



Incharge/Chairperson/Principals/Directors  
Departments/Constituent Colleges/Institutes/Sub-Campuses  
The Islamia University of Bahawalpur

Subject: **Revamping and Implementation of IUB Guidelines for Thesis and Proposal/Synopsis Writing**

Dear Sir/Madam

1. The Advanced Studies and Research Board is playing a vital role in improving the research standards at the Islamia University of Bahawalpur. In pursuit of excellence, the Directorate of Advanced Studies and Research constituted a committee vide Notification No. 229/AS&R dated 02<sup>nd</sup> March 2023 to revamp and implement new "*IUB Guidelines for Synopsis and Thesis Writing*" that will provide guidelines for writing and submitting thesis/dissertation/synopsis/research project of BS/MPhil/MS/MSc (Hons)/MBA/LLM/PhD or equivalent programs which will enhance the quality of research (Annex-A).

2. These guidelines were adopted in the 84<sup>th</sup> meeting of the Advanced Studies and Research Board, held on 17 March 2023. The Incharges / Chairpersons / Principals / Directors of teaching Departments/Colleges/Institutes are requested to distribute these guidelines among all the supervisors who will ensure the implementation of these instructions during the preparation of the thesis/dissertation/synopsis/research project by the scholars doing research work under their supervision, making research output worthy of presentation and publication.

3. The supervisors are expected to oversee and enforce these standards during the preparation of research work by the scholars under their supervision. It may also be noted that the thesis may be submitted to the Directorate of Advanced Studies and Research following these guidelines; otherwise, it will not be processed for evaluation.

4. These guidelines will be uploaded to the university website in the form of a booklet very soon.

Enclosure: as stated

Yours truly,

Deputy Director (AS&R)  
for Director (AS&R)

Copy to:

1. Deans of all Faculties.
2. Director, Academics.
3. Director, Quality Enhancement Cell.
4. Directors, Sub-Campuses.
5. Director, Green Campus.
6. Incharge(s) of the teaching department in Sub-Campuses.
7. Assistant Controller of Examinations (Sub-Campuses)
8. Incharge(s) Thesis Submission Desk in Sub-Campuses.
9. Executive Secretary to Vice Chancellor.
10. PA to Registrar.

# **IUB Guidelines for Synopsis/Thesis Writing**

Directorate of Advanced Studies and Research  
Syed Tabish Alwari Building  
Baghdad-ul-Jadeed Campus  
**The Islamia University of Bahawalpur**

## **Aims and Objectives**

1. To get the IUB thesis/synopsis guidelines **implemented at IUB** in true letter and spirit
2. To revamp the existing guidelines in perspective of a) **the latest trends in Science Writing** b) to facilitate the supervisors/reviewers/readers and c) to follow **Green Policy of the IUB**
3. To initiate and maintain a series of workshops for the DRC members/faculty of the IUB on all **Allied Aspects of Science Writing and IUB Thesis/Synopsis Guidelines**

## **Amendments Made in 2014 Guidelines**

### **For Green Policy:**

- Line spacing, margins and printing pattern

### **For Quality Purpose and Similarity in Pattern and Format:**

1. Structured abstract
2. Appropriate subheadings for the Introduction Chapter
3. 'Work Done in Pakistan' to be added as a subheading in the Literature Review Chapter
4. Appropriate subheadings for chapter of Methodology
5. Minor amendments in 'Results' as per new patterns of 'Science Writing'
6. Minor amendments in 'Discussion' as per new patterns of 'Science Writing'
7. Minor amendments in 'Conclusions and Recommendations' as per new patterns of 'Science Writing'
8. APA style of referencing
9. Quick guides to thesis/synopsis organization and their format and style
10. Quick guide to APA reference style

# Table of Contents

Preface.....	1
Title Page-I.....	2
Title Page-II.....	3
Student’s Declaration.....	4
Supervisor’s Declaration.....	5
Certificate.....	6
Dedication.....	7
Acknowledgements.....	8
Table of Contents.....	9
List of Tables.....	10
List of Figures.....	11
List of Abbreviations/Key Working Definitions.....	12
List of Appendices.....	13
Abstract.....	14
Model of a Structured Abstract.....	15
Main Manuscript.....	16
<b>Chapter 1 Introduction.....</b>	<b>17</b>
1.1 Background.....	17
1.2 Instructions.....	17
1.2.1 Must-haves.....	17
<b>Chapter 2 Review of Literature.....</b>	<b>18</b>
2.1 Importance.....	18
2.2 Purpose.....	18
2.3 Instructions.....	18
<b>Chapter 3 Materials and Methods/Data and Methodology.....</b>	<b>19</b>
3.1 Background.....	19
3.2 Instructions.....	19
3.3 Must-haves.....	19
<b>Chapter 4 Results.....</b>	<b>20</b>
4.1 Instructions.....	20
4.2 Incorporation of Tables.....	20
4.3 Incorporation of Figures.....	20
4.3.1 Large Size Drawings/Charts/Figures/Tables.....	21
4.4 Equations.....	21
4.5 Quotations in the Text.....	21
<b>Chapter 5 Discussion.....</b>	<b>24</b>
5.1 Background.....	24
<b>Chapter 6 Conclusions and Recommendations.....</b>	<b>25</b>
6.1 Conclusions.....	25
6.2 Recommendations.....	25
Literature Cited.....	26
List of Publications.....	27
General Guidelines.....	28

Formatting Guidelines.....	28
Summary Chart for the Organization of the Thesis and its Style and Form.....	29
Quick Guide to APA Style.....	30
Summary Chart for the Organization of the Synopsis and its Style and Form.....	34

# I. Preface

## Components

- Title Pages
- Student's Declaration
- Supervisor's Declaration
- Certificate
- Dedication (Optional)
- Acknowledgements
- Table of Contents
- List of Tables
- List of Figures
- List of Abbreviations
- List of Appendices (If Any)
- Abstract

**Title of the Thesis (Title-Cased),  
Font Size 16 (Bold), Times New Roman  
(TNR), Centralized**

Followed by University Monogram  
(3×3.2 cm)/(1.18in×1.26in)



Full Name of the Candidate,  
Registration Number (Title-Cased,  
Font Size 14, TNR, Bold, Centralized)

**Name of the Student  
Spxxxxxxx001**

Degree for which the Thesis has  
been Submitted  
(Font Size 16, TNR, Bold,  
Centralized)

**BS (Hons)/MS/MPhil/PhD Xyz**

Name of the Department/Institute, Faculty,  
University, Country Name and Year of Degree  
Completion  
(Title-Cased, Font Size 16, TNR, Bold,  
Centralized)

**Department/Institute of Abcd  
Faculty of Abcd  
The Islamia University of Bahawalpur  
Pakistan  
2023**

**Title of the Thesis (Title-Cased),  
Font Size 16 (Bold), Times New Roman  
(TNR), Centralized**

(Title-Cased, Font Size 12, TNR,  
Bold, Centralized)

**A Thesis Submitted by**

Full Name of the Candidate,  
Registration Number (Title-Cased,  
Font Size 14, TNR, Bold, Centralized)

**Name of the Student  
Spxxxxxxx001**

**in Partial Fulfilment of the Requirements for the Degree of**

Degree for which the Thesis has  
been Submitted,  
(Title-Cased, Font Size 16, TNR,  
Bold, Centralized)

**BS (Hons)/MS/MPhil/PhD Xyz**

**Supervised by**

Name of the Supervisor, Academic Designation,  
Name of Department/Institute  
(Capitalize Each Word, Font Size 14, TNR,  
Bold, Centralized)

**Name of Supervisor**

**Academic Designation, Department/Institute**

Name of the Department/Institute, Faculty,  
University and Country Name  
(Title-Cased, Font Size 16, TNR, Bold,  
Centralized)

**Department/Institute of Abcd  
Faculty of Abcd  
The Islamia University of Bahawalpur  
Pakistan**



(Title-Cased, Font Size 16, Bold, TNR,  
Centralized)

## **Student's Declaration**

Text in Font Size 12, Line Spacing 1.5,  
TNR, Justified

I, Mr. Student Name S/O Father Name, hereby declare that the contents of the thesis titled “Thesis Title” is a product of my own research and nothing has been incorporated (except the references, standard mathematical or generic models/ equations/ formulae/ protocols etc.) in this research work without acknowledgement to the best of my knowledge. I further declare that this work has not been submitted for the award of any other diploma/degree.

Name of the Student and Registration  
Number, Font Size 12, TNR Bold, Right-  
align for Signature

**Name of the Student**  
**Spxxxxxx001**

(Title-Cased, Font Size 16 Bold, TNR,  
Centralized)

## **Supervisor's Declaration**

Font Size 12, Line Spacing 1.5, TNR,  
Justified

It is certified that the research work presented by Student Name in this thesis titled "Thesis Title" has been carried out under my supervision. In my opinion it is fully adequate in scope and quality for the degree of BS/Master of Philosophy (M. Phil.)/PhD in Subject Name from the Name of Department/Institute, The Islamia University of Bahawalpur.

Name of the Supervisor, Font Size 12,  
TNR Bold, right-align for signature

**Name of Supervisor**

(Font Size 16 Bold, TNR, Centralized)

# Certificate

Font Size 12, Line Spacing 1.5, TNR,  
Justified

It is hereby certified that work presented by Student's Full Name S/O Father Name in the thesis titled "Title of Thesis" has been successfully presented/ defended and is accepted in its present form as satisfying the requirement for the degree of Master of Philosophy/Doctor of Philosophy in the (Field's Name) in the Department of Xyz, Faculty of Abc, The Islamia University of Bahawalpur.

Capitalize Each Word, Font Size  
12, TNR

**1. Supervisor**

\_\_\_\_\_  
Full Name

**2. Co-Supervisor**

\_\_\_\_\_  
Full Name,  
Designation, Department  
University

**3. External Examiner**

\_\_\_\_\_  
Full Name

**4. External Examiner**

\_\_\_\_\_  
Full Name

**5. Chairman/Director**

\_\_\_\_\_  
Full Name

Note: In case of a supervisory/advisory committee, the members may be added here, as per need.

(Font Size 16 Bold, TNR, Centralized)



## **Dedication**

Write dedication here. (Font Size 12, Line Spacing 1.5, TNR and Justified). Dedication should not contain any number, photograph or chart and must be maximum of 100 words.

(Font Size 16 Bold, TNR, Centralized)



## **Acknowledgements**

Write acknowledgments here (Maximum 600 words/ page). (Font size 12, Line Spacing 1.5, TNR, Justified).

Acknowledgements can be made to researchers, academicians, industrialists, collaborators, organizations *etc.* as per the need.

(Title-Cased, Font Size 16 Bold, TNR,  
Centralized)

(Font Size 12, TNR, 1.15 Line Spacing, 0  
pt Before and After Paragraph, Justified.)  
Chapter Name/Number must be Bold

# Table of Contents

<b>Chapter 1 Introduction .....</b>	<b>17</b>
1.1 Background .....	17
1.2 Instructions .....	17
1.2.1 Must-haves .....	17
<b>Chapter 2 Review of Literature.....</b>	<b>18</b>
2.1 Importance.....	18
2.2 Purpose .....	18
2.3 Instructions .....	18
<b>Chapter 3 Materials and Methods/Data and Methodology .....</b>	<b>19</b>
3.1 Background .....	19
3.2 Instructions .....	19
3.2.1 Must-haves .....	19
<b>Chapter 4 Results.....</b>	<b>20</b>
4.1 Instructions .....	20
4.2 Incorporation of Tables .....	20
4.3 Incorporation of Figures .....	20
4.3.1 Large Size Drawings/Charts/Figures/Tables .....	21
4.4 Equations .....	21
4.5 Quotations in the Text .....	21
<b>Chapter 5 Discussion .....</b>	<b>24</b>
5.1 Background .....	24
<b>Chapter 6 Conclusions and Recommendations.....</b>	<b>25</b>
6.1 Conclusions .....	25
6.2 Recommendations .....	25

(Title-Cased, Font Size 16 Bold, TNR,  
Centralized)

## List of Tables

**Table 4.1:** Linear Regression between Various Hematological Attributes for Cholistani Camels (n=149)..... 22

(Font Size 12, TNR, 1.15 Line Spacing, 0  
pt Before and After Paragraph, Justified)

(Title-Cased, Font Size 16 Bold, TNR,  
Centralized)

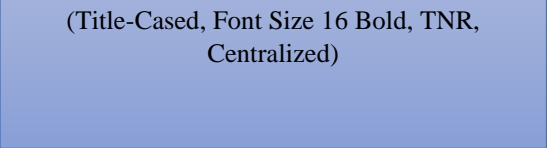
## List of Figures

- Figure 4.1:** Scatterplot for logilinear regression between hemoglobin determined spectrophotometrically (HbD) and hemoglobin calculated as one-third of Packed Cell Volume (HbC) in Cholistani camels (n= 149; r= 0.753) ..... 23
- Figure 4.2:** A dancing Marecha (a) and Barella (b) camel in Cholistan Desert of Pakistan (Ali et al., 2009) ..... 23

(Font Size 12, TNR, 1.15 Line Spacing, 0  
pt Before and After Paragraph, Justified)



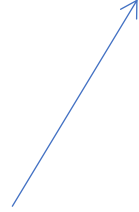
(Title-Cased, Font Size 16 Bold, TNR,  
Centralized)



## **List of Abbreviations/Key Working Definitions**

IUB: Islamia University of Bahawalpur

LOA: List of Abbreviations



Title-Cased, Font size 12, Line  
Spacing 1.15, Opt Spacing Before  
and After Paragraph, TNR,  
Justified

Abbreviations must be Sorted  
Alphabetically

(Title-Cased, Font Size 16 Bold, TNR,  
Centralized)



## **List of Appendices (If Any)**

<b>Appendix I:</b> Alaine Detection Kit by Sigma Aldrich, Germany.....	7
--	---

(Font Size 16 Bold, TNR, Centralized)

## **Abstract**

Font Size 12, TNR, 1.15 line spacing, 0pt Spacing Before and 6pt Spacing After Paragraph, Justified)

Structured abstracts' assist the reader/reviewer in quickly understanding the findings of a study. The font of the entire document is Times New Roman size 12, regular, justified except headings. Unlike 'non-structured abstracts', they are divided into clear sections with distinct headings. These headings typically consist of background, objective(s), methodology, results, and conclusions. Considering a global twist of 'Science Writing' towards structured abstracts, the research thesis must have a structured abstract (not more than 500 words) as per the model given ahead.

**Keywords (3 to 5):** Keyword1, Keyword2, Keyword3, Keyword4, Keyword5

(Capital First Letter, Font Size 12, Bold, TNR)

(Capital First Letter, Font Size 12, Regular, TNR)  
Separated by Commas

# Model of a Structured Abstract

## Background

In human medical practice, a hematological rule of three has been validated for healthy human populations. One such formula is estimating hemoglobin (Hb) levels as 1/3<sup>rd</sup> of Packed Cell Volume (PCV). However, no such hematological formulae have been devised and validated for veterinary medical practice.

## Objectives

The present study was devised with an aim to evaluate the relationship between hemoglobin (Hb) concentration and Packed Cell Volume (PCV) in camels (n=215) being reared under pastoralism, and to devise a simple pen-side hematological formula for estimation of Hb from PCV.

## Methodology

The PCV was determined through microhematocrit method whereas Hb estimation by cyanmethaemoglobin method (HbD). The Hb was also calculated as 1/3<sup>rd</sup> of PCV and was dubbed as calculated Hb (HbC). Overall HbD and HbC were significantly ( $P \geq 0.05$ ) different. Similar results were attained for all study groups i.e. males (n=94) and females (n=121), and young (n=85) and adult (n=130) camels. The corrected Hb (CHb) was deduced through regression prediction equation attained from linear regression model. Scatter-plots were drawn, linear regression was carried out, and Bland Altman chart was built for agreement of both methods of Hb estimation.

## Results

A non-significant ( $P \geq 0.05$ ) difference was noticed between HbD and CHb. Bland Altman chart revealed good agreement between HbD and CHb and there was no proportional bias on the distribution of data around the mean difference line (Mean= 0.1436, 95% CI= 3.00, -2.72).

## Conclusion

We accordingly recommend a simplified pen-side hematological formula for deducing Hb concentration from PCV viz. Hb concentration (g/dL)= 0.18(PCV)+5.4 for all age and gender groups of camels instead of its calculation as one-third of PCV.

**Keywords:** Packed cell volume, Hemoglobin, Cholistani camels

## II. Main Manuscript

Components
<ul style="list-style-type: none"><li>• Chapter 1: Introduction</li><li>• Chapter 2: Review of Literature</li><li>• Chapter 3: Materials and Methods/Data and Methodology</li><li>• Chapter 4: Results</li><li>• Chapter 5: Discussion</li><li>• Chapter 6: Conclusions and Recommendations</li></ul>

# Chapter 1

## Introduction

### 1.1 Background

The introduction of a science document introduces the title of the research work and its allied aspects hence preparing the reader for the rest of the document. As it is the first part of the document and is about to set the stage for the remaining document, hence it needs to be catchy to the reader's/reviewer's eye.

Sub-Heading-I Should Be in Title Case, Font Size 14, Bold, Line Spacing: 1.15, Spacing After Paragraph: 6 Pt, TNR, Justified

### 1.2 Instructions

The introduction chapter should present an introduction to the topic/study in a clear and concise manner. In addition, it may also give an overview of the main themes as well as terms that have been addressed in the research work. It must be kept in mind that the introduction chapter should not be a mere literature review. However, it may put forth a clear research gap through a few prominent past pieces of research in that area. Having created a research gap, it should clearly mention the objectives of the research/study (research objectives may be written in bulleted form or in the form of a paragraph). The introduction chapter should also clearly present the significance of the study, its limitations and strengths, and an overview of the whole thesis.

The chapter may be divided into appropriate subheadings as per the need of the research title/research work.

Sub-Heading-II Should Be in Title Case, Font Size 13, Bold, Line Spacing: 1.15, Spacing After Paragraph: 6 Pt, TNR, Justified

#### 1.2.1 Must-haves

The following subheadings must, however, be incorporated:

- Background
- Statement of Problem
- Significance of the Study
- The Hypothesis of the Study
- Novelty Statement
- Objectives (Bulleed)

##### 1.2.1.1 Sub-Heading-III

All Sub-Headings-III and subsequent Sub-Headings must be in TNR, font size 12, bold, justified, 0 Pt spacing before paragraph and 6 Pt spacing after paragraph.

## **Chapter 2**

### **Review of Literature**

#### **2.1 Importance**

Within the circles of prominent global Science Writers, it has lately been established that gradually this chapter, which once used to play a pivotal role in establishing a research gap/hypothesis, is now losing its footing in the present-day world of research. The research students/scholars normally copy and paste the abstracts of past research work/research articles without giving them a robust shape. It is pertinent that the supervisors may inculcate the importance of the scope/need of this chapter to their research students.

#### **2.2 Purpose**

This chapter mainly serves a two-fold purpose that is a) to sum up the past work conducted on similar aspects of research and b) to create a research gap for the research study being conducted. However, normally it is noticed that the students/scholars only cover the first purpose without attaining the second purpose in true spirits.

#### **2.3 Instructions**

The literature review must not be written in an ‘author-based style’ in which each paragraph begins with an authors’ name with the whole of the copied abstract from a research article. Instead a ‘**Narrative Literature Review**’ with appropriate subheadings must be written in a way that a clear and concise research gap/hypothesis is deduced. The literature review must be written in an argumentative manner thus identifying a logical research gap in the relevant field/subject. It will not only strengthen the hypothesis but will also lead to a clarified answer to the research question as an outcome.

The research cited and incorporated in this chapter must be the latest, that is, it **must have been conducted in the last ten (10) years**, until and unless the supervisor deems it necessary to incorporate older references due to the paucity of research in that specific area/subject. Only international research work may not only be incorporated into this chapter. For creating an appropriate research gap/hypothesis, it is inevitable that the local research (research conducted in Pakistan) may also be cited/incorporated. The supervisors may make sure that research in that area/subject conducted in Pakistan has been incorporated. It is normally noticed that this chapter only contains references/research works conducted in other countries and it altogether omits national research works. In this regard, a subheading of ‘**Work Conducted in Pakistan**’ may be a good option to adopt. The research scholars may be updated about the primary, secondary and tertiary literature. And it may be made sure that only primary and secondary literature is used in the document.

**Research Gap/Hypothesis must be written in at least one paragraph at the end of the chapter.**

## **Chapter 3**

### **Materials and Methods/Data and Methodology**

#### **3.1 Background**

A research methodology gives research legitimacy and provides scientifically sound findings. It also provides a detailed plan that helps to keep researchers on track, making the process smooth, effective and manageable. Vague and unclear information in this chapter means that the results and the deduced conclusions are not credible at all.

#### **3.2 Instructions**

The chapter may be devised in such a way that the research methodology is elaborative and reproducible. Furthermore, wherever needed, it should be supported by appropriate references both from the field of methodology in particular and research the literature in general. This section may have references older than those of the last ten (10) years as certain techniques/methods were originally described quite earlier in the history of science.

A scientific pattern of writing may be implemented strictly such as the use of chemicals, equipment *etc.* may be given along with their brand names, model numbers, CAT numbers, country of origin *etc.* If proformas are utilized for surveys, the proformas may be tested for validity before their dissemination for research. Supervisor of each area/subject may make it inevitable that the methodology of the research work is at par with past research work and is in line with the rules set by the patterns of academic and science writing.

#### **3.3. Must-haves**

The chapter must include following appropriate sub-headings:

- A brief account of research paradigm/Traditions and approaches
- Research design/Model specification
- Geo-location of the study
- Location of sampling
- Location of laboratory (if any)
- Study animals/Subjects/Population/Sample number
- Sampling technique/Data collection procedures
- Study attributes/Parameters
- Research methodology (detailed)
- Data analysis procedures (detailed)

**Note:** The above given list of subheadings is inexhaustible and tentative. Sub-headings may be added/deleted as per demand of the subject area/research area.



## Chapter 4

### Results

#### 4.1 Instructions

The chapter may be kept separate from the chapter of ‘Discussion’. **However, it may be merged with Discussion as per the need of the subject/research.** Results may be given in the form of text, tables or/and figures. However, redundancy may be avoided. If a parameter or a set of parameters has been presented in tabulated form, then there is no need to give it in a figurative form.

Results should be written in a clear, concise and logical way. Statistical representations may be incorporated wherever needed. For example, a ‘statistical difference’ may immediately be followed by the level of significance in parenthesis as ( $P \leq 0.05$ ). Statistical and non-statistical results must be elaborated in detail. In addition, if needed, the interpretations may also be incorporated.

Care must be given that the chapter may not contain any sentence pertaining to the chapter of ‘Methodology’. This chapter may be merged with the Discussion chapter as per the need of the subject/research are.

#### 4.2 Incorporation of Tables

All the tables must be numbered as per their respective chapters, *e.g.* Table 4.1., 4.2. *etc* and must be appropriately cited in the text. Table number (*e.g.* 4.2) must be given in bold and in one line, and its title in another, justified on the left. An appropriate caption (title-cased) may be given above the table which must be TNR 11, left aligned, unbold and single-spaced in case of more than one line. Please see the Table ahead for details (Table 4.1.). All the column headings must be bold and centered. However, the body of the table will be in regular font, centered. The appropriate footnote must be given below the Table, if need be. It must be in TNR 10, regular, left aligned. The abbreviations/acronyms in the Table, if any, must be mentioned in full in the footnote below the Table.

#### 4.3 Incorporation of Figures

All the figures must be numbered as per their respective chapters, *e.g.* Figure 4.1., 4.2. *etc.* and must be appropriately cited in the text. Figure number (*e.g.* 4.7) must be given in bold and in one line, and its title in another, justified on the left. An appropriate caption/legend (title-cased) may be given below the figure which must be TNR 11, left aligned, unbold and single-spaced in case of more than one line. Please see the Figure ahead for details (Figure 4.1.). If the figures are needed to be incorporated in other chapters (apart from results), and they have been taken from some external source then an appropriate source in the form of reference citation may be provided as per the example given in Figure 4.2.

All the figures must be scientifically devised, giving a statistical representation where ever necessary. Error bars *etc* if applicable, may be explained along with the figure caption/legend.

The figures/images should neither be too large nor too small and must fit within the margins of the page.

### **4.3.1 Large Size Drawings/Charts/Figures/Tables**

Any drawing/chart/figure/table, which cannot be accommodated within the margins of thesis page, even with easily legible reduced size, must be prepared on a larger size paper / sheet, which should be folded and enclosed in a special pocket attached permanently inside of the bound back of the thesis.

## **4.4 Equations**

All equations belonging to a chapter in the text should be written using equation tool (in Microsoft Word, Font Style Cambria Math, font size 12, regular), numbered in the same way as the figures and tables (should include chapter number). Each equation should start on a separate line with a larger than the normal spacing between the equation, the equation is aligned centre and equation number is aligned right, e.g.,

$$x^2 + x + 1 = 0 \quad (1.1)$$

The equation should be referred to in the text as Equation 1.1

## **4.5 Quotations in the Text**

A quotation must be written in a separate paragraph, font style TNR, font size 12, italic, should be centered and given in inverted commas. The name of speaker/Quotee will be written in the line next to quote (font style TNR, font size 12, italic).

*“Education is the most powerful weapon which you can use to change the World”*

*Nelson Mandela*

Left Align, font size 11, Bold, TNR

TNR 11, Regular, Justified (Single-Spaced in Case of More than One Line)

**Table 4.1:**

Linear Regression between Various Hematological Attributes for Cholistani Camels (n=149) for Various Seasons.

<b>Groups</b>		<b>HbD vs PCV</b>	<b>HbD vs HbC</b>	<b>R</b>	<b>Adjusted r Square</b>
Gender	Females (n=68)	y= 0.23; x+4.3	y= 0.7; x+4.3	0.654*	0.41
	Males (n=81)	y= 0.20; x+5.3	y= 0.54; x+5.3	0.79*	0.62
Age	Young (n=24)	y= 0.19; x+5.8	y= 0.60; x+5.8	0.830*	0.68
	Adult (n=125)	y= 0.19; x+5.3	y= 0.60; x+5.3	0.751*	0.56
<b>Overall</b>		<b>y= 0.18; x+5.4</b>	<b>y= 0.55 x+5.5</b>	<b>0.753*</b>	<b>0.56</b>

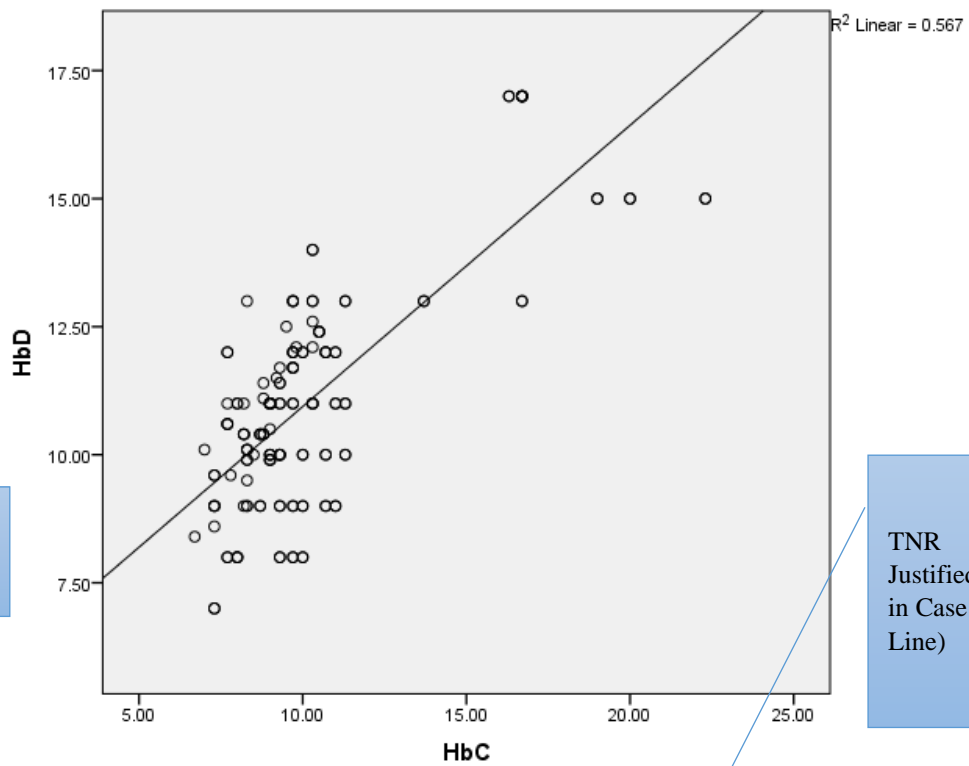
\*Significant correlation at  $P \leq 0.01$ .

HbD= Hemoglobin determined spectrophotometrically; HbC= Hemoglobin calculated as 1/3<sup>rd</sup> of PCV; PCV= Packed cell volume

All Numerical Data in the Columns Must be Centered (Horizontally as well as Vertically)

Table should be Auto-Fit for Contents and Windows

TNR 10, Regular, Left Align, Single-spaced



Left Align, font size 11, Bold, TNR

TNR 11, Regular, Justified (Single-Spaced in Case of More than One Line)

**Figure 4.1:**

Scatterplot for logilinear regression between hemoglobin determined spectrophotometrically (HbD) and hemoglobin calculated as one-third of Packed Cell Volume (HbC) in Cholistani camels (n= 149; r= 0.753)



**Figure 4.2:**

A dancing Marecha (a) and Barella (b) camel in Cholistan Desert of Pakistan (Ali et al., 2009)

# Chapter 5

## Discussion

### 5.1 Background

This chapter presents the meaning, importance and relevance of the results of the study. It focuses on explaining and evaluating the results of the study, showing how they relate to the previous research work conducted on similar area/subject. Furthermore, it presents an argument in support of the overall conclusion of the study. **It should not be a second results section.**

**Care should be taken while drafting this chapter as it may not be a mere repetition of past research as given in the Literature Review chapter.**

There are different ways to write this section, but you can focus your writing around these key elements:

- **Summary:** A brief recap of the key results of the study
- **Interpretations:** What do the results of the study mean?
- **Implications:** Why do the results of the study matter?
- **Limitations:** What can't the results of the study tell us?
- **Comparisons:** The results of which past research works are in line with yours and which are different? And give logical reasoning for the differences.
- **Conclusions:** Brief conclusions and recommendation attained from the research work

## **Chapter 6**

### **Conclusions and Recommendations**

#### **6.1 Conclusions**

Reaching the end of the draft, one needs to apprise the reader/reviewer once again of what the whole draft was about. It may be written in the form of a paragraph or bullets.

This part may be written in the following pattern:

1. First, give a brief overview of the problem which was addressed in the research and also give a one-lined methodology conducted
2. Secondly, give specific conclusion(s) emanating from the specific results of the research study
3. Thirdly, present a general and broader conclusion which the results of the study deduce along with limitations of the study
4. Fourthly, give significance as to how the conclusions/results attained in the research work may be of value to any of the stakeholders

#### **6.2 Recommendations**

This part of the thesis can be written in a good way only if the researcher is aware of the limitations and scope of the research work. The recommendations may be directed towards many stakeholders such as academicians, researchers, policy-makers, government/non-government agencies, farmers, patients, industrialists, *etc.* depending upon the type of research work/area/subject.

It may be written in the form of a paragraph or bullets. And it must be based on specific findings attained from that research only.

### III. Literature Cited

The section/part of the thesis chapter will be titled 'Literature Cited' and will contain a list of all references/sources cited in the main text. The following points must be maintained:

1. Each reference cited in the text must be in this list and vice versa which can be made sure through using appropriate reference management software, such as Mendeley or any other updated and reliable software
2. Only primary and secondary sources of literature may be cited until and unless there seems an inevitable need to incorporate tertiary literature too
3. The references of the internet and newspaper may be kept minimal and must not exceed 10% of the total references
4. References must be arranged alphabetically according to the last name of the author and then according to the year
5. Only the APA manual (Latest edition) style of references may be used for referencing. A few commonly used examples have been given ahead in a Quick Guide to APA Style.
6. The font style for reference must be Tnr 12, justified, line spacing: 1.15, paragraph spacing must be kept as 0pt (before and after), left hanging indent of 0.5inches in 2<sup>nd</sup> and subsequent lines except the first line, as given below:

Hygum, E., & Pedersen, P. M. (Eds.). (2010). *Early childhood education: Values and practices in Denmark*. Hans Reitzels Forlag. <https://earlychildhoodeducation.digi.hansreitzel.dk/>

Kesharwani, P. (Ed.). (2020). *Nanotechnology based approaches for tuberculosis treatment*. Academic Press.

Torino, G. C., Rivera, D. P., Capodilupo, C. M., Nadal, K. L., & Sue, D. W. (Eds.). (2019). *Microaggression theory: Influence and implications*. John Wiley & Sons. <https://doi.org/10.1002/9781119466642>

## **List of Publications**

Any research articles published in peer-reviewed journals or as conference proceedings may be incorporated in bullet form in this section in APA style (Latest Edition).



### **General Guidelines:**

1. The title must be a phrase encompassing all aspects of 'Science Writing' and not a sentence
2. Title must be in title-case and not sentence-case
3. While giving results of the study, only one digit after the decimal point such as 2.0 and not 2.052 must be given except where statistical representation makes it necessary to give more than one digit after the decimal such as  $P \leq 0.05$ ,  $r = 0.287$ ,  $r^2 = 82.745$  etc.
4. There should be no space between the number and its corresponding symbol e.g.  $P \leq 0.05$
5. There should be no space between number and a unit e.g. 25mL, 102mOsm etc.
6. Biological and botanical names, names of species and words such as *etc*, *eg*, *viva voce* and *vice versa* may be italicized.
7. Abbreviations/acronyms must be given in full at their first appearance in each chapter. However, in the rest of the chapter, acronyms must be used.
8. Keep uniformity or consistency in writing throughout the thesis, e.g. uniform font and style of headings, sub-headings, text; English style (British or American); tables; figures/flow charts/graphs; writing references; line spacing, etc
9. The thesis must be balanced in terms of content in various chapters
10. Table of Contents, List of Tables and List of Figures must be auto generated (e.g. built in for Microsoft Word).

### **Formatting Guidelines:**

1. The thesis/synopsis must be typed on one side of an A4-sized paper of at least 80 grams
2. The linespacing throughout the document must be 1.15
3. The paragraph spacing must be kept as 0pt (before) and 6pt (after)
4. If a picture/figure/Table is not covering whole page, then the remaining page must not be left blank. Rather after a spec of three lines, text of next paragraph may be started
5. All the headings/titles of the chapters must be bold, TNR 16, title-cased and centre-aligned. However, the text must be in TNR 12, 1.15 line-spaced, and justified
6. Margins for top, bottom and right side of page must be kept at 0.75 inches, whereas the margin for left/binding side must be 1.5 inches.
7. Page numbers (before start of chapter 1) should be lower-case Roman Numerals such as ii, iii, iv and so forth. They should start with 'ii' on the page that appears after the title page. The title page is assumed to be the first page, but remains unnumbered
8. The page numbers (for chapters) must be given at the bottom center of the page in Arabian Numerals (Calibri (Body), font size 11, regular) starting from 1 of Chapter 1.
9. Published work from the manuscript may be given in the appendices at the end of the draft
10. Final form of the thesis will be bound as a permanent form. See Title Pages in beginning of this draft for details

11. Color of hard-bound thesis will be maroon for PhD, Green for MPhil and Black for BS/MSc. Color of writing on hard cover will be silver for MPhil/MSc/BS and golden for PhD
12. For documents other than english, similar formatting guidelines will be followed. However, a separate sample/model will be provided in the final-drafted booklet.

## Summary Chart for the Organization of the Thesis and its Style and Form

Component	Heading/Title	Style and Form
I. Preface	<ul style="list-style-type: none"> <li>a) Title Pages</li> <li>b) Student’s Declaration</li> <li>c) Supervisor’s Certificate</li> <li>d) Certificate (Only for Hardbound Submission)</li> <li>e) Dedication (Optional)</li> <li>f) Acknowledgements</li> <li>g) Table of Contents</li> <li>h) List of Tables</li> <li>i) List of Figures</li> <li>j) List of Abbreviations</li> <li>k) List of Appendices (If any)</li> <li>l) Abstract (Structured abstract under the sub-headings of: Background, Objective(s), Methodology, Results, Conclusions)</li> </ul>	<ul style="list-style-type: none"> <li>- Page numbers should be lower-case Roman Numerals such as ii, iii, iv and so forth. They should start with ‘ii’ on the page that appears after the title page. The title page is assumed to be the first page, but remains unnumbered.</li> <li>- All titles should be written in font number 16, bold, TNR, title-cased and centered. All text must be in font number 12, TNR, 1.15 line-spaced and justified.</li> <li>- The paragraph spacing must be kept as 0pt (before) and 6pt (after) except for Table of Contents, List of Tables, List of Figures, List of Abbreviations and List of Appendices.</li> <li>- Each title/chapter should begin from a new page (Each title page/chapter should end with page break).</li> </ul>
II. Main Manuscript	<ul style="list-style-type: none"> <li>a) Chapter 1: Introduction</li> <li>b) Chapter 2: Review of Literature (Under appropriate sub-headings and must contain a sub-heading of ‘Work Conducted in Pakistan’)</li> <li>c) Chapter 3: Materials and Methods/Data and Methodology (Must include appropriate sub-headings such as Geo-location of study, Location of Sampling, Location of Laboratory, Study Animals/subjects, Population/sample number, Study Attributes/parameters, Data Analyses)</li> <li>d) Chapter 4: Results</li> <li>e) Chapter 5: Discussion</li> <li>f) Chapter 6: Conclusions and Recommendations</li> <li>g) List of Publications (If any)</li> </ul>	<ul style="list-style-type: none"> <li>- Page numbers should be in Arabian Numerals such as 1, 2, 3 and so forth. They should start from ‘1’ for the chapter of Introduction.</li> <li>- All chapter titles should have font number of 16, bold, TNR, title-cased and centered. All text must be in font number 12, TNR, 1.15 line-spaced and justified.</li> <li>- The paragraph spacing must be kept as 0pt (before) and 6pt (after)</li> <li>- Each title/chapter should begin from a new page (Each title page/chapter should end with page break).</li> </ul>
III. Literature Cited	Literature cited (APA Style)	<ul style="list-style-type: none"> <li>- The heading of ‘Literature Cited’ should have a font number of 16, bold, TNR, and centered. All text must be in font number 12, TNR, justified, 1.15 line-spaced.</li> <li>- Paragraph spacing must be kept as 0pt (before and after), left hanging indent of 0.5inches in 2<sup>nd</sup> and subsequent lines except the first line. It will not be counted/mentioned as a separate chapter</li> </ul>

Quick Guide to APA Style		
Type	In-text	Reference List
<b>Journal Article References</b>		
1. Journal Article	<ul style="list-style-type: none"> <li>• <i>Parenthetical citation:</i> (Grady et al., 2019)</li> <li>• <i>Narrative citation:</i> Grady et al. (2019)</li> </ul>	Grady, J. S., Her, M., Moreno, G., Perez, C., & Yelinek, J. (2019). Emotions in storybooks: A comparison of storybooks that represent ethnic and racial groups in the United States. <i>Psychology of Popular Media Culture</i> , 8(3), 207–217. <a href="https://doi.org/10.1037/ppm0000185">https://doi.org/10.1037/ppm0000185</a>
2. Journal Article with Number	<ul style="list-style-type: none"> <li>• <i>Parenthetical citation:</i> (Jerrentrup et al., 2018)</li> <li>• <i>Narrative citation:</i> Jerrentrup et al. (2018)</li> </ul>	Jerrentrup, A., Mueller, T., Glowalla, U., Herder, M., Henrichs, N., Neubauer, A., & Schaefer, J. R. (2018). Teaching medicine with the help of “Dr. House.” <i>PLoS ONE</i> , 13(3), Article e193972. <a href="https://doi.org/10.1371/journal.pone.0193972">https://doi.org/10.1371/journal.pone.0193972</a>
<b>Magazine Article References</b>	<ul style="list-style-type: none"> <li>• <i>Parenthetical citations:</i> (Lyons, 2009; Schaefer &amp; Shapiro, 2019; Schulman, 2019)</li> <li>• <i>Narrative citations:</i> Lyons (2009), Schaefer and Shapiro (2019), and Schulman (2019)</li> </ul>	<p>Lyons, D. (2009, June 15). Don’t ‘iTune’ us: It’s geeks versus writers. Guess who’s winning. <i>Newsweek</i>, 153(24), 27.</p> <p>Schaefer, N. K., &amp; Shapiro, B. (2019, September 6). New middle chapter in the story of human evolution. <i>Science</i>, 365(6457), 981–982. <a href="https://doi.org/10.1126/science.aay3550">https://doi.org/10.1126/science.aay3550</a></p> <p>Schulman, M. (2019, September 9). Superfans: A love story. <i>The New Yorker</i>. <a href="https://www.newyorker.com/magazine/2019/09/16/superfans-a-love-story">https://www.newyorker.com/magazine/2019/09/16/superfans-a-love-story</a></p>
<b>Newspaper Article References</b>	<ul style="list-style-type: none"> <li>• <i>Parenthetical citations:</i> (Carey, 2019; Harlan, 2013; Stobbe, 2020)</li> <li>• <i>Narrative citations:</i> Carey (2019), Harlan (2013), and Stobbe (2020)</li> </ul>	<p>Carey, B. (2019, March 22). Can we get better at forgetting? <i>The New York Times</i>. <a href="https://www.nytimes.com/2019/03/22/health/memory-forgetting-psychology.html">https://www.nytimes.com/2019/03/22/health/memory-forgetting-psychology.html</a></p> <p>Harlan, C. (2013, April 2). North Korea vows to restart shuttered nuclear reactor that can make bomb-grade plutonium. <i>The Washington Post</i>, A1, A4.</p> <p>Stobbe, M. (2020, January 8). Cancer death rate in U.S. sees largest one-year drop ever. <i>Chicago Tribune</i>.</p>

<p><b>Book/EBook References</b></p> <p>1. Whole Authored Book</p> <p>2. Whole Edited Book</p> <p>3. Chapter in an Edited Book</p>	<ul style="list-style-type: none"> <li>• <i>Parenthetical citations:</i> (Jackson, 2019; Sapolsky, 2017; Svendsen &amp; Løber, 2020)</li> <li>• <i>Narrative citations:</i> Jackson (2019), Sapolsky (2017), and Svendsen and Løber (2020)</li> </ul> <ul style="list-style-type: none"> <li>• <i>Parenthetical citations:</i> (Hygum &amp; Pedersen, 2010; Kesharwani, 2020; Torino et al., 2019)</li> <li>• <i>Narrative citations:</i> Hygum and Pedersen (2010), Kesharwani (2020), and Torino et al. (2019)</li> </ul> <ul style="list-style-type: none"> <li>• <i>Parenthetical citations:</i> (Aron et al., 2019; Dillard, 2020; Thestrup, 2010)</li> <li>• <i>Narrative citations:</i> Aron et al. (2019), Dillard (2020), and Thestrup (2010)</li> </ul>	<p>Jackson, L. M. (2019). <i>The psychology of prejudice: From attitudes to social action</i> (2nd ed.). American Psychological Association. <a href="https://doi.org/10.1037/0000168-000">https://doi.org/10.1037/0000168-000</a></p> <p>Sapolsky, R. M. (2017). <i>Behave: The biology of humans at our best and worst</i>. Penguin Books.</p> <p>Svendsen, S., &amp; Løber, L. (2020). <i>The big picture/Academic writing: The one-hour guide</i> (3rd digital ed.). Hans Reitzel Forlag. <a href="https://thebigpicture-academicwriting.digi.hansreitzel.dk/">https://thebigpicture-academicwriting.digi.hansreitzel.dk/</a></p> <p>Hygum, E., &amp; Pedersen, P. M. (Eds.). (2010). <i>Early childhood education: Values and practices in Denmark</i>. Hans Reitzels Forlag. <a href="https://earlychildhoodeducation.digi.hansreitzel.dk/">https://earlychildhoodeducation.digi.hansreitzel.dk/</a></p> <p>Kesharwani, P. (Ed.). (2020). <i>Nanotechnology based approaches for tuberculosis treatment</i>. Academic Press.</p> <p>Torino, G. C., Rivera, D. P., Capodilupo, C. M., Nadal, K. L., &amp; Sue, D. W. (Eds.). (2019). <i>Microaggression theory: Influence and implications</i>. John Wiley &amp; Sons. <a href="https://doi.org/10.1002/9781119466642">https://doi.org/10.1002/9781119466642</a></p> <p>Aron, L., Botella, M., &amp; Lubart, T. (2019). Culinary arts: Talent and their development. In R. F. Subotnik, P. Olszewski-Kubilius, &amp; F. C. Worrell (Eds.), <i>The psychology of high performance: Developing human potential into domain-specific talent</i> (pp. 345–359). American Psychological Association. <a href="https://doi.org/10.1037/0000120-016">https://doi.org/10.1037/0000120-016</a></p> <p>Dillard, J. P. (2020). Currents in the study of persuasion. In M. B. Oliver, A. A. Raney, &amp; J. Bryant (Eds.), <i>Media effects: Advances in theory and research</i> (4th ed., pp. 115–129). Routledge.</p> <p>Thestrup, K. (2010). To transform, to communicate, to play—The experimenting community in action. In E. Hygum &amp; P. M. Pedersen (Eds.), <i>Early childhood education: Values and practices in Denmark</i>. Hans Reitzels Forlag. <a href="https://earlychildhoodeducation.digi.hansreitzel.dk/?id=192">https://earlychildhoodeducation.digi.hansreitzel.dk/?id=192</a></p>
<p><b>Report by a Government Agency References</b></p>	<ul style="list-style-type: none"> <li>• <i>Parenthetical citation:</i> (National Cancer Institute, 2019)</li> <li>• <i>Narrative citation:</i> National Cancer Institute (2019)</li> </ul>	<p>National Cancer Institute. (2019). <i>Taking time: Support for people with cancer</i> (NIH Publication No. 18-2059). U.S. Department of Health and Human Services, National Institutes of Health. <a href="https://www.cancer.gov/publications/patient-education/takingtime.pdf">https://www.cancer.gov/publications/patient-education/takingtime.pdf</a></p>

<p><b>ISO Standard References</b></p>	<ul style="list-style-type: none"> <li>• <i>Parenthetical citations: (International Organization for Standardization, 2018; Occupational Safety and Health Administration, 1970)</i></li> <li>• <i>Narrative citations: International Organization for Standardization (2018) and Occupational Safety and Health Administration (1970)</i></li> </ul>	<p>International Organization for Standardization. (2018). <i>Occupational health and safety management systems—Requirements with guidance for use</i> (ISO Standard No. 45001:2018). <a href="https://www.iso.org/standard/63787.html">https://www.iso.org/standard/63787.html</a></p> <p>Occupational Safety and Health Administration. (1970). <i>Occupational safety and health standards: Occupational health and environmental control: Occupational noise exposure</i> (OSHA Standard No. 1910.95). United States Department of Labor. <a href="https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.95">https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.95</a></p>
<p><b>Conference Presentations and Proceedings</b></p> <ol style="list-style-type: none"> <li>1. Conference Presentation</li> <li>2. Abstract of a Conference Presentation</li> </ol>	<ul style="list-style-type: none"> <li>• <i>Parenthetical citation: (Evans et al., 2019)</i></li> <li>• <i>Narrative citation: Evans et al. (2019)</i></li> <li>• <i>Parenthetical citation: (Cacioppo, 2019)</i></li> <li>• <i>Narrative citation: Cacioppo (2019)</i></li> </ul>	<p>Evans, A. C., Jr., Garbarino, J., Bocanegra, E., Kinscherff, R. T., &amp; Márquez-Greene, N. (2019, August 8–11). <i>Gun violence: An event on the power of community</i> [Conference presentation]. APA 2019 Convention, Chicago, IL, United States. <a href="https://convention.apa.org/2019-video">https://convention.apa.org/2019-video</a></p> <p>Cacioppo, S. (2019, April 25–28). <i>Evolutionary theory of social connections: Past, present, and future</i> [Conference presentation abstract]. Ninety-ninth annual convention of the Western Psychological Association, Pasadena, CA, United States. <a href="https://westernpsych.org/wp-content/uploads/2019/04/WPA-Program-2019-Final-2.pdf">https://westernpsych.org/wp-content/uploads/2019/04/WPA-Program-2019-Final-2.pdf</a></p>
<p><b>Dissertations and Theses</b></p>	<ul style="list-style-type: none"> <li>• <i>Parenthetical citations: (Kabir, 2016; Miranda, 2019; Zambrano-Vazquez, 2016)</i></li> <li>• <i>Narrative citations: Kabir (2016), Miranda (2019), and Zambrano-Vazquez (2016)</i></li> </ul>	<p>Kabir, J. M. (2016). <i>Factors influencing customer satisfaction at a fast food hamburger chain: The relationship between customer satisfaction and customer loyalty</i> (Publication No. 10169573) [Doctoral dissertation, Wilmington University]. ProQuest Dissertations &amp; Theses Global.</p> <p>Miranda, C. (2019). <i>Exploring the lived experiences of foster youth who obtained graduate level degrees: Self-efficacy, resilience, and the impact on identity development</i> (Publication No. 27542827) [Doctoral dissertation, Pepperdine University]. PQDT Open. <a href="https://pqdtopen.proquest.com/doc/2309521814.html?FMT=AI">https://pqdtopen.proquest.com/doc/2309521814.html?FMT=AI</a></p> <p>Zambrano-Vazquez, L. (2016). <i>The interaction of state and trait worry on response monitoring in those with worry and obsessive-compulsive symptoms</i> [Doctoral dissertation, University of Arizona]. UA Campus Repository. <a href="https://repository.arizona.edu/handle/10150/620615">https://repository.arizona.edu/handle/10150/620615</a></p>

## Summary Chart for the Organization of the Synopsis and its Style and Form

Component	Heading/Title	Style and Form
I. Title Pages	Main Title Page Table of Contents List of Tables List of Figures List of Abbreviations/Key Working Definitions List of Appendices (If Any) Abstract (Structured Abstract Under the Sub-headings of: Background, Objective, Methodology, Expected Results/Outcome)	As Given in the Summary Chart for Thesis on pp 30
II. Main Manuscript	Introduction Objectives of the Study Review of Literature (Under Appropriate Sub-headings and Must Contain a Sub-heading of ‘Work Conducted in Pakistan’) Justification/Rationale of the Study Hypothesis of the Study Significance of the Study Novelty Statement Statement of Problem Methodology and Plan of Work (Must include sub-headings of: Geo-location of Study, Location of Sampling, Location of Laboratory, Study Animals/Subjects, Population/Sample Number, Study Attributes/Parameters, Data Analyses) Likely Benefits/Outcomes of the Study	
III. Literature Cited	Literature Cited (APA Style)	