseases must, therefore, constantly control the number of facultative anaerobes to maintain periodontal health. To those who are under attack by facultative anaerobes, it is crucial to eliminate the dental bacteria effectively. The research of Merriam *et al.* [8] indicated that facultative anaerobes hide deep inside dental pockets, which are the trickiest places to clean; ordinary toothbrushes are inefficient in wiping out these bacteria. Therefore, in this paper, we proposed a cavity-cleaning device that uses oxygen microbubbles and

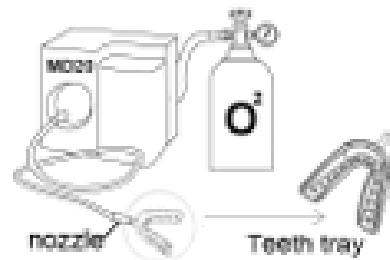


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Efficacy of using oxygen microbubble device for facultative anaerobe removal

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Many researchers have made use of microbubbles to transfer oxygen. For instance, in their experiment, Bisazza *et al.* [17] inserted oxygen microbubbles with an average size of 2.5 μm into chitosan and showed by an analysis under a fluorescence microscope that this core-shell structure is effective in transferring oxygen to anoxic tissues. Using microbubbles as a medium, Ikeura *et al.* [18] incorporated ozone to get rid of vegetables and fruits of pesticides and pests owing to the disinfecting property of ozone. Continuous production of ozone microbubbles had a significant effect in dissolving pesticide residue. In aquaculture, air bubbles are commonly used as a medium to send carbon dioxide to water plants undergoing photosynthesis, hence supplying oxygen to fish. As shown by these examples, microbubbles are a carrier that is small and that has a vast range of cleaning uses. The research described above demonstrated the application of microbubbles to cleaning. This paper focused on their application to improve oral hygiene, as it used microbubbles to transport oxygen and eliminate facultative anaerobes in dentures.

2 Methods

To understand the optimal cleaning outcome of the oxygen microbubble generator, this study manipulated device design variables and tested different combinations of them. An experiment was carried out emitting water in different ways to clean the dentures in a soft tooth tray and remove the facultative anaerobes, aiming to investigate whether the oxygen microbubbles produced by this generator were effective in removing facultative anaerobes and determine which combination of design variables cleaned most efficiently. The effects of these design variables were tested

Study aim

Efficacy of using oxygen microbubble device for facultative anaerobe removal

Pei-Ju Lin , Ming-Chuen Chuang, Szu-Chung Chang

What is wrong? (Problem 5)

Despite the growing popularity of IF in lay media, limited research has been done in patients with T2DM ¹⁸. Previous reports in individuals with T2DM have suggested that IF interventions can induce similar weight loss and reduction in glycated hemoglobin (HbA1c) as standard dietary recommendations ¹⁹⁻²³. However, the small sample sizes preclude definitive conclusions based on these individual studies, indicating the need for a robust and systematic evaluation of the effect of IF in T2DM. Thus, the purpose of this systematic review and meta-analysis is to evaluate the metabolic impact of IF interventions in patients with T2DM.



Ultimul paragraf din
introducere

MATERIAL AND METHODS

This systematic review and meta-analysis is reported in accordance with the Preferred

Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement and was registered

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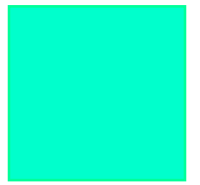


The verb is at present tense

MATERIAL AND METHODS

This systematic review and meta-analysis is reported in accordance with the Preferred

Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement and was registered



What is wrong? (Problem 6)

- in the **Introduction** chapter:
- "The aim of the study was to evaluate the efficacy of candesartan cilexetil compared to placebo in patients with hypertension. Hypertension is an important aspect as it can lead to stroke. In the literature, mean values of systolic blood pressure of 145 mmHg and 135 mmHg were found for subjects treated with candesartan cilexetil."

What is wrong? (Problem 6)

- in the **Introduction** chapter :
- " The aim of the study was to evaluate the efficacy of candesartan cilexetil compared to placebo in patients with hypertension. Hypertension is an important aspect as it can lead to stroke. In the literature, mean values of systolic blood pressure of 145 mmHg and 135 mmHg were found for subjects treated with candesartan cilexetil."

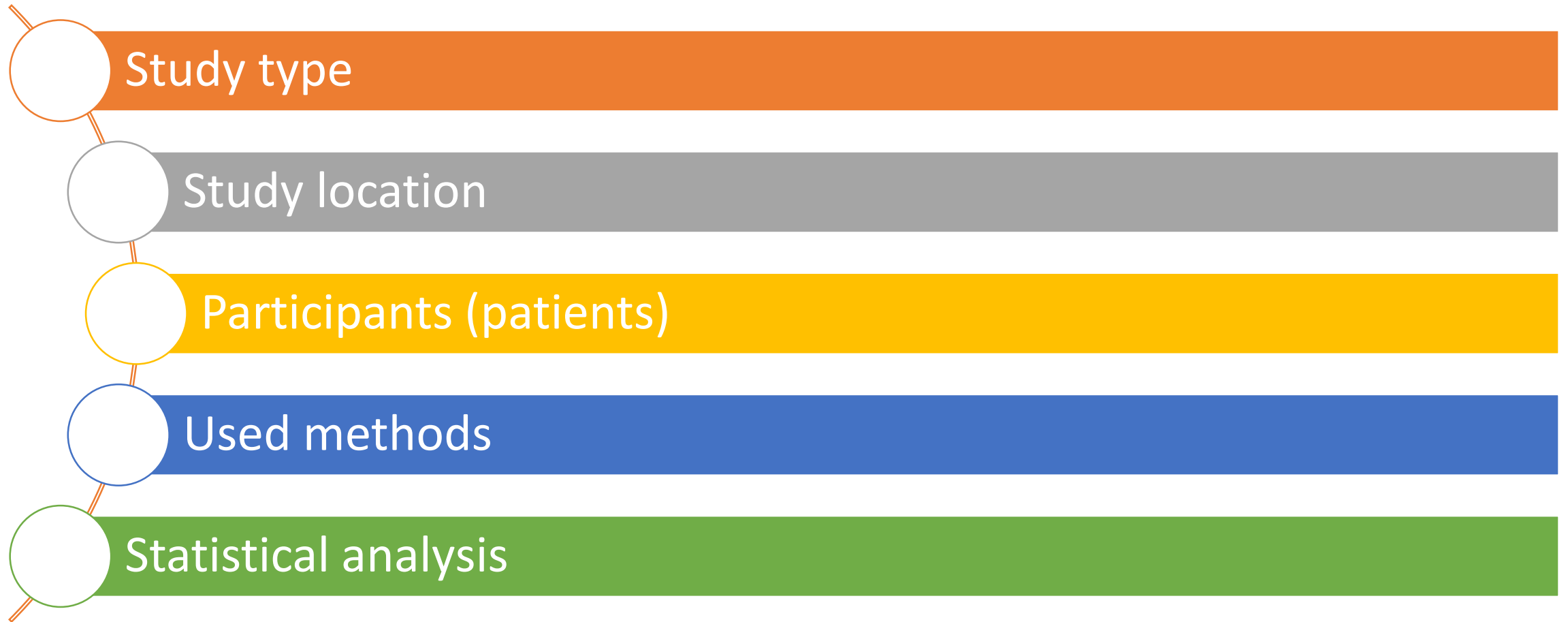
In introduction, but
before the aim,
need reference

In discussion
chapter, need
reference

Materials and Methods

- Chapter Purpose:
 - to describe how the results were obtained
 - to be able to reproduce the study
 - in detail
 - complete
 - clear
 - concise

Materials and Methods



Materials and Methods

Study type

cross-sectional
case-control
cohort
trial
randomized
open

- longitudinal
- prospective
- retrospective
- experimental
- observational
- etc.

Study design

The design of the study provided a double-blind, controlled placebo, randomized clinical trial.

Patients were randomized into three treatment groups: BTX-A, placebo, and control ($n = 8$ in each). Group 1 BTX where eight subjects treated with BTX-A injections, Group 2 placebo where eight subjects treated with saline placebo injections and a control group where eight subjects were given. The treatment protocol provided four BTX-A (Botox, Allergan, Inc.) intramuscular injections for each side (30 U) within the masseter muscles and three injections (20 U) within the anterior temporalis muscles, for a treatment total of 100 U. In the placebo group, isotonic saline was injected into muscles in the same way. The control group had no injections. The injections were made during a single appointment under ultrasonographic control. All injections were performed by the maxillofacial surgeon.

study type is mentioned

Materials and Methods

- Study location
- to answer the questions:
- where?
- when?

MATERIALS AND METHODS

Trial Design

This prospective study was a single-center, two-arm parallel randomized controlled trial and registered at the Thai Clinical Trials Registry (TCTR) ID: TCTR20201218004.

Participants, Eligibility Criteria, and Setting

The trial was conducted at the orthodontic clinic, Faculty of Dentistry, Prince of Songkla University. The study protocol was approved by the institutional review board committee (protocol EC 6308-030) of Prince of Songkla University and the study was conducted in accordance with the Declaration of Helsinki. Informed consent was obtained from all subjects.

Withayanukonkij W, Chanmanee P, Promsawat M, Viteporn S, Leethanakul C. Root resorption during maxillary molar intrusion with clear aligners: a randomized controlled trial. Angle Orthod. 2023 Nov 1;93(6):629-637. doi: 10.2319/010723-14.1. PMID: 37922387; PMCID: PMC10633803.

Materials and Methods

- Study participants
 - population description: animals/individuals
 - participant description
 - inclusion criteria
 - exclusion criteria
 - how was the selection made?

Participants, Eligibility Criteria, and Setting

The trial was conducted at the orthodontic clinic, Faculty of Dentistry, Prince of Songkla University. The study protocol was approved by the institutional review board committee (protocol EC 6308-030) of Prince of Songkla University and the study was conducted in accordance with the Declaration of Helsinki. Informed consent was obtained from all subjects.

The inclusion criteria for subjects were: (1) adult males or females, age 18–35 years; (2) AOB of 0–4 mm (vertical gap between the incisal edge of upper and lower incisors); (3) Angle Class I or II; (4) Skeletal Class I ($ANB = 0-5^\circ$); (5) normo- to hyperdivergent pattern ($MPA = 23-39^\circ$); and (6) healthy periodontal status. The exclusion criteria were: (1) moderate to severe crowding; (2) loss of posterior teeth; (3) history of trauma to the molars; (4) history of endodontic treatment to the maxillary first molar; (5) systemic disease related to bone metabolism; (6) taking immunosuppressive drugs or drugs inhibiting or accelerating tooth movement; and (7) neuromuscular deficiencies.

Withayanukonkij W, Chanmanee P, Promsawat M, Viteporn S, Leethanakul C. Root resorption during maxillary molar intrusion with clear aligners: a randomized controlled trial. Angle Orthod. 2023 Nov 1;93(6):629-637.

Materials and Methods

- Methods used
 - how the data were collected
 - definition of diseases (especially if there are multiple definitions in the literature)
 - list of data (variables) that were collected
 - their description
 - units of measurement,
 - used device
 - manufacturer, address
 - used procedures
 - method of measurement
 - etc.

Materials and Methods

- Methods used
 - list of drugs and chemicals
 - international non-proprietary name
 - trade name
 - manufacturer, address
 - description of intervention

Materials and Methods

- Methods used
- well-known methods
 - only mention
 - no reference needed
- lesser known methods
 - briefly describe
 - with bibliographic references
- original methods
 - describe them extensive

Echipaments

Intervention

What data were measured/collected

Statistical analysis methods

Cardiopulmonary exercise test

The participants performed the CPX with and without surgical mask-wearing (Saraya Co., Ltd., Osaka, Japan) in random order (Table 1). The interval between the two procedures was more than 1 week. The participants wore a gas mask over the surgical mask and performed CPX with an exhaled gas analyser (Minato Medical Science, Osaka, Japan). Additionally, it was confirmed that there was no breath leakage while wearing the surgical mask (Figure 1). The exercise load was measured on a bicycle ergometer (Aerobike 75xlii, Konami, Tokyo, Japan). After 4 min of rest without moving on the ergometer, the participants gradually pedalled and warmed up for another 4 min. The test proceeded to continuous pedalling exercises at a gradual load of 20 W per min. The participants were instructed to perform pedalling exercises to the limit and raise their hands when they reached it. They remained on the bike for subsequent cooling down at a load of 20 W for 4 min before exercise completion. We measured the following variables: AT, as measured by the V-slope method; AT-occurrence time (AT time); power (W); oxygen consumption (VO2), and ventilation amount (VE). Moreover, leg fatigue and breathing difficulty assessments were performed using a modified Borg scale (rate of perceived exertion, RPE) every min.

Table 1. Technical features of the surgical masks.

Bacteria Filtration Efficiency (%)	≥ 98
Submicron Particulate Filtration Efficiency (%)	≥ 98
Respiratory resistance (mmH ₂ O/cm ²)	< 4



Note: The gas mask was secured to prevent breath leakage. The masks were adjusted to enable breathing through the gas mask.

Figure 1. Cardiopulmonary exercise test.

Statistical analysis

The experimental data are expressed as mean ± standard deviation. For all statistical analyses, SPSS version 25.0 (IBM Inc., Armonk, NY, USA) was used. A paired t-test was conducted to compare the surgical mask-wearing and mask-free conditions.

- Otsuka, A., Komagata, J., & Sakamoto, Y. (2020). Wearing a surgical mask does not affect the anaerobic threshold during pedaling exercise. Journal of Human Sport and Exercise, in press. doi:<https://doi.org/10.14198/jhse.2022.171.03>

Materials and Methods

Statistical analysis

- how the sample size was calculated

- how the data description was done

 - graphs used

 - frequencies,

 - means,

 - medians,

 - etc.

Materials and Methods

Statistical analysis

- what statistical tests were used

- how were they chosen?

- if an application was used for statistical calculation

 - name

 - version of the program

- specify the significance threshold chosen (e.g. 0.05)

Materials and Methods

Important

- All the verbs at past tense

Materials and Methods

Mistakes to avoid

- !!! not in this chapter
 - Explanations or discussions
 - place them in the Discussions chapter
 - e.g. why I chose the method
 - Results
 - place them in the Results chapter
- Incomplete description



What is wrong? (Problem 7)

- in the Material and Methods chapter:
- "The blood pressure of the study subjects was measured with a mercury column sphygmomanometer. Such a sphygmomanometer was used because digital sphygmomanometers are not reliable."

What is wrong? (Problem 7)

- in the Material and Methods chapter:
- "The blood pressure of the study subjects was measured with a mercury column sphygmomanometer. Such a sphygmomanometer was used because digital sphygmomanometers are not reliable."



it is an argument =
discussion

Results

- description of the group/groups
- results corresponding to the objectives
 - primary
 - secondary
- Events
 - death
 - loss from the study
 - adverse reactions

Results

- time at presence tence
- we do not present the same result two time
 - in the figure and in the tables
- we do not repeat the results
- the unit of measurement is not passed in the table cell
 - but in the table header

Results

- numbers
 - Romanian/english format
 - with decimal point
 - numbers with 2 decimal places
 - means
 - medians
 - standard deviations
 - etc.
 - numbers with one decimal place
 - percentages

Results

Mistakes to avoid

- Results will NOT contain
- Explanations
- Comments
- Comparisons with other works
- References
- Methods or population description

What is wrong? (Problem 8)

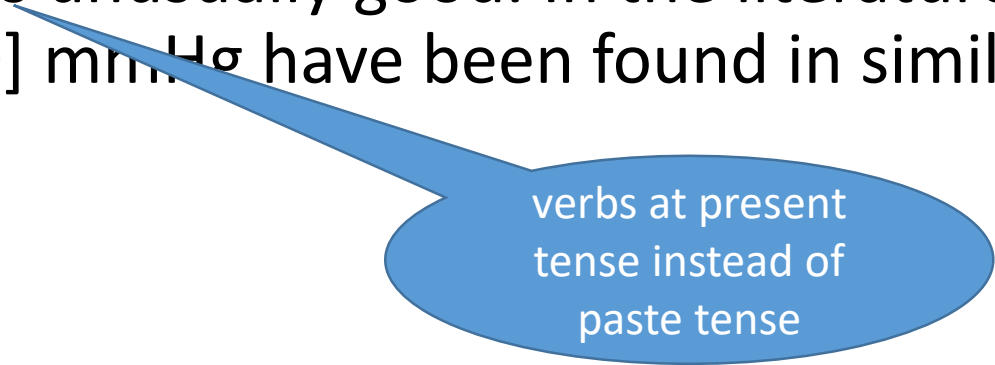
in the Results chapter:

"The mean systolic blood pressure of the subjects in the Enalapril group is: 135 mmHg. This result is unusually good. In the literature, values of 150 mmHg [19] or 173 [20] mmHg have been found in similar situations."

What is wrong? (Problem 8)

in the Results chapter:

"The mean systolic blood pressure of the subjects in the Enalapril group is: 135 mmHg. This result is unusually good. In the literature, values of 150 mmHg [19] or 173 [20] mmHg have been found in similar situations."



verbs at present
tense instead of
past tense

What is wrong? (Problem 8)

in the Results chapter:

"The mean systolic blood pressure of the subjects in the Enalapril group is: 135 mmHg. This result is unusually good. In the literature, values of 150 mmHg [19] or 173 [20] mmHg have been found in similar situations."

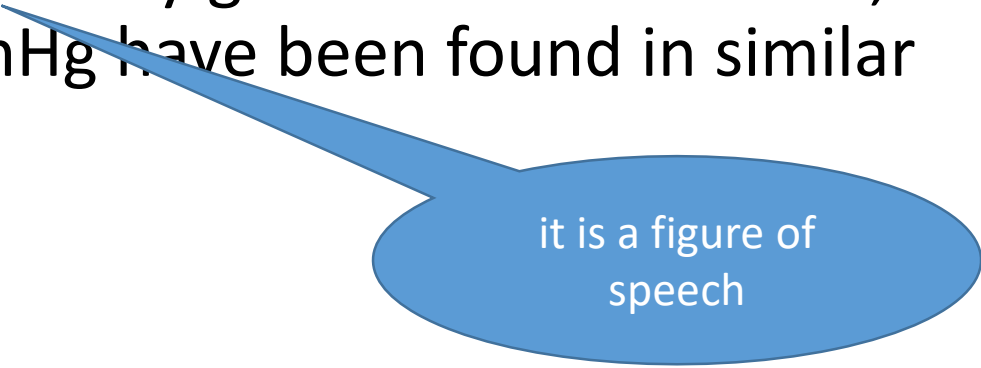


is a discussion

What is wrong? (Problem 8)

in the Results chapter:

"The mean systolic blood pressure of the subjects in the Enalapril group is: 135 mmHg. This result is unusually good. In the literature, values of 150 mmHg [19] or 173 [20] mmHg have been found in similar situations."



it is a figure of
speech

Results

- results and only results
 - do not comment,
 - do not argue
 - do not discuss
 - do not refer to other studies
- Results are organized in
 - tables
 - figures

Results

Tables:

- have a title above the table

- are numbered in order of appearance

- have line or column names or both

- have a footer where

 - abbreviations

 - explanations are mentioned

Results

Tables:

- numerical variables

 - units of measurement

- qualitative variables expressed

 - absolute frequencies

 - and

 - relative frequencies (percentages)

 - the total number of patients from which the percentage was calculated is mentioned

Table number, Table name

Unity of
measurements

Correct ✓

Explanations abbreviations,
explanations

Sutkowy P, Woźniak A, Boraczyński T, Mila-
Kierzenkowska C, Boraczyński M. Postexercise impact of
ice-cold water bath on the oxidant-antioxidant balance
in healthy men. Biomed Res Int. 2015;2015:706141.

Table 1

Number of subjects

Characteristics of the study subjects. Values are given as mean \pm SD.

Subjects' number	24
Age (years)	28.7 \pm 7.3
BM (body mass, kg)	79.8 \pm 10.2
BH (body height, cm)	181.9 \pm 6.9
BF (body fat, %)	14.2 \pm 4.6
TBW (total body water, %)	62.8 \pm 3.3
MM (muscle mass, %)	44.9 \pm 2.6
BMI (body mass index, kg/m)	24.1 \pm 2.5
BS (body surface, m ²)	2.0 \pm 0.1
IPAQ (level of physical activity, MET·min/wk)	2574.3 \pm 1000.6
VO _{2max} ¹ (maximum oxygen consumption, mL/kg/min)	42.1 \pm 4.7
Borg CR10 ¹ (rating of perceived exertion scale)	3.7 \pm 1.1
VO _{2max} ² (maximum oxygen consumption, mL/kg/min)	44.3 \pm 5.9
Borg CR10 ² (rating of perceived exertion scale)*	3.5 \pm 0.9

¹Session 1 (no ice-cold water bath).

²Session 2 (ice-cold water bath).

*No statistically significant differences between VO_{2max} and Borg CR10 in both sessions.

Correct ✓

Table name, table number

TABLE I.—*Intergroup comparisons of patient characteristics.*

Variables	Group			Intergroup comparisons (P-value)		
	C	NSW	SW	C vs. SW	C vs. NSW	SW vs. NSW
Women	39	43	33	0.083	0.084	0.029
Men	4	7	14	0.029	0.079	0.029
Total	43	50	47			
Age (years)	65.28±7.02	63.69±8.89	65.47±10.28	0.553	0.552	0.553
Weight (kg)	73.4±8.86	76.7±12.05	73.7±9.2	0.234	0.243	0.241
Height (m)	1.63±0.03	1.60±0.07	1.62±0.06	0.083	0.083	0.083
BMI (kg/m ²)	27.3±3.4	29.7±4.6	27.8±3.5	0.082	0.01	0.01
Time from onset of symptoms (years)	10±7.7	6.6±4.5	6.9±5.6	0.014	0.014	0.08

BMI: Body Mass Index; NSW: non-sulfurous water group; SW: sulfurous water group; C: control group. Data are expressed as mean±SD.

Explanations for the abbreviations

Explanations

unity of
measurements

Branco M, Rêgo NN, Silva PH, Archanjo IE, Ribeiro MC, Trevisani VF. Bath thermal waters in the treatment of knee osteoarthritis: a randomized controlled clinical trial. Eur J Phys Rehabil Med. 2016 Aug;52(4):422-30.

Incorrect

without number of subjects

TABLE I.—*Intergroup comparisons of patient characteristics.*

Variables	Group			Intergroup comparisons (P-value)		
	C	NSW	SW	C vs. SW	C vs. NSW	SW vs. NSW
Women	39	43	33	0.083	0.084	0.029
Men	4	7	14	0.029	0.079	0.029
Total	43	50	47			
Age (years)	65.28±7.02	63.69±8.89	65.47±10.28	0.553	0.552	0.553
Weight (kg)	73.4±8.86	76.7±12.05	73.7±9.2	0.234	0.243	0.241
Height (m)	1.63±0.03	1.60±0.07	1.62±0.06	0.083	0.083	0.083
BMI (kg/m ²)	27.3±3.4	29.7±4.6	27.8±3.5	0.082	0.01	0.01
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Branco M, Rêgo NN, Silva PH, Archanjo IE, Ribeiro MC, Trevisani VF. Bath thermal waters in the treatment of knee osteoarthritis: a randomized controlled clinical trial. *Eur J Phys Rehabil Med.* 2016 Aug;52(4):422-30.

Table number, title

Variables with subcategories

Correct ✓

Unity of measurements

Explanations for the abbreviations, explanations

Table 1 – General characteristics of the pregnant women, according to intervention groups. São Paulo, SP, Brazil, 2014

Variable	Total	Hot Bath	Swiss Ball	Hot Bath and Swiss Ball	p
Age (years, mean, SD)	26.02 (5.73)	26.05 (5.41)	27.24 (6.47)	24.56 (4.91)	0.101 ^b
Color	127 (100.0%)	44 (100.0%)	45 (100.0%)	38 (100.0%)	0.157 ^a
Caucasian	61 (48%)	25 (56.8%)	19 (42.2%)	17 (44.7%)	
Black	13 (10.2%)	5 (11.4%)	6 (13.3%)	2 (5.3%)	
Asian	5 (3.9%)	1 (2.3%)	0 (0.0%)	4 (10.5%)	
Brown-skinned	48 (37.8%)	13 (29.5%)	20 (44.4%)	15 (39.5%)	
Schooling	127 (100.0%)	44 (100.0%)	45 (100.0%)	38 (100.0%)	0.644 ^a
0 to 3 years	1 (0.8%)	1 (2.3%)	0 (0.0%)	0 (0.0%)	
4 to 7 years	11 (8.7%)	4 (9.1%)	3 (6.7%)	4 (10.5%)	
8 to 11 years	89 (70.1%)	27 (61.4%)	34 (75.6%)	28 (73.7%)	
12 or more	26 (20.5%)	12 (27.3%)	8 (17.8%)	6 (15.8%)	
Gestational age (weeks; mean, SD)	39.69 (1.06)	39.69 (1.02)	39.78 (1.17)	39.60 (1.00)	0.731 ^b
Number of pregnancies (mean, SD)	2.01 (1.25)	1.95 (1.36)	2.24 (1.33)	1.79 (0.98)	0.193 ^c
Parity (mean, SD)	0.71 (0.97)	0.75 (1.16)	0.80 (0.92)	0.56 (0.75)	0.517 ^c
Number of visits (mean, SD)	8.37 (1.98)	8.86 (2.31)	8.22 (1.96)	7.97 (1.48)	0.098 ^b
First prenatal visit (quarter)					
1st	96 (75.0%)	34 (77.3%)	32 (71.1%)	30 (76.9%)	
2nd	31 (24.2%)	9 (20.5%)	13 (28.9%)	9 (23.1%)	
3rd	1 (0.8%)	1 (2.3%)	0 (0.0%)	0 (0.0%)	
Time of intervention at birth (minutes, mean, SD)	253.43 (153.53)	255.05 (148.00)	288.41 (188.32)	216.85 (124.28)	0.102 ^b
Presence of companion	128 (100.0%)	44 (100.0%)	45 (100.0%)	39 (100.0%)	0.874 ^a
Yes	115 (89.8%)	39 (88.6%)	40 (88.9%)	36 (92.3%)	
No	13 (10.2%)	5 (11.4%)	5 (11.1%)	3 (7.7%)	

Source: Research data, 2014.

SD: Standard Deviation; p: Fisher's Chi-Square or Fisher's exact test descriptive level^a, ANOVA (^b) and Kruskal-Wallis (^c);

Incorrect

The percentage cannot be placed in the table cell, but in the column or row header.

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8 to 11 years	89 (70.1%)	27 (61.4%)	34 (75.6%)	28 (73.7%)	
12 or more	26 (20.5%)	12 (27.3%)	8 (17.8%)	6 (15.8%)	
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Parity (mean, SD)	0.71 (0.97)	0.75 (1.16)	0.80 (0.92)	0.56 (0.75)	0.517 ^c
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Presence of companion	128 (100.0%)	44 (100.0%)	45 (100.0%)	39 (100.0%)	0.874 ^a
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No	13 (10.2%)	5 (11.4%)	5 (11.1%)	3 (7.7%)	

Source: Research data, 2014.

SD: Standard Deviation; p: Fisher's Chi-Square or Fisher's exact test descriptive level^a, ANOVA (^b) and Kruskal-Wallis (^c);



What is wrong? (Problem 9)

<https://www.wooclap.com/UMGDYP>

- **Table no. 3 Distribution of the Digital Ulcers**

	No.	% (95% IC)
yes	72	57.143% (48.024 - 65.918)
no	54	40.857% (34.082 - 51.976)

What is wrong? (Problem 9)

- **Table no. 3 Distribution of the Digital Ulcers**

	Nr.	% (95% CI)
yes	72	57.143% (48.024 - 65.918)
no	54	40.857% (34.082 - 47.976)

% with only one
digit

The percentage
cannot be placed in
the table cell

No explanation
about CI
abbreviation?

Results

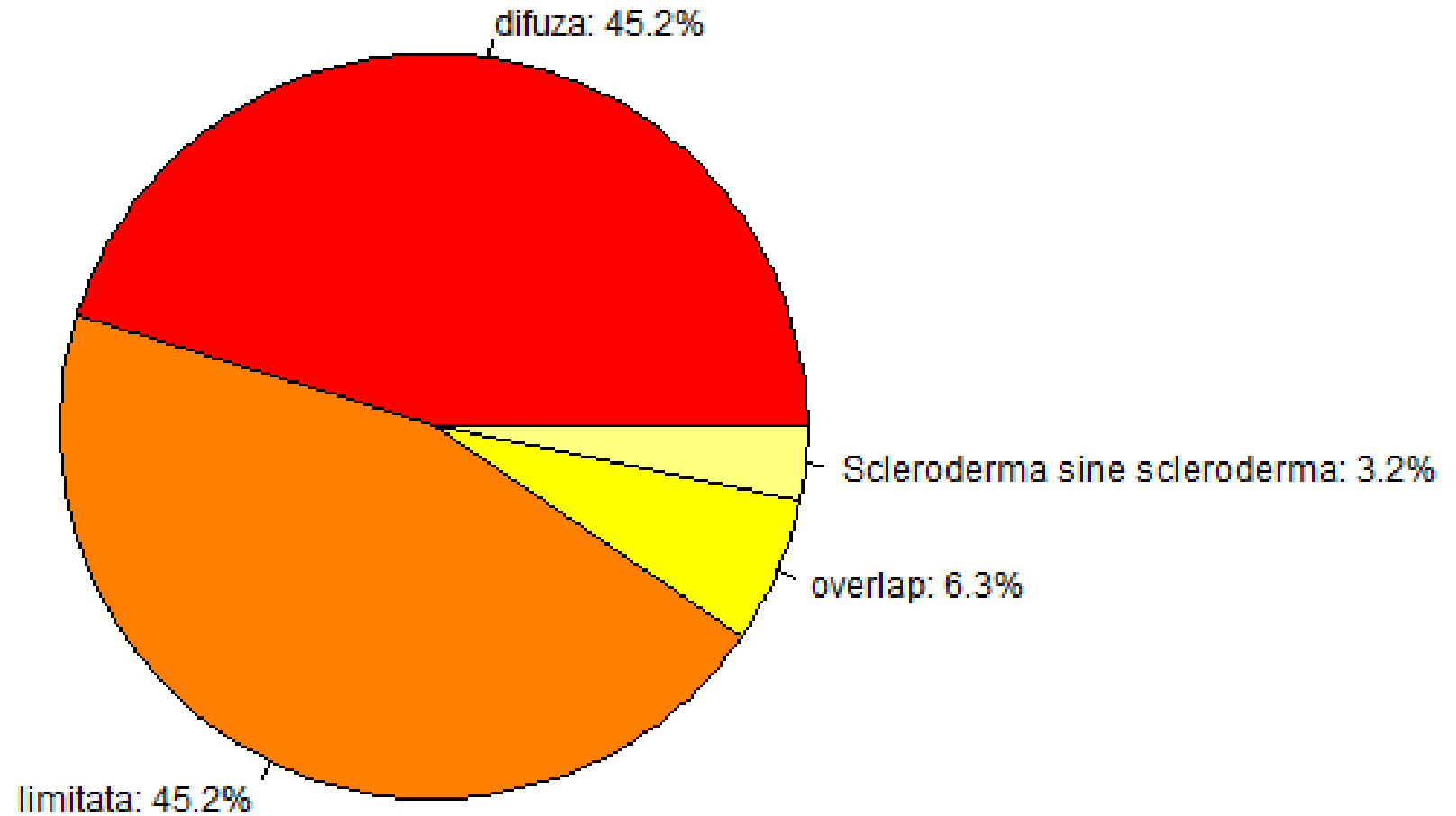
Figures

- have a title below the figure
- are numbered in order of appearance
- have a legend
- have name and unity of measurements on the axis titles
- have column labels
- have contrasting colors

- What is wrong? (Problem 10)



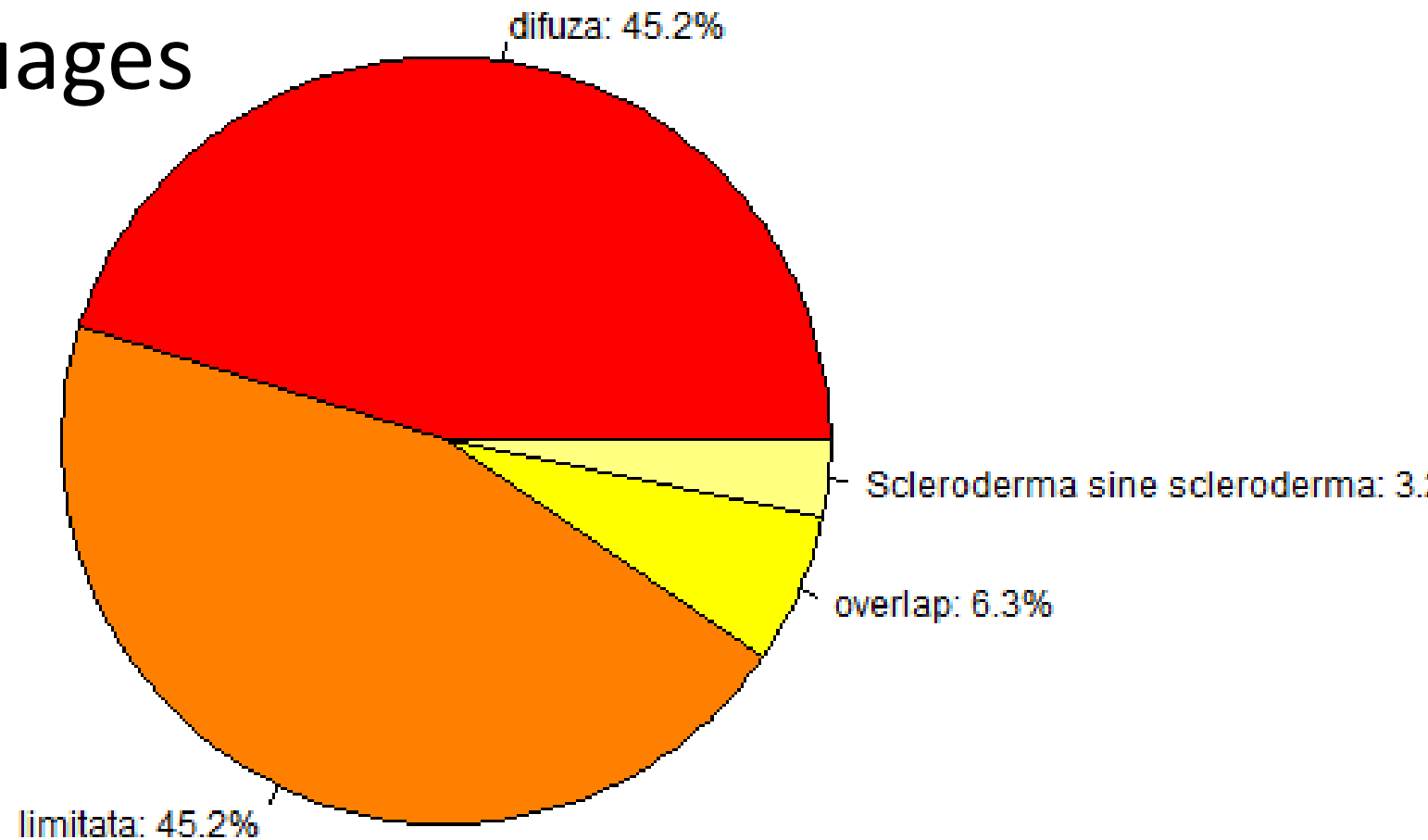
<https://www.wooclap.com/UMGDYP>



- The colors are not contrasting
- Figure title missing
- Legend in two languages



<https://www.wooclap.com/UMGDYP>



What is wrong? (Problem 11)

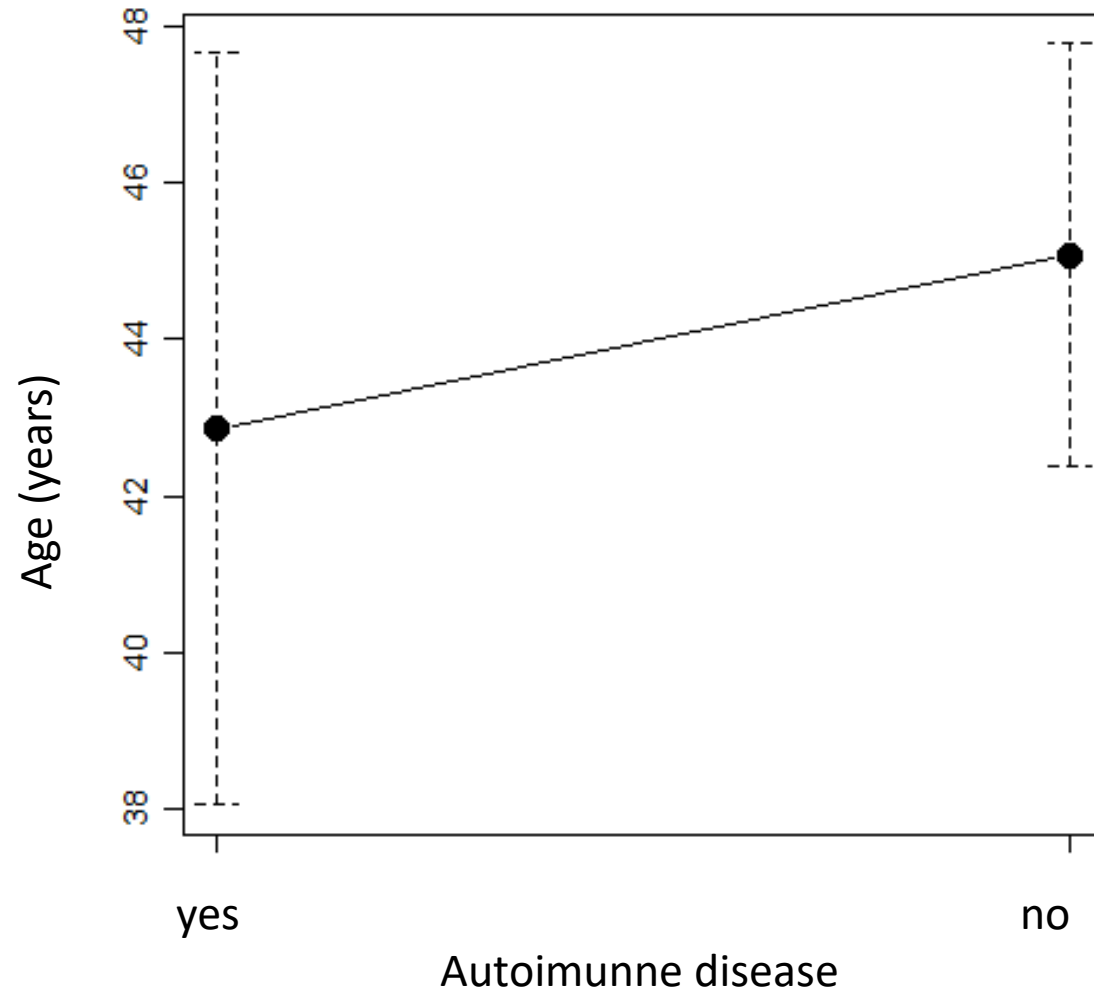


Fig. 1 Age at onset according to association with autoimmune diseases

What is wrong? (Problem 11)

- unity of measurements are missing
- what is the dot and the line?

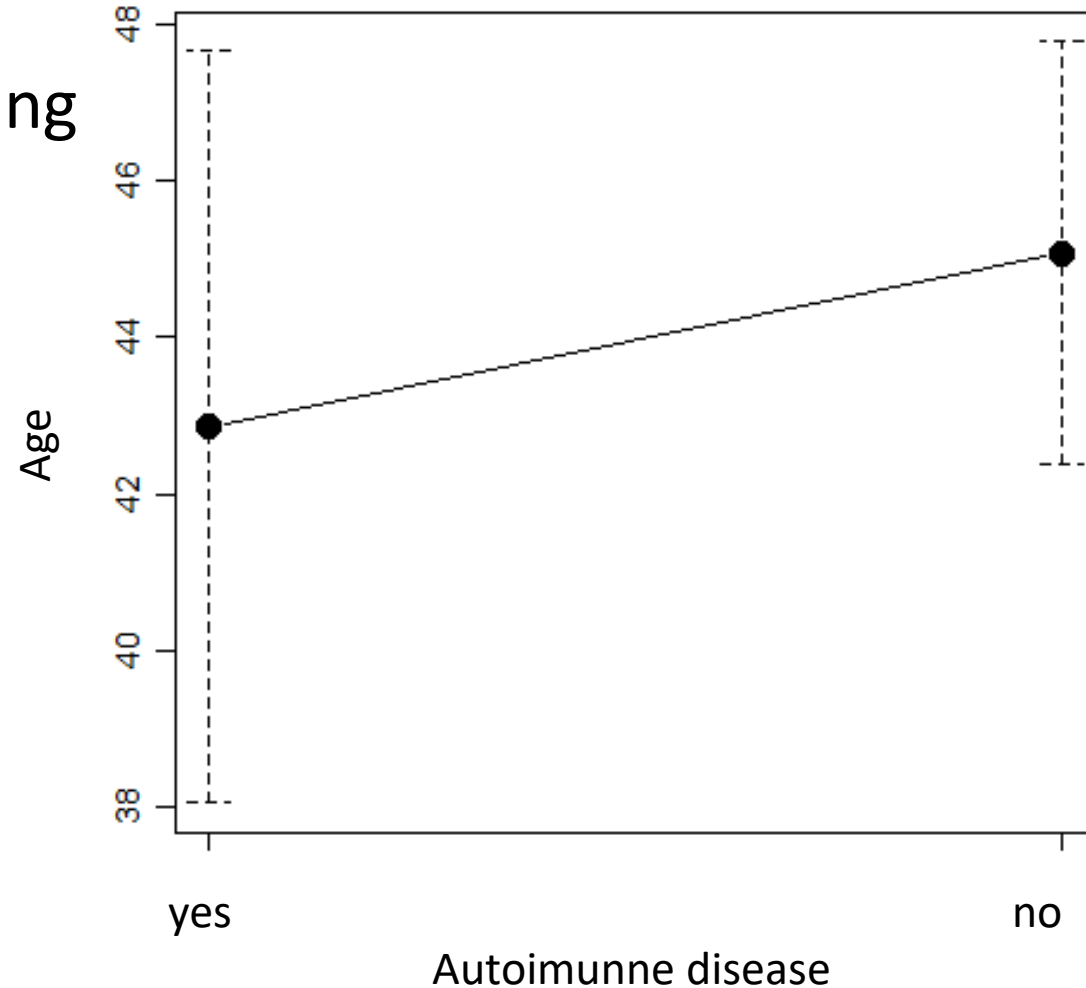


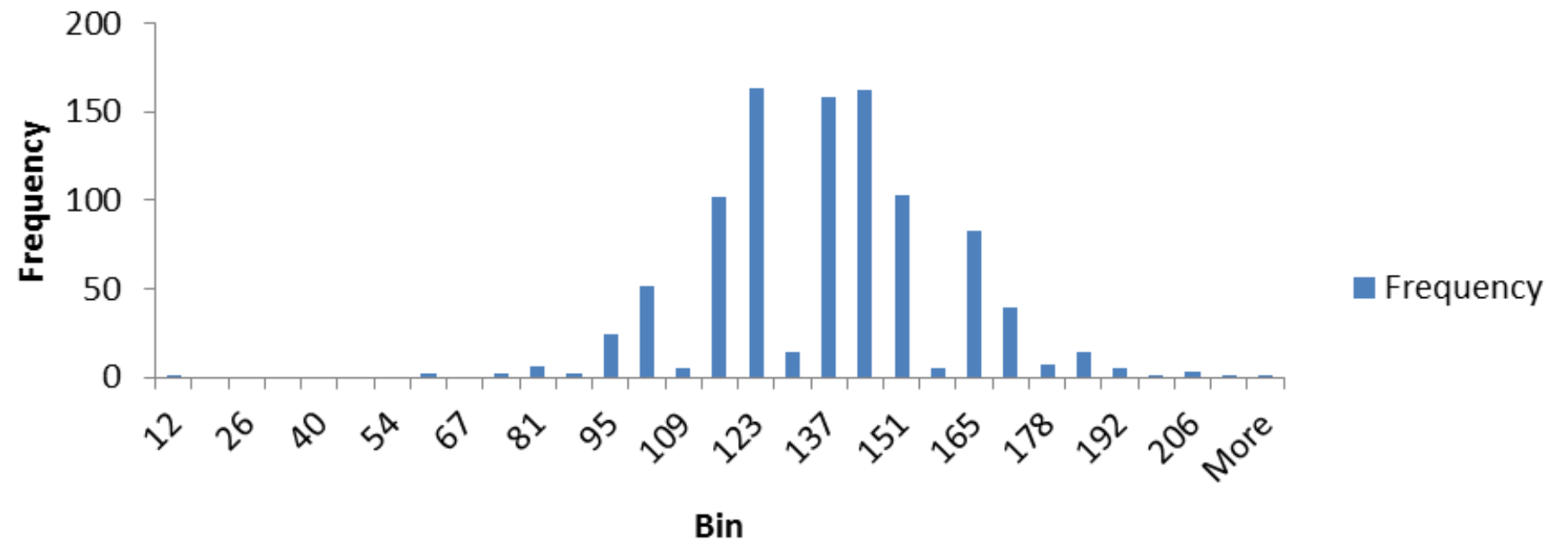
Fig. 1 Age at onset according to association with autoimmune diseases

- What is wrong? (Problem 12)

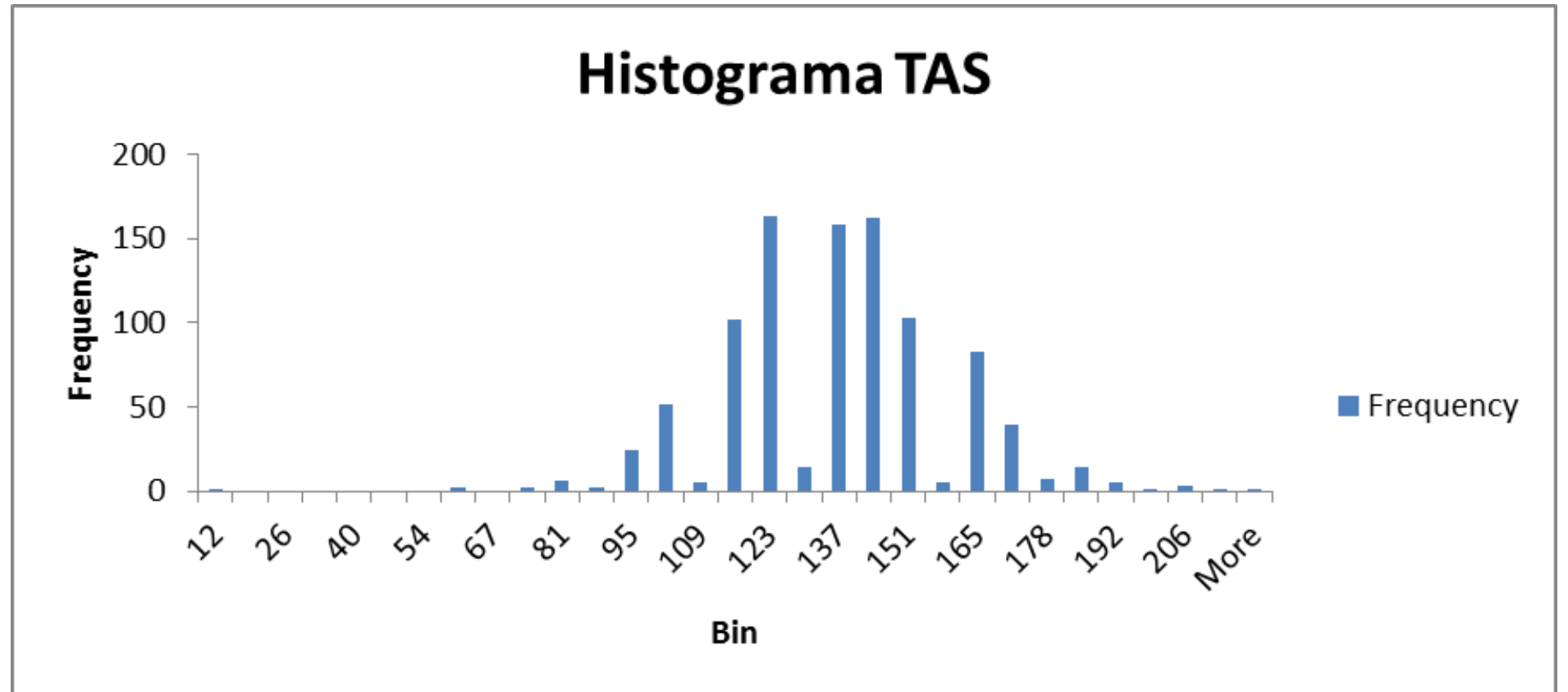


<https://www.wooclap.com/UMGDYP>

SBP histogram



- The figure title is missing
- What is Bin?
- What are the values on the OX axis?
- The title is in Romanian, and the titles on the OY/OX axes are in English
- A histogram has no spaces between columns



Discutions

They must answer the following questions:

- What important results did the study have?

- What explanations need to be given?

- What is the message of the work?

- What needs to be done next?

The purpose of the discussion is to interpret the work that was carried out, namely the means that were used, the working method, the results, starting from the limits of the study and up to the conclusions that emerge.

Discussions- Objectives

1. To say whether
 - the purpose of the work was / was not achieved
 - list the main results
- the results
 - are not repeated
 - not all interpreted

Discussions- Objectives

2. Appreciation of the quality and validity (correctness) of the results.

- critical discussion of the work

- identification of systematic errors

Was the number of subjects studied sufficient?

Is there an error in the selection of subjects?

Was the choice of the working method the best?

Discussions- Objectives

3. Comparison of the results obtained with those of other authors
 - differences/similarities,
 - specified by enumeration
 - explained why they appeared
 - based on arguments that can be proven

Discussions- Objectives

Optional

formulation of hypotheses at the end of the discussion
to be resolved by other studies

Discussions

Mistakes to avoid

Presence of objectives other than those defined

Repetition of introduction

Emergence of

- new terms

- new data

- new methods

- new results

Emotional expressions

Fabulations

Conclusions

Only conclusions

without generalizations

references to unproven study results!!!

All conclusions will be based on the study results

Conclusions or

Hypotheses

can be stated in the present tense.

References

Mistakes to avoid

- references in
 - Results
 - Title
 - Abstract

Thank you!