

LITERATURE REVIEW

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OBJECTIVES

- Understand the purpose of a literature review
- Identify research articles to review
- Identify true experimental study design
- Identify the components of a research study
- Critique the setting, population, sample size
- Scrutinize the analysis and conclusions
- Identify study limitations
- Recognize implications for clinical practice



READING RESEARCH

10

7

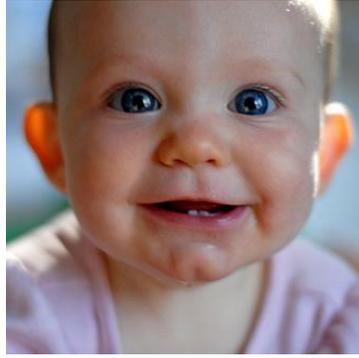
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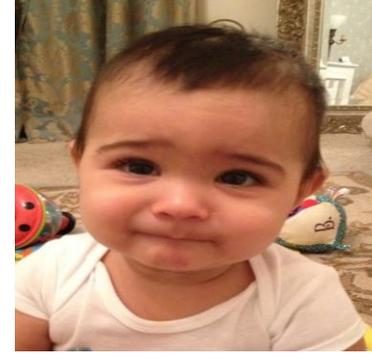
Absolutely,
Bring it On!



Sure I'll
read it!



Well.....
Okay



I don't
think so!



Please, Please
NO!



REVIEW VS. CRITIQUE



Reviews are a high level scrutiny of the study's content

A Critique is a deep dive into the study's;

- Strengths and limitations
- Accuracy and believability
- Clinical relevance of the evidence

Critique are an appraisal of the research methods and findings



Selecting Research Articles From a List of Studies

Search Results: 1 - 30 of 557

1. [Vildagliptin: A Review of Its Use in Type 2 Diabetes Mellitus.](#)  

 (includes abstract) Keating, Gillian; *Drugs*, 2014 Apr; 74 (5): 587-610. (journal article - **meta analysis**, research, systematic review, tables/charts) ISSN: 0012-6667 PMID: 24638989

Academic Journal The dipeptidyl peptidase-4 inhibitor vildagliptin (Galvus) is approved for use as monotherapy and combination therapy in type 2 diabetes mellitus. A fixed-dose combination of vildagliptin/metform...

Subjects: Diabetes Mellitus, Type 2 Drug Therapy; Dipeptidyl Peptidase 4 Inhibitors Administration and Dosage

[Show all 8 images](#)

 [PDF Full Text](#) (577.6KB)

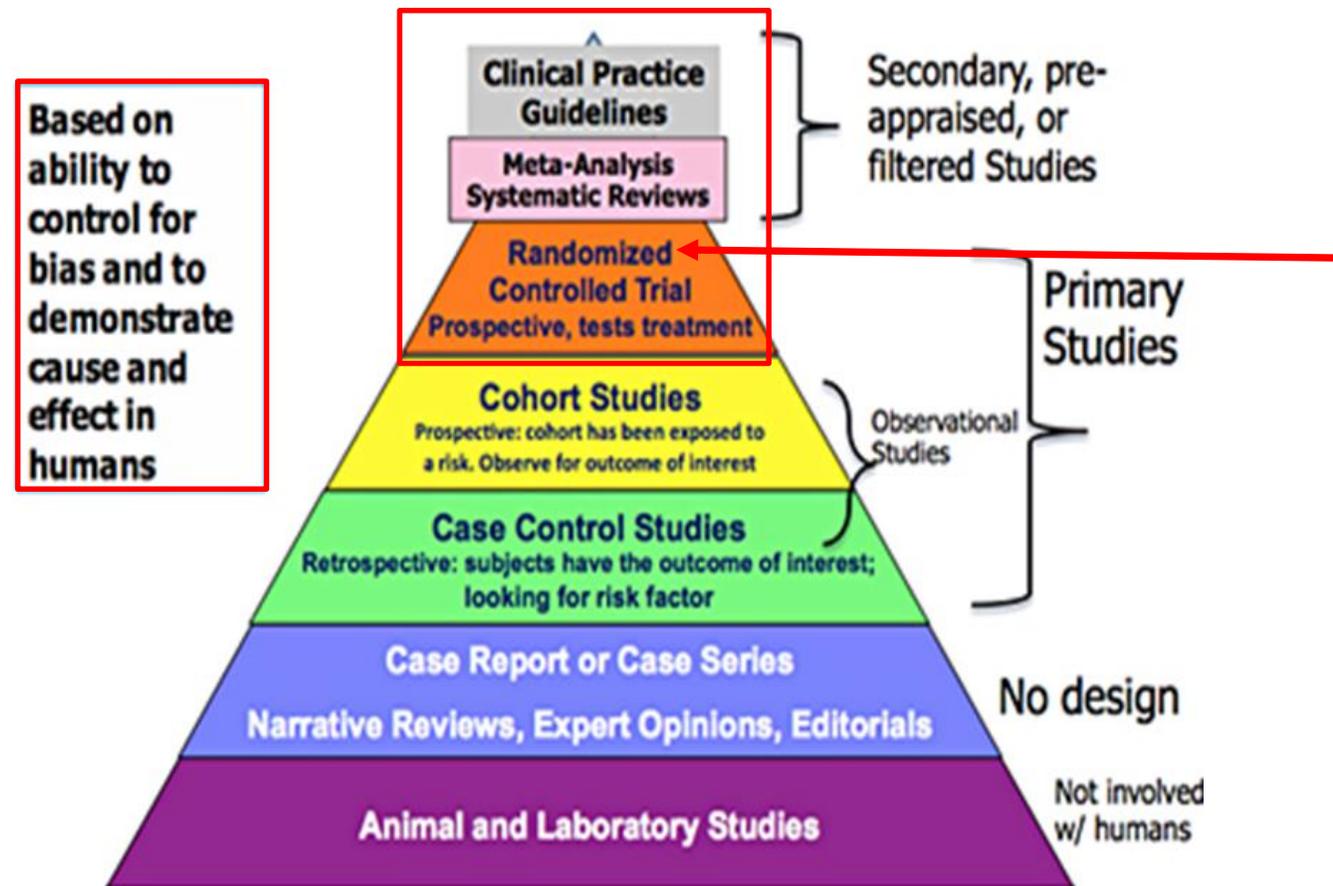
2. [Diabetes and Hypertension Prevalence in Homeless Adults in the United States: A Systematic Review and Meta-Analysis.](#)  

 (includes abstract) Bernstein, Rebecca S.; Meurer, Linda N.; Plumb, Ellen J.; Jackson, Jeffrey L.; *American Journal of Public Health*, 2015 Feb; 105 (2): e46-60.

SELECTING A RESEARCH ARTICLES

Hierarchy of Research Designs & Levels of Scientific Evidence

Evidence Hierarchy



RANDOMIZED CONTROLLED TRIAL

Characteristic of a true experimental design or RCT

- ✓ Intervention (Experimental Group)
- ✓ Control Group (No intervention)
- ✓ Randomization

Must have all three to be RCT

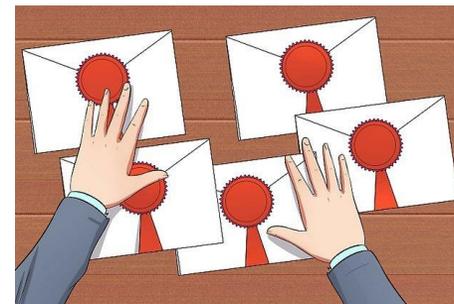


GET A *Random Number* BETWEEN:

1 and 100

Generate!

42



RESEARCH TITLES

RESEARCH TITLES--Should include;

- ✓ Population under study
- ✓ Key Concept
(Human characteristic or behavior)
- ✓ Intervention (& Comparison)
- ✓ Methodology



A New Distraction Intervention to Reduce Venipuncture **Pain** in **School-Age Children: Different Colored Flashlights; An Experimental Study with Control Group**

IDENTIFYING ARTICLES TO REVIEW

- ✓ *Effects of sucrose as pain relief/comfort during immunizations on 15 month children in health care centers: A randomized controlled trial*
- ✗ *Predictors of agitation in the critically ill*
- ✓ *Graduated compression stockings as prophylaxis for flight-related venous thrombosis: Systematic literature review*
- ✗ *Patients' perceptions of participation in nursing care on medical wards*

SAMPLE STUDY

Reducing Length of Labor and Cesarean
Surgery Rate Using a Peanut Ball for
Women Laboring With an Epidural

Tussey, C. M., Botsios, E., Gerkin, R.D., Kelly, L.A.,
Gamez, J., Mensik, J.

Primary source



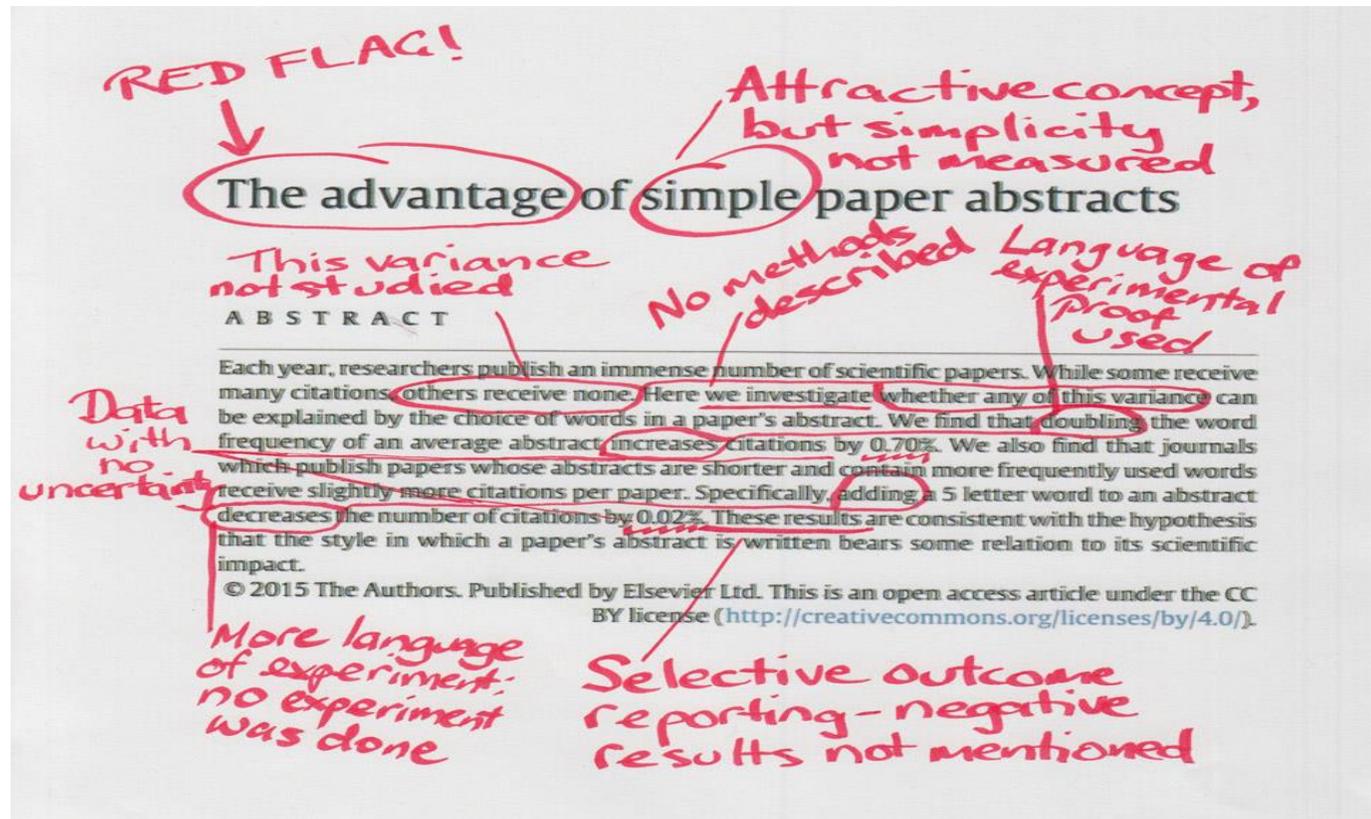
The Journal of Perinatal Education | Winter 2015, Volume
24, Number 1



ABSTRACT

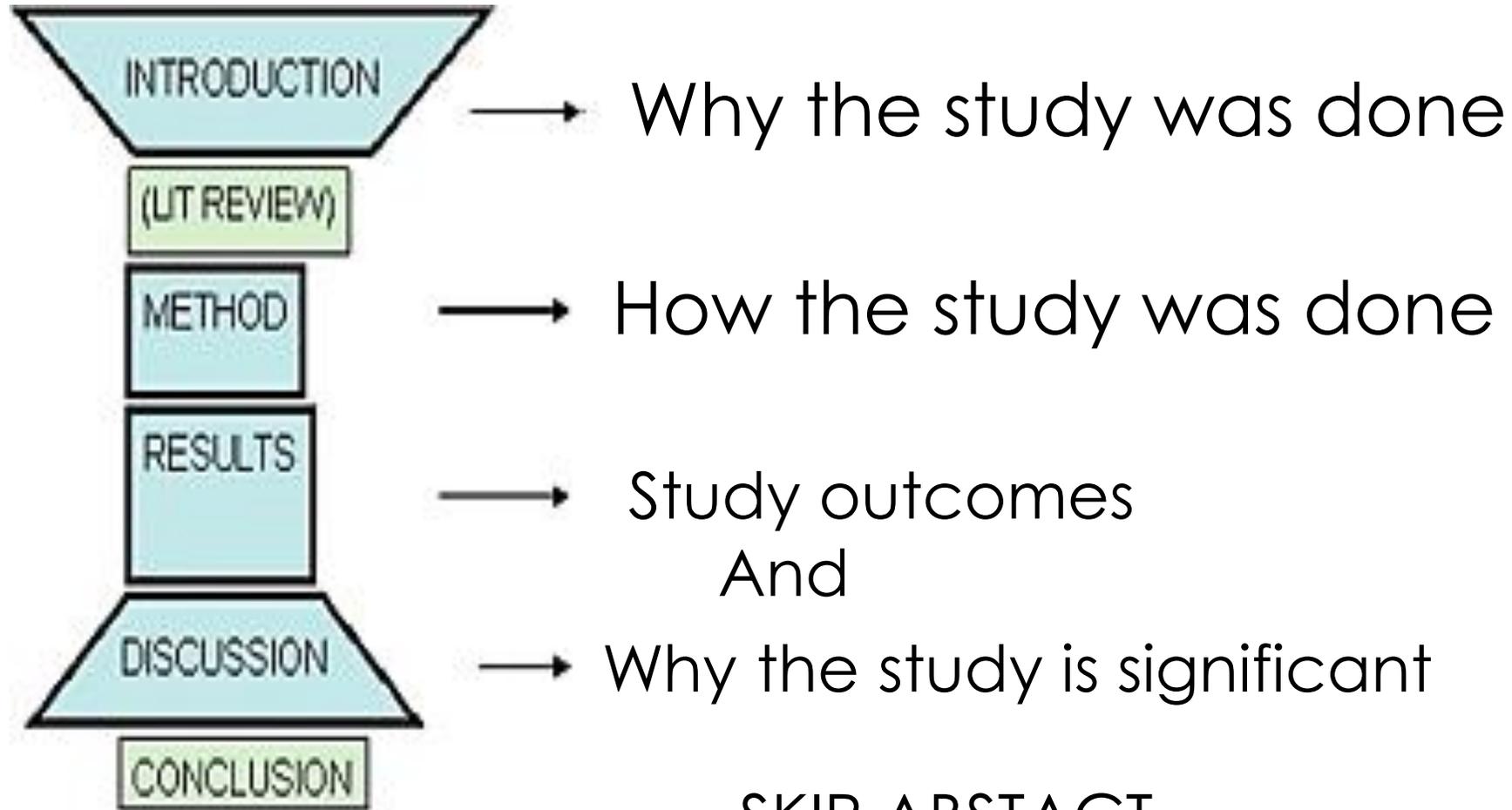
ABSTRACT

Abstracts evolved as marketing blurbs for papers – and they're the mother lode of research spin. (Bastian, 2016)



COMPONENTS OF A STUDY

I
M
R
A
D



SKIP ABSTRACT

INTRODUCTION

First paragraph:

Study Problem

Middle paragraphs:

Literature Review: Define the problem and establishes the need for the study

Last paragraph:

Study Purpose, Research Question , Hypothesis



INTRODUCTION: RESEARCH PROBLEM

Reducing Length of Labor and Cesarean Surgery Rate Using a Peanut Ball for Women Laboring With an Epidural

Introduction

Cesarean surgery is often perceived as benign, but the surgery can place the woman at an increased risk of infection, hemorrhage, damage to abdominal and urinary tract organs, longer recovery, and complications from anesthesia. In 2010, the U.S. cesarean rate was at 32.8% (Martin, Hamilton, Ventura, Osterman, & Matthews, 2013), a drastic increase from the initial and ideal rate of 4.5% when it was first measured in 1965 (Taffel, Placek, & Liss, 1987). Organizations have begun assuming responsibility for limiting elective inductions, recognizing that the best outcomes overall for both the mother and the infant occur in facilities with cesarean surgery rates in the 5%-10% range (Althabe & Belizan, 2006). The Healthy People 2020 cesarean surgery rate target is 23.9% for low-risk full-term women with a singleton, vertex presentation (U.S. Department of Health and Human Services, 2013).

INTRODUCTION: RESEARCH HYPOTHESIS, OBJECTIVE

Last paragraph

Reducing Length of Labor and Cesarean Surgery Rate Using a Peanut Ball for Women Laboring With an Epidural

Based on previous knowledge of maternal position changes, it was hypothesized that the simple placement of the peanut ball between a laboring woman's legs could increase pelvic diameter and allow more room for fetal descent. Although the peanut ball is currently used in labor and birth units, little research exists to support its effectiveness in improving labor outcomes. In an effort to explore the effectiveness of using a peanut ball for laboring women with an epidural, a nurse-led study was designed to compare the length of labor and mode of birth in a controlled, randomized study with two groups: women who used a peanut ball compared to those who did not use a peanut ball.

INTRODUCTION: LITERATURE REVIEW

Skip the rest of the
Introduction! (at least for now)

HAPPY Dance



METHODS SECTION

How the study was done—Step-by-step

- Ethical Statement
- Theory or Framework (if one is used)
- Setting; where the study took place
- Participants and the Sample Size
- How data was collected



METHOD SECTION

Ethical Statement

Must Have—Not present?—No need to review!

- Generally 1st paragraph
- Institutional Review Board (IRB)
- Ethic's Committee
- Review Committee
- Human Rights Committee

Sample Study: 1st paragraph, last sentence ✓



METHODS: SETTING AND SAMPLE

Single-Site verses Multi-Site Setting



Multiple sites increase the confidence in results and generalizability

Sample Study: 2nd paragraph, 1st sentence

METHODS: PARTICIPANTS

Are the groups homogenous (balanced)?

TABLE 1

Maternal Demographic Characteristics in Control and Intervention Groups

Characteristic	Peanut Ball Group (n = 107)	Control Group (n = 94)
Age , M[SD)	27 .5(6 .7)	27 .3(6 .2)
Average gravidity, median	2.0	2.0
Parity, median	1.0	0.0
Nulliparity, %	47.7	59.6
White ethnicity, %	43.9	35.5
Hispanic ethnicity,%	43.0	46.2
EDC in weeks, M (SD)	38 .9(2 .4)	39.1(2.5)
Diabetic, %	4.8	4.4
Cervical dilation median	4.5	4.0
Effacement at enrollment, %	84.2	77.7
Station at enrollment, median	- 1 .0	- 1 .0



METHODS: SAMPLE SIZE

How do researchers know how many people are needed in a research study?.... Through a Power Analysis

Power analysis determines the **minimum** number of participants needed to ensure the validity of statistical results (i.e. p value)

Per the article, *“It was determined that **90 subjects** in each group would provide **a power of .80** at an alpha of .05. To account for dropouts, a sample size of 100 subjects per group was planned”* (Tussey, et al. 2015).

METHODS: DATA COLLECTION

Self-report

Observation

Bio-physical

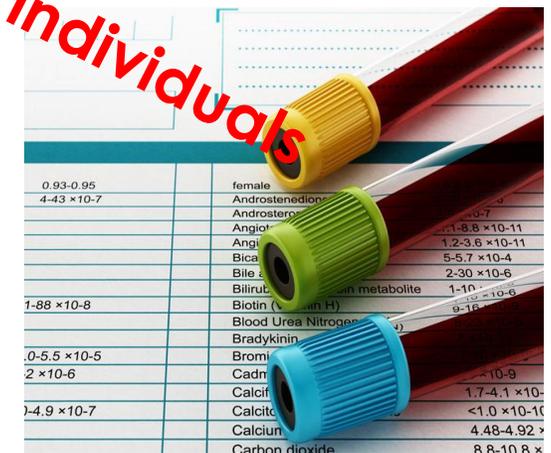


Validity and reliability of the tools

APGAR SCORE	0	1	2
Heart Rate	Absent	Slow < 100/min	> 100/min
Respiratory Rate	Absent	Slow, weak cry	Good cry
Muscle tone	Flaccid	Some flexion of extremities	Well flexed
Reflex, irritability	No response	Grimace	Cry
Color	Blue, pale	Body pink, extremities blue	Completely pink

Score _____

Training of individuals



METHODS: DATA COLLECTION

In the Sample Study this area is labeled “***Intervention***”

- The study procedure
- What data was collected
- How data was collected
 - Training: Registered nurses were educated by the investigators on the study protocol
 - Quality of the tools used—medical record documentation



RESULTS

Data Analysis and Results; Skip—information should be in a table
Sample Study: Table 2 “*Labor and Birth Outcomes*”

Note any p-Values < 0.05



Length of second stage labor (min)

Peanut Ball Group ($n = 107$)
21.3 (16.3 - 26.3)

Control Group ($n = 94$)
43.5 (32.3 - 54.8)

Statistic
t test

p Value
< .001

Cesarean Surgery

Peanut Ball Group ($n = 107$)
11 (10.3)

Control Group ($n = 94$)
19 (21.1)

Statistic
 χ^2

p Value
.011

WHAT IS A P-VALUE?

Difference

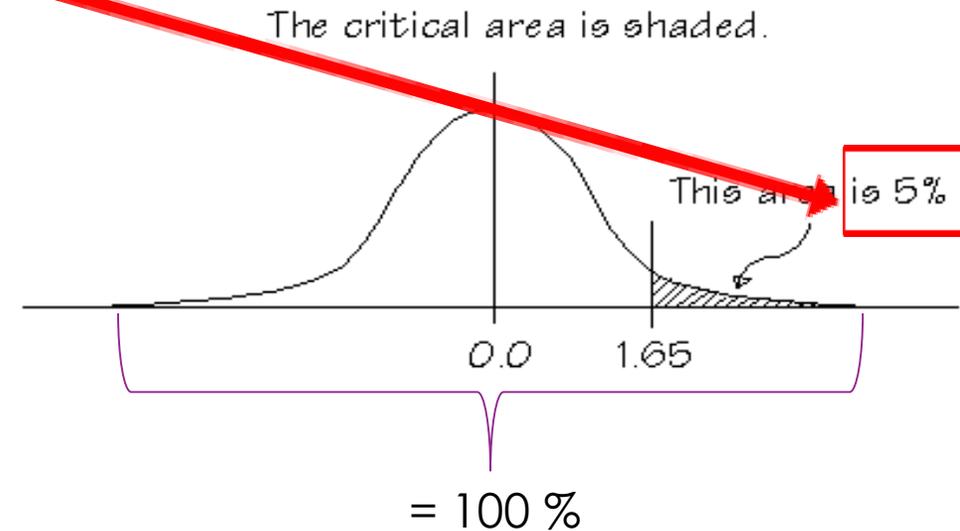
Is Significant or Is Not Significant

Standard value is $p < 0.05$

$p < 0.05$

95% chance that the change in the outcome IS caused by the intervention

5% that the change that the outcome is NOT caused by the intervention



DISCUSSION SECTION

- Compares results with the findings from other studies
- Explain findings, point out any unexpected or especially profound findings
- Describes lessons learned, study limitations
- Highlighting best practices
- Discusses whether the hypothesis is supported or unsupported
- Call for additional research



DISCUSSION

Study Limitations

- All Studies have limitations
- Located at the end of the study
- Researchers' professional responsibility
- Holes or gaps in the research design
 - Sampling deficiencies, practical constraints, data quality problems, methodological short-comings
- May differ from the readers' identified study limitations



DISCUSSION

Sample Study Limitations

- A single facility in the Southwest
- Did not control for all factors that could influence outcomes
- Additional analysis was needed to control for differences between the groups
- The study did not monitor the total length of time a woman sat in an upright position



DISCUSSION

Implications for clinical practice

Sample Study:

- Demonstrate the potential of the peanut ball to reduce length of labor and promote spontaneous vaginal birth.
- Integration of the use of a peanut ball can begin with childbirth educators
- Nurses include the peanut ball use in labor management classes
- Future research should address the effectiveness of the peanut ball with a larger sample controlling for more potential confounders.



REVIEW

1. Review the title for; population, key concept, intervention, method
2. Read the problem; 1st paragraph Introduction
3. Read the purpose, hypothesis, research question; Last paragraph Introduction
4. Ethic statement present
5. Setting, one site vs. multiple sites
6. Participant groups are homogenous (balanced)
7. Power analysis is done to determine the minimum number of participants
8. Data Collection—tools and training
9. Results—focus on *p*-Values (okay to have insignificant results)
10. Limitations
11. Recommendations clinical practice

SHORTCUTS AND TIPS

- Control “F” or Find—search for key words
- Don’t rely on the Abstract
- Skip the literature review
- Scrutinize discussion section
- Use tables as quick reference
- When in doubt; through it out

I ♥
Ctrl+F



QUESTIONS ??





Thank
you

REFERENCES

- Bastian, H., (2016, March). How to spot research spin: The case of the not-so-simple abstract. *Bias, Science Communication*. Retrieved from <https://blogs.plos.org/absolutely-maybe/2016/03/17/how-to-spot-research-spin-the-case-of-the-not-so-simple-abstract/>
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- University of Southern California (2019), *Organizing Your Social Sciences Research Paper: 8. The Discussion* Retrieved from <http://libguides.usc.edu/writingguide/discussion>