

**Impact of Willful Ignorance and Personal Negligence based Regret among  
Elderly**

A Thesis Submitted

To

**Sikkim University**



In Partial Fulfillment of the Requirement for the  
**Degree of Doctor of Philosophy**

By

**Rhicha Raman**

Department of Psychology

School of Human Sciences

February 2021

6 माईल, सामदुर, तादोंग -737102  
नगरपालिका, सिक्किम, भारत  
फोन-(03592-251212, 251415, 251656)  
टेलीफैक्स -251067  
वेबसाइट - WWW.CUS.AC.IN



सिक्किम विश्वविद्यालय  
SIKKIM UNIVERSITY

6 Mile Samdur, Tadong -737102  
Gangtok, Sikkim, India  
Ph: 03592-251212, 251415, 251656  
Telefax: 251067  
Website: www.cus.ac.in

एक केंद्रीय विश्वविद्यालय के रूप में 2007 में स्थापित किया गया था और 2015 में नाक द्वारा मान्यता प्राप्त।  
(A central university established by an Act of Parliament of India in 2007 and accredited by NAAC in 2015)

## DECLARATION

I, Rhicha Raman, hereby declare that the subject matter of this thesis entitled "**Impact of Willful Ignorance and Personal Negligence based Regret among Elderly**" submitted to Sikkim University for the degree of **Doctor of Philosophy in Psychology** is my original research work carried out by me during the period from August 2017 to February 2021 under the supervision of Dr. Saurabh Maheshwari, Assistant Professor, Department of Psychology, Sikkim University. The thesis or any part of the thesis has not been submitted by me for any research degree in any other university/institute. This has been submitted in partial fulfillment of the requirement of the Degree of Doctor of Philosophy in Psychology, School of Human Sciences, Sikkim University, Gangtok.

*Rhicha Raman*

Ms. Rhicha Raman

Roll No.: 17PDPS02

Registration No. 17/Ph.D/ PSY/ 02

We recommend this thesis be placed before the examiners for evaluation.

Dr. Saurabh Maheshwari  
(Supervisor)  
Department of Psychology  
Sikkim University

Dr. Satyananda Panda  
(Head of the Department)  
Department of Psychology  
Sikkim University

6 माइल, साम्दुर, लादोंग -737102  
गंगटोक, सिक्किम, भारत  
फोन-03592-251212, 251415, 251656  
टेलीफैक्स -251067  
वेबसाइट - [www.cus.ac.in](http://www.cus.ac.in)



सिक्किम विश्वविद्यालय  
SIKKIM UNIVERSITY

6 Mile Samdur, Ladong -737102  
Gangtok, Sikkim, India  
Ph. 03592-251212, 251415, 251656  
Telefax. 251067  
Website: [www.cus.ac.in](http://www.cus.ac.in)

भारत के संसद के अधिनियम द्वारा वर्ष 2007 में स्थापित और नेशनल काउंसिल ऑफ़ हायर एजुकेशन (एन सी ई आर) द्वारा वर्ष 2015 में प्रमाणित (ए-2) विश्वविद्यालय।  
(A central university established by an Act of Parliament of India in 2007 and accredited by NAAC in 2015)

## CERTIFICATE

This is to certify that the thesis entitled **“Impact of Willful ignorance and Personal Negligence based Regret among Elderly”** submitted by **Ms. Rhicha Raman** (Roll No. 17PDPS02 and Registration No.17/PhD/PSY/02) in partial fulfillment of the requirement for the award of **PhD Degree in Psychology** of Sikkim University has not been previously submitted for the award of any degree or diploma to this or any other University. This thesis is her original work and she has been working under my supervision.

A handwritten signature in blue ink, appearing to be 'Saurabh Maheshwari', written over a horizontal line.

**Supervisor**

**Dr. Saurabh Maheshwari**

**Assistant Professor**

**Department of Psychology**

**Sikkim University**

**Place: Gangtok**

**Date:**

8/03/21

6 माइल, साम्दुर, तदोङ -737102  
गंगटोक, सिक्किम, भारत  
फोन-03592-251212, 251415, 251656  
फैक्स-251067  
वेबसाइट - www.cus.ac.in



6 Mile, Samdur, Tadong -737102  
Gangtok, Sikkim, India  
Ph. 03592-251212, 251415, 251656  
Telefax: 251067  
Website: www.cus.ac.in

सिक्किम विश्वविद्यालय  
SIKKIM UNIVERSITY

एक केंद्रीय विश्वविद्यालय के रूप में 2007 में संसदीय अधिनियम द्वारा स्थापित किया गया था और 2015 में एनएएसी द्वारा मान्यता प्राप्त किया गया।  
(A central university established by an Act of Parliament of India in 2007 and accredited by NAAC in 2015)

## PLAGIARISM CHECK CERTIFICATE

This is to certify that a plagiarism check has been carried out for the following Ph.D. thesis with the help of URKUND software and the result is 1%, which is within the permissible limit as per the norms of Sikkim University.

**“Impact of Willful Ignorance and Personal Negligence based Regret among Elderly”**

Submitted by **Ms. Rhicha Raman** under the supervision of **Dr. Saurabh Maheshwari**, Assistant Professor, Department of Psychology, School of Human Sciences Science, Sikkim University.

*Rhicha Raman*

Signature of the Scholar  
(Rhicha Raman)

*Saurabh Maheshwari*

Countersigned by Supervisor  
(Dr. Saurabh Maheshwari)

*R. Chandak*

पुस्तकालयाध्यक्ष  
Librarian  
केन्द्रीय पुस्तकालय Central Library  
सिक्किम विश्वविद्यालय  
Sikkim Uni

## Urkund Analysis Result

Analysed Document: thesis complete.docx (D96590576)  
Submitted: 2/26/2021 8:41:00 AM  
Submitted By: smaheshwari@cus.ac.in  
Significance: 1 %

Rectangular Snip

### Sources included in the report:

Regret Attribution (1).docx (D82148530)  
Mansi tiwari, final thesis management.pdf (D54995666)  
67cffb1d-dd94-416f-958c-7b71ed4ca2e0  
[https://www.bje.uni-bonn.de/download-the-latest-issue-1/copy\\_of\\_volumeII%25281%2529/schran.pdf](https://www.bje.uni-bonn.de/download-the-latest-issue-1/copy_of_volumeII%25281%2529/schran.pdf)  
[https://smw.ch/journalfile/download/article/ezm\\_smw/en/smw.2019.20074/df465e47b2f243ea7c0fb4739748b07ba5d067dd/smw\\_149\\_w20074.pdf/rsrc/jf](https://smw.ch/journalfile/download/article/ezm_smw/en/smw.2019.20074/df465e47b2f243ea7c0fb4739748b07ba5d067dd/smw_149_w20074.pdf/rsrc/jf)  
[http://etheses.dur.ac.uk/188/1/Regret\\_as\\_Autobiographical\\_Memory.pdf](http://etheses.dur.ac.uk/188/1/Regret_as_Autobiographical_Memory.pdf)  
[https://www.researchgate.net/publication/23679811\\_What\\_We\\_Regret\\_Most\\_Are\\_Lost\\_Opportunities\\_A\\_Theory\\_of\\_Regret\\_Intensity](https://www.researchgate.net/publication/23679811_What_We_Regret_Most_Are_Lost_Opportunities_A_Theory_of_Regret_Intensity)  
[https://www.researchgate.net/profile/Marcel\\_Zeelenberg/publication/46621809\\_The\\_inaction\\_effect\\_in\\_the\\_psychology\\_of\\_regret/links/0deec5178118b86bf1000000.pdf](https://www.researchgate.net/profile/Marcel_Zeelenberg/publication/46621809_The_inaction_effect_in_the_psychology_of_regret/links/0deec5178118b86bf1000000.pdf)  
[https://www.researchgate.net/publication/316870754\\_The\\_Ideal\\_Road\\_Not\\_Taken\\_The\\_Self-Discrepancies\\_Involved\\_in\\_People's\\_Most\\_Enduring\\_Regrets](https://www.researchgate.net/publication/316870754_The_Ideal_Road_Not_Taken_The_Self-Discrepancies_Involved_in_People's_Most_Enduring_Regrets)

### Instances where selected sources appear:

16



**Document** [thesis complete.docx](#) (D96590576)  
**Submitted** 2021-02-26 13:11 (+05:0-30)  
**Submitted by** smaheshwari@cus.ac.in  
**Receiver** smaheshwari.sikkim@analysis.orkund.com  
**Message** Rhicha [Show full message](#)

1% of this approx. 89 pages long document consists of text present in 9 sources.

## ACKNOWLEDGEMENTS

First of all, I am grateful and would not miss the opportunity to express my profound gratitude to my father (Shree Radha Raman Jha) who contributed his precious time to provide all the help I needed especially during my data collection and he is the one who always shown faith in me.

My sincere thanks to Saurabh sir, for giving me opportunity to carry out my research work, under his guidance. It was a blessing and my honor to be supervised by Dr. Saurabh Maheshwari. I would like to express my profound sense of gratitude towards my supervisor sir, Dr. Saurabh Maheshwari, Department of Psychology, Sikkim University, Gangtok for his skillful guidance, cognate attitude, and never-ending encouragement to complete this work. Despite his busy schedule, he always had his valuable time whenever I needed his help. His fruitful suggestions and very meticulous checking of all work made my work stress free. I am indebted for his immense patience throughout the period of study. With his mentorship, enthusiasm, and support I have had a great learning experience that will remain with me forever.

I am highly indebted to Dr. Satyananda Panda (Head of the Department), Department of Psychology, Sikkim University, Gangtok for his valuable suggestions, scholarly guidance, and inspiration to complete my work.

I would also like to thank all the research participants of both studies, who without any personal gain voluntarily participated in my research study. I am grateful to all the Head of Pensioner associations of Bihar, especially, Purnea, Katihar, Patna and Bhagalpur Districts for giving me all the necessary details for contacting the retired people. I express my genuine gratitude to the members of pensioners associations in Bihar for providing help during my data collection.

I am also grateful to the people at central library of Sikkim University for their kind help by providing me with ample resources during the course of my research study.

I am thankful to my Mother (Manju Raman), who always stood by my side whenever I was in need. I am also grateful for my brothers (Amit Raman & Shubham Vineet) and my sisters-in-laws (Priti Raman & Lakshmi Jha), and my entire family for being my backbone. They have always been a continuous source of encouragement. I would also like to thank my younger sister (Rashi Raman) for her crucial and unforgettable support (especially for applying and arranging visa for my presentation in a research conference). A very special appreciations to my Niece (Shivangi Raman) and Nephews (Shaurya and Sakaar Raman) for their innocent and endless loving gesture for me which helped me to stay positive.

I like to acknowledge the support I received from the Department of Psychology, Sikkim University. I would like to thank Kushal, Tshering, Viplav, Mridusmita, Jeshmeen, Parvati, Kinnori and Kakoli for all their help. I would also like to thank my roommate Alisha Pradhan who was cooperative, and understanding.

My deepest thank goes to Mr. Mukul Jha who has helped me the most during my days of hardship and supported me in times of need.

Rhicha

Raman

Place: Gangtok

Date:



## ABSTRACT

Regret, a self-attentive negative emotion, comes from the realization of the inappropriate course of action taken in the past. In general, it appears from an upward comparison involving counterfactual thinking. While it comes from our action that we have performed in the past, which we wish we would not have done, it may also come from our inaction, that is, the things we did not do and we wish we would have done. Regret in itself is a negative feeling and it can also lead to high levels of psychological distress and hamper the subjective wellbeing of individuals. The thoughts and feelings associated with regrets become more worrisome in old age, as people in this age have time to reflect and evaluate their entire life, but can hardly change anything or correct any mistake. Although there are many studies conducted on regret in old age, however, most of them are related to the western context and they overlooked several important aspects of regret. Against this backdrop, the present research examined the regret experiences of Indian older adults.

Specifically, the research aims to explore the common sources of life regrets among Indian older adults. The present study also examines the role of gender in the experience of regret. The study further examines what do older adults regret more— their wrong actions or their missed inactions. Another aim of the present thesis is to explore the process of regret. One of the main aims of the present work is to explore the role of willful ignorance and personal negligence in regret experiences. The research also discovers the reasons behind health regrets. Finally, the present study examines the way people cope up with feelings of regret and their learning experiences. For meeting the objectives of the present research, two studies have been conducted— a narrative Inquiry, and a survey Study.

In the narrative inquiry, interviews of 60 retired participants (Male = 30 & female = 30;  $M_{age} = 67.50$ ) were taken which gives 157 incidents of life regrets. These regret incidents included all sorts of regrets and explained the process, nature, as well as coping with regrets. This study also examines the role of willful ignorance and personal negligence in life regrets. Through this study, not only the researcher got the answers to many research questions but it also helped in developing scales concerning willful ignorance, personal negligence, health regret, and regret coping for the survey. Study two, the survey, was conducted on 300 (Male = 150 & female = 150;  $M_{age} = 65.79$ ) retired older adults. The focus of this study was clearly to test and confirm the findings of study one on a larger sample and also to address a few research objectives that could not be addressed in the narrative inquiry. This study also explores the role of regret in the subjective well-being of participants. The survey questionnaires included the self-developed scales along with a few well-published scales measuring variables like self-esteem, indecisiveness, general health, social comparison, etc.

Results of both the studies suggest that regret in old age comes from a few dominant sources, namely, education, health, career, finance, and parenting. However, sources like friendship, leisure, community, and self, are less frequent sources of regret among older adults. The studies show gender differences in the prevalence of the sources for regret. While for men the biggest sources of regrets are health, education, finance, career, and spirituality, however, for women, the prominent domains are education, career, health, parenting, and family. Results further show that in old age, people regret more about their inactions than their actions. The study shows that the counterfactual thoughts, responsible for regrets, originate from various unfulfilled expectations and comparison processes. Unfulfilled expectations could be due to self, or others, and even come from expectations towards others. On the other

hand, a comparison that can lead to counterfactual thinking could be a comparison between the anticipated and the real outcomes, or between self and others, or even between pre-and post-decisional lives. Surprisingly, health regret emerged as one of the biggest regrets in this study. Results show that there are three main sources behind health regrets: the absence of health-enhancing behavior, the prevalence of health-threatening behavior, and medical negligence at an early stage.

Results show that people involve in wilful ignorance primarily because of two reasons– they are motivated to not know or they are not motivated to know something. Personal negligence, on the other hand, could from five various sources– illusion of invulnerability, personal rigidity, easy alternative, hopelessness, and perceived irrelevance. Willful ignorance and personal negligence show significant association with regret feeling, regret involvement, health regret as well as regret coping, however, they do not contribute to overall life regrets. People use several coping strategies to handle their regrets, including both adaptive and maladaptive methods. Participants mentioned using adaptive ways, namely, positive reappraisal, downward comparison, social support, religious/spiritual involvement, and maladaptive strategies, namely, denial or suppression, attributing externally, and justification/rationalization. Regret learning is a step further from regret coping, that is, individuals need to cope-up with their regrets first to turn those regrets into learning lessons. More importantly, it is also found that learning from regret is not limited to self rather it could be for others as well. Results further show that regret experiences significantly contribute to satisfaction with life as well as in general happiness of individuals. Results are discussed in the context of Indian culture.

*Keywords:* Regret; Regret domains; Regret and gender; Old age; Indian older adults; Willful ignorance; Personal negligence; Regret coping; Regret learning.

## TABLE OF CONTENT

ABSTRACT .....	i
TABLE OF CONTENTS .....	iv
LIST OF TABLES .....	vi
CHAPTER 1: INTRODUCTION .....	1-9
CHAPTER 2: LITERATURE REVIEW .....	10-38
Regret Theory.....	11
Sources of Life Regrets.....	12
The Process of Regret.....	14
Intensity of Regret.....	15
Action Inaction Regret.....	17
Regret and Health.....	19
Personal Factors in Regret.....	21
Regret and Culture.....	22
Regret and Gender.....	24
Regret across Life Span.....	25
Regret Coping.....	27
Personal Carelessness and Regret.....	29
Willful Ignorance.....	30
Personal Negligence.....	32
The Present Study.....	34
Research Questions.....	38
CHAPTER 3: NARRATIVE INQUIRY .....	39-68
Method.....	39
Participants.....	40
Interview Question.....	40
Procedure.....	41
Data Analysis.....	42
Results.....	42

Discussion.....	60
CHAPTER 4: SURVEY STUDY.....	69-115
Pilot Study.....	70
Item Development.....	71
Item Analysis.....	75
Survey Study.....	83
Method.....	84
Results.....	91
Discussion.....	112
CHAPTER 5: DISCUSSION.....	116-140
Major Life Regrets.....	116
Action and Inaction Regrets.....	121
The Process of Regret .....	123
Role of Willful Ignorance and Personal Negligence in Regret.....	129
Health Regret.....	132
Individual Factors Contributing to Regret.....	134
Regret Coping.....	135
Regret Learning.....	137
CHAPTER 6: CONCLUSION, LIMITATION, AND IMPLICATIONS .....	141-150
Conclusion.....	146
Limitations.....	147
Implications.....	149
REFERENCES.....	151
APPENDIX.....	174

## LIST OF TABLES

<b>Sl. No.</b>	<b>Table No.</b>	<b>Little of Table</b>	<b>Page No.</b>
1.	3.1	Frequency Analysis of Regret Domains	43
2.	3.2	Frequency Analysis of Action and Inaction Regret	46
3.	4.1	Item Analysis Statistics for Health Regret	76-77
4.	4.2	Item Analysis Statistics for Willful Ignorance	78-79
5.	4.3	Item Analysis Statistics for Personal Negligence	79-80
6.	4.4	Item Analysis Statistics for Regret Coping	80-82
7.	4.5	Numbers of Items Retained and Removed from Each Variable Scale	83
8.	4.6	Frequency and Gender Differences on Regrets and Counterfactual Thinking	92
9.	4.7	Prevalence of Regret Sources and Gender Differences	93
10.	4.8	Gender Differences in Various Emotions Related to Regret	94
11.	4.9	Gender Differences in the Various Study Variables	95
12.	4.10	Descriptive, Cronbach's $\alpha$ and Correlation Coefficients for Different Variables	97-98
13.	4.11	Regression Analysis: Regret Involvement	101
14.	4.12	Regression Analysis: Regret Feeling	103
15.	4.13	Regression Analysis: Health Regret	104
16.	4.14	Regression Analysis: Overall Life Regrets	105
17.	4.15	Regression Analysis: Regret Coping	106
18.	4.16	Regression Analysis: Regret Learning	108
19.	4.17	Regression Analysis: Happiness	109
20.	4.18	Regression Analysis: Satisfaction with Life	111

## Chapter 1: Introduction

Regret is a part of our everyday life. No matter how careful, thoughtful, and rational our decisions are, sometimes they turn out to be wrong and disastrous. Studies indicate that approximately 90 percent of people are reported of having regrets in life (Landman, 1987a; Wrosch et al., 2005), however, the content and the intensity of these regrets may vary from person to person. The unwanted outcomes of our decisions, no matter whether they were in our control or beyond our control, can lead us to the feeling of regret, where we realized that if we would have acted differently, the outcome would be different and probably better. Interestingly, the feeling of regret does not only come from our wrong action but sometimes from no action or inaction. It arises after the realization of mistakes done either in the form of action or inaction. Scholars believe that regret is a self-attentive negative emotion, which appears from an upward comparison involving counterfactual thinking (Gilovich & Medvec, 1995a; Zeelenberg, 1999). The counterfactual thinking, that the present situation would have been better if the choice would have been differently made evokes the feeling of regret. So, it can be said that regret is a conscious experience because people put their attention to the entire process of decision making that how and where it went wrong, and which was more preferable act as per the current regretful circumstances. Various research on regret has identified regret as cognitive calculations including the feelings of blame (either for self or others), expectations, trust in thoughts associated with myths and suspicious beliefs, etc. (Connolly & Zeelenberg, 2002).

Although regret is a negative emotion and sometimes it leads to low self-esteem, anxiety, guilt, and even depression and suicidal ideation, however, it would

be wrong if we treat regret as a completely adverse and unproductive emotion. Regret on its appearance makes individuals re-think about wrong decisions, and it attempts to provide an understanding of the corrective action associated with the particular regret (Zeelenberg, 1999). Moreover, counterfactual thinking draws the act of enhancement utilizing its inferential uses for future act improvements (Morris & Moore, 2000), which indicates that regret due to counterfactual thinking can lead to corrective action. An inquiry showed that lay conceptions of regret are a positive experience as opposed to a completely negative one. That might be the reason that people appraised regret as the most beneficial among 12 negative emotions on several life dimensions (Saffrey et al., 2008).

The experience of regret is a common and inherent phenomenon of human development (Landman, 1987a) because progress is selective, and human behavior is sensitive to failure. Though humans start having regrets at a very early age, however, major life regrets appear much later in one's life. According to Erikson (1982) and Butler (1963), intense life evaluation naturally happens as life brings to a conclusion. One notable trait in the cognitive organization of human life is the change regarding their understanding of life, age, time, and past experiences that play a great part when it comes to giving meaning to life (Wong & Watt, 1991). As people get older and approach the final stages of their life, they are prone to do mental calculations of what they have done and what they could not do in their life. Their age and experiences start evoking thoughts like "I could not, I would have been, I wish". These thoughts bring attention to unfulfillments and unsatisfactions of life and bring a feeling of regret in people's life. Significant evidence is suggesting that regrets can be more harmful to the quality of life of older adults as compared to young people probably because there is a lack of opportunity of making changes in life in old age (Wrosch et



al., 2005). A study demonstrated that regrets lead to a lower level of life satisfaction among older adults but not among young adults (Lecci et al., 1994). Jokisaari, (2003) showed that older adults rated less chance to change their goals related to regrets than younger adults. For older adults, their regrets are linked with the perception that there is no time left for any perceived missteps to be corrected (Västfjäll et al., 2011). Similarly, Wrosch and Heckhausen (2002) revealed that in later life people feel regretful not only by focusing on their actions (commissions) but also from their inactions (omission). However, scholars have shown that regrets of omission deepened and become more painful with time (Gilovich & Medvec, 1994), especially in later life. Research also shows that the nature of regret in old age significantly differentiates from a young age, while younger adults regret more about leisure and relationship, older adults show regret more about work and family (Jokisaari, 2004).

Although there are many studies conducted on regret in old age, however, most of them are related to the western context and they overlooked several aspects of regret. For example, many researchers have shown that counterfactual thinking is the root cause of regret, however, only a few talks about what instigates counterfactual thinking in the first place. Similarly, the role of personal carelessness on regret feelings is not well examined. There are many such gaps following which, the present study examines the regret experiences in old age, specifically, in the Indian context. This study has the following major aims:

In life, many a time people commit mistakes due to sheer carelessness. People ignore warnings, they neglect symptoms, they undermine information, they overlook precautionary measures, which many a time do not create trouble for them, and therefore go unnoticed, but sometimes such ignorance/negligence could lead to disastrous outcomes. These negative unwanted outcomes of carelessness may cause

regret for such behavior among people. Many works show as why people consciously ignore or neglect information (e.g., Gigerenzer & Gracia-Retamero, 2017; Hefferenan, 2011; Hertwig & Engel, 2016). However, very few examine the aftermaths of such careless behavior, like how people accept their carelessness, how they deal with it, and most importantly how these careless behaviors influences regret. Hence, the primary goal of the present thesis is to understand the role of willful ignorance and personal negligence in life regrets of older adults.

Research indicates that the most significant life regrets of people are often associated with major developmental domains such as career, education, and family (Wrosch & Heckhausen, 2002). Researchers also show that younger adults regret more about leisure, relationship, however, older adults show more regret towards their work and family (Jokisaari, 2004). DeGenova's (1992) work on the older adult, shows that the regret related to career, education, and marriage were more common, however, the intensity was much higher in regret related to finance, family conflict, loss/grief, children problem, and health. It is evident, that many previous studies have explored the major causes or domains of life regret in old age, however, mostly on the westerns culture, except a few (e.g., Choi & Jun, 2009). Culture defines our role and duties, it dictates what is right and what is wrong, it explains what should be done or not, therefore, it is very probable that culture can shape the things which people regret or do not regret. Hence, one of the aims of the present study is to explore what does a common Indian older adult regret in his/her life. Moreover, only a few studies explore the role of gender difference in life regret. The present study also examines if gender has any role in the feeling and content of life regrets.

Individuals may have regret for their actions (commission) or their inactions (omission). Action regret comes from things that one did but wishes one had not done

and inaction regret represents those situations in which people fail to do something but wish they would have done. Research shows adverse outcomes that come from steps taken as action are more regretful than similar adverse outcomes that appear from actions forgone (Kahneman & Tversky, 1982; Landman, 1987b). However, many later works show that people feel regret in the long run over those things they failed to do, that is, regrets over not taken paths or regrets of omission (inaction) deepened and became more painful with time (Gilovich & Medvec, 1994, 1995a 1995b). Even a cross-cultural researcher found that in China, Japan, and Russia, people regret more their inaction than action (Gilovich et al., 2003). Therefore, the present thesis also explores what do older adults regret more, their action or inaction, and also is there any gender difference in action-inaction regret.

Another aim of the present thesis is to explore the process of regret. That is, it is well established that counterfactual thinking leads people to have regrets (Gilovich & Medvec, 1995a; Zeelenberg, 1999), however, what leads to this counterfactual thinking is not well explored. Since people do not have regret feeling all the time even for the worst mistakes, sometimes it goes high and could be intolerable, sometimes we do not even remember our mistakes and regret them. Therefore, there must be some instigating factors that put people in counterfactual thinking mode that could cause regret. The present study looks into this and examines the process behind the regret feeling.

Health is one of the major reasons for regret shown in many studies (e.g., Choi & Jun, 2009; Hattiangadi et al., 1995). In general, regret can stimulate high levels of affective and emotional distress (Landman, 1987a; Lecci et al., 1994). However, sometimes it may originate from the poor health or illness of a person (DeGenova, 1992; Hattiangadi et al., 1995; Roese & Summerville, 2005). Since in old age many

people suffer from various chronic or terminal diseases, for which, in many cases they blame themselves. Therefore, it will be worthy to understand the prevalence and causes behind health regrets. Thus, the thesis explores the reasons behind health regrets and how personal negligence and willful ignorance affect them.

The final aim of the present study is to examine the way people cope up with regret feelings, especially in old age when there are fewer opportunities to undo or correct the course of action. People definitely cannot change what is already done, but they can understand and learn from it so that appropriate changes may indicate the new beginning of life. It is not surprising that people have a remarkable capacity to adapt to change an adverse life circumstance such as regret. There are only a few works that deal with regret coping (e.g., Bauer et al., 2008; Heckhausen et al., 2010), however, more research is needed, particularly in the old age context. Therefore, the present thesis also explores the coping strategies deployed by older adults to deal with their life regrets, and it also tries exploring how regret could turn into a source of learning for self and others.

To meet the aim of the present study, two studies are planned. The first study is a narrative inquiry. In this study the regret incidents or stories of older adults are asked and analyzed to understand what do they regret, why do they regret and how do they handle their regret feelings. Through regret incidents, we also aim to explore the process of regret. This study also examines the role of willful ignorance and personal negligence in life regrets and factors behind health regret. From study one, we not only get the answers to many research questions but it also helps in developing scales to measure various study variables in study two such as health regret and coping.

The second study follows the survey method. The survey will be conducted on retired government employees. This study is based on the results of study one, that is,

for many variables such as health regret, willful ignorance, personal negligence, regret coping, etc., the questionnaire will be developed from the findings of the narrative inquiry. The aim of study two is not only to validate the findings of study one on a representative sample using the survey method but also to examine issues that could not be addressed in study one. Such as, what personal factors influence regret, how do regret attribution associate with regret feelings. The second study also explores the role of regret experience on wellbeing, specifically on satisfaction with life, and subjective happiness of individuals.

The present thesis is divided into six chapters. The first chapter, *Introduction*, that is, the current chapter aims to give a brief introduction to the work and outline of the chapters. The goal of the chapter is to provide an overview of the present thesis, its scope, and rationale.

Chapter 2, *Literature Review*, will provide a broader understanding of regret in general. The chapter includes literature regarding regret theory, causes of life regrets, action-inaction regret, the intensity of regret, the process of regret, and regret coping. The literature review also discusses the role of culture in regret, regret across the life span, willful ignorance, personal negligence, and the relationship between regret and health. This chapter aims to present briefly the relevant literature on regret and explore the gap where the present study should focus on. The chapter concludes with the research questions of the present study.

Chapter 3, *The Narrative Inquiry*, presents Study 1. This study explored the participants' subjective feelings regarding their life regrets. The narrative inquiry provides a qualitative understanding of life regrets of older adults, their health-based regret, and coping strategies that played a vital role in overcoming their life regrets. Moreover, it throws light on the role of willful ignorance and personal negligence on

regret in old age. Finally, the chapter also examines the gender difference in various aspects of regrets.

Chapter 4, *The Survey Study*, deals with the quantitative examination of regret, its reasons, its correlates, and its consequences. The chapter is divided into two parts, part one focuses on the scale development and pilot study, part two discusses the main survey study. Scale development includes the process through the items of four scales namely, health regret, willful ignorance, personal negligence, and the development of regret coping. The pilot study presents the method of the data collection, the results of item analysis, and the finalization of items of the scales. This main study includes the description of data collection following the survey method and the use of standardized scales along with the scale developed in the pilot study. Chapter four further shows the results related to the major source of regret, regret attribution, regret involvement, regret coping, and regret learning. It also explains how various aspects of regret related to each other, and how they are influenced by personal variables such as self-esteem, social comparison, indecisiveness, religious beliefs, and influence the well-being of individuals.

Chapter 5, *General Discussion*, synthesizes the results of narrative inquiry and survey study. The results of the study are discussed around five major questions: 1) what do Indian older adults regret? Do they have regret more from their action or inaction? Does gender have any role in the causes of regrets? 2) What instigates the feeling of regret? 3) What is the role of willful ignorance and personal negligence on regret? 4) What causes health regrets? 5) How do older adults deal with their regret? When and how a regret experience turns into a learning experience?

Chapter 6, *Conclusion, Limitations, and Implications*, summarizes the results and outcomes of the thesis. The conclusive script in this chapter gives an

understanding of the problem on the ground the present work is conducted and the major findings of the work. This chapter also discusses the limitations of the thesis and future directions of research. The last section of the chapters explores the implications of the present work.

## Chapter 2: Literature Review

“Regret is the negative emotion, based on our cognition that we experience when realizing or imagining that our present situation would have been better if we had acted differently” (Zeelenberg 1999, p.36). The response regarding regret originates from the realization of the inappropriate course of action taken in the past (Roese & Summerville, 2005; Zeelenberg, 1999). The occurrence of regret is a constant and innate aspect of human development (Landman, 1987a, 1993). However, to experience regret, people must recognize the advantageous unchosen alternatives. Throughout life, people execute several decisions that may or may not go as per their expectations. However, the consequences of the erroneous decision can negatively influence one’s life, which can advance the feeling of regret, particularly when one has unfulfilled expectations (Roese & Summerville, 2005). Regret is a commonly experienced emotion that can instigate high levels of psychological distress (Landman, 1987a; Lecci et al., 1994). However, the process of regret may help people to perceive mistakes and it assists the idea for corrective efforts that help to overcome regret.

While some regrets go to the grave of individuals, others might vanish with time. The time course of regret may depend on the importance and severity of the regret, for example, buying a dress but afterward finding it not very attractive may cause regret on buying it, however, it necessarily would not last for a very long time. On the other hand, marrying the wrong person or investing all the savings in a wrong venture could cause lifelong regrets. People can experience these life regrets from various aspects/decisions of their life such as education, career, family, health, and leisure (Hattiangadi et al., 1995; Roese & Summerville, 2005).



## **Regret Theory**

Regret theory describes that humans are not separated from the consequences of their decisions. If another choice appears more extensive after the played performance, people will regret their choice. Thus, regret is a negative emotion whereby high intensities of regret are weighted disproportionately heavier than smaller ones (Zeelenberg & Pieters, 2007). Decision-makers always try to avoid regret, or in other words, they are regret averse. The regret theory by Loomes and Sugden (1982) is based on two functions— a standard utility function and a regret function, capturing the impact of regret. This theory of regret recommends that the value of a decision creator depends on both what he/she gets and what he/she could have gotten in case he/she had chosen a distinctive option. Regret is a purely decision-related feeling. In order to understand the impact of regret, various approaches to decision-making have been developed. For instance, in 1950s, researchers contended that we, from time to time, based our choices on a “minimax regret” principle (e.g., Luce & Raiffa, 1957; Savage, 1951). This principle holds that one computes the greatest of reasonable regret (characterized as a contrast between the genuine to goodness outcome of the chosen alternative and the highest probable outcome of the rejected options) for each choice, and then selects the option where this regret is smallest. The minimax regret runs the show when there is no information about the probabilities of the conceivable outcomes because either this information is not required or is not used into account even when it is present.

Regret can be considered as a state of feeling that could be painful in which an individual feels bad for misfortunes, limitations, losses, transgressions, shortcomings, or mistakes that have happened in their life. These are the encounters of perceived reasons or reasoned emotion that may extend from controllable to uncontrollable and

even accidental events, which may be unethical or lawful transgression or ethically and legally neutral and can be due to implemented actions or psychological ones committed by oneself or by the group. In general, the regret theory stresses that humans are by nature regret aversive, that is, they anticipate the regret and act to reduce that while taking their decisions.

### **Sources of Life Regrets**

Research indicates that the most significant life regrets of people are often associated with major developmental domains such as work, education, and family (Wrosch & Heckhausen, 2002). Jokisaari's (2004) study shows that young adults are more likely to identify regrets in the domains of leisure and relationships, whereas, middle-aged and older adults have shown more regret related to their work and family. Many scholars have explored what do people regret most in their life or the major domains of regret. Kinnier and Metha (1989) asked participants to think of their entire life, and if they get a chance to live it again (from the listed eight aspects of life), which top three domains would they wish to change. The study showed the prominent sources of life regrets were— missed educational opportunities, not being assertive, lack of self-discipline, and lack of risk-taking in life (Kinnier & Metha, 1989). Landman and Manis's (1992) work shows that most people prefer that they should have done something differently in their lives. However, mostly they regret failing to complete their education and making mediocre career or wrong relationship choices.

Hattingadi et al. (1995) found education as the most common source of regret followed by career, romance, and self. Similarly, Lecci et al. (1994) works showed top three sources of regret in life were education, career, and leisure, in descending order. However, Gilovich and Medvec's (1994) work showed romance was the most

frequently reported source of regret followed by education and career. A meta-analysis on causes of regret by Roses and Summerville (2005) shows that a large number of studies documented peoples' regrets on 12 domains of life, that are, education, career, romance, parenting, self-improvement, leisure, finance, family, health, friends, spirituality, and community. Their study further reveals that the six most prominent regret domains of Americans are education, career, romance, parenting, self-improvement, and leisure. Interestingly, in their own study on college students, Roses and Summerville (2005) found romance is the most frequent regret followed by friends, education, leisure, and self. These results show that age plays a huge role in the nature/content of a person's regret.

Research on the older adult shows that regrets related to career, education, and marriage are more common in old age, but the intensity of regret is higher in regret related to finance, family conflict, loss/grief, children problem, and health (Choi & Jun, 2009). Similarly, DeGenova (1992) asked a representative sample of elderly people, what aspects of their lives would they prefer to change if they get the opportunity to improve their life with the life revision index; participants were rated on desired changes for 35 life domains. The results show that education, finance, health, and leisure enjoyment are the areas with a considerable amount of desired change. In their work on young, middle-aged, and older adults, Kinnier and Metha (1989) found that older people, young, and middle-aged participants showed similar regret related to their education and the time they spent on spiritual work. However, older adults show higher regret related to the time they spent with family and they regret less on being assertive, self-discipline, and risk-taking than young and middle-aged. Though in old age people have fewer opportunities available to that of young people for the betterment of their education, nevertheless, still people linger with the

feeling of regret of their educational choices (Lang & Carstensen, 2002). However, scholars also show that older adults regret less about the things which have less opportunity to change or undo (Wrosch et al., 2005).

### **The Process of Regret**

Thoughts, such as how actual situations may have differently occurred are associated with our mental procedures (Kahneman & Miller, 1986). Counterfactual thinking serves as an understanding to establish the causes of events and to learn from mistakes (Roese & Olson, 1995; Wells & Gavanski, 1989). It also serves an affective function by contributing to emotions such as regret, guilt, and hope and attributions such as blame and responsibility (Kahneman & Tversky, 1982; Roese, 1994, 1997). Counterfactual thinking plays a role in many aspects of cognition, including formulating counter examples (Johnson-Laird & Byrne, 1991), developing smaller goals in problem-solving (Ginsberg, 1986), and creative search (Hofstadter, 1985).

The process of regret can be represented in two ways—the cognitive and the motivational process. The cognitive process of regret is about counterfactual analysis of regret, whereas, the motivational process of regret is somewhat similar to the handling of regret. The primary role of counterfactual thinking is to provide a base for experiencing regret, which involves the comparison between “what is” and “what could have been” (Van Dijk & Zeelenberg, 2005). The comparative analysis of regret follows the alternative realities which could exist if one has chosen differently and the fact which is present now. In this process, people may begin to regret the current reality and wish to change it by consistently thinking about the past when they had the chance to change the scenario. The cognitive processes are often related to counterfactual thinking and regret, which are characterized by a negative emotional response that can vary in intensity. The work of Gilovich et al. (1998) had shown that

regret is linked with three kinds of emotions- hot, wistful, and despair. So, the experience of regret may conceptualize as a counterfactual emotion, capturing both its cognitive and emotional properties (Kahneman & Miller, 1986; Roese, 1997; Zeelenberg, 1998).

The motivational process of regret allows people to move on from the state of loss and being attentive towards remaking things to create opportunity. The motivational properties may include thoughts that can strengthen people to learn or cope with their regret and thereby improving regretful things that appeared as a result of our action or inaction. The metaanalysis by Roese and Summerville (2005) indicates that the high frequencies of life regrets have occurred in major developmental domains (e.g., education, career), and the developmental areas are often related to the motivational function of regret. The opportunity principle of regret suggests that the domains of life give numerous opportunities, which motivate people to make adaptive changes in the direction of coping and learning. The opposite perspective of the opportunity principle is more painful and sometimes makes people stuck in their past. The “lost opportunity” principle explains the loss of opportunities or very few opportunities to move ahead in life (Beike et al., 2009).

### **Intensity of Regret**

Gilovich and Medvec (1995a) described two different types of regret: short-term regret, which is the direct emotional reaction to the outcome, and longing regret, which is the less intense sentiment. Some people make the same mistakes again under the same circumstances due to the low intensity of regret or vague feelings of regret. If we talk about specific feelings of regret, it is different from shame, guilt, fear, disappointment, and sadness. These negative feelings may provoke regret or help to bring regret feelings; however, they are not similar to regret feelings.

Findings of scenario-based experiments by Kahneman and Tversky (1982) showed that actions appear larger than inaction while experiencing regret. Still, surveys of people's maximum real-life regrets disclose that people are more troubled by their inactions. There are significant discrepancies in the facts on which these conflicting findings are based, and it may be due to these variations that there are different consequences. People who have been asked about precise, short-term regrets may be evaluating deeply other kinds of events than those who inquired about the major regrets of their lives. There may be a significant difference in what people understand by regret when it applies to these two perspectives (action & inaction). An action produces more regret in a short period, but inactions tend to be more disturbing and upsetting in the long run of life (Gilovich & Medvec, 1994, 1995a).

Another aspect that might be associated with older adults' regret feeling is the capability to identify and pursue alternative aims. Available alternative goals may reduce an old person's focus on regrets that cannot be overcome and may thereby increase the intensity of regret. As an outcome, older adults' subjective well-being may also benefit from their capacities to identify meaningful goals. Research indicates the beneficial effects of available alternatives on adaptive goal regulation and personal well-being (Wrosch et al., 2003), while associations between alternative goals and regret experiences have not yet been examined. It is important to note that disengagement or not doing anything and existing future aims may not be associated with regret intensity and indicators of quality of life in young adulthood. For example, at a young age, inaction-regret may not necessarily create intense regret and reduced levels of subjective well-being, it is because, at a young age, people hold more opportunities to reduce their regrets, unlike elderly people. In support of this argument, research has publicized that processes directed at defeating regrets (i.e.,

attributing self or internal things; Wrosch & Heckhausen, 2002) can be associated with reduced regret intensity among young adults.

### **Action and Inaction Regret**

Individuals may regret their actions as well as their inactions. Action regrets refer to those regrets where people have done something that they wish they had not, on the other hand, inaction regrets appear when people did not take any action but they wish they would have taken (Gilovich & Medvec, 1995a; Gilovich et al., 2003; Kahneman & Tversky, 1982). Research shows adverse outcomes that have come from action taken as actions are more regretful than similar adverse outcomes that appear from actions forgone (Kahneman & Tversky, 1982). Following this seminal work, many studies show that people regret more due to their actions than because of their inactions (e.g., Landman, 1987b; Zeelenberg et al., 1998).

However, Gilovich and Medvec (1994, 1995a) proposed the concept of temporal pattern in the experience of regret. They showed that in the long run, people feel regret over those things that they failed to do or accomplish, that is, regrets over not taken paths or regrets of omission (inaction) that deepen and become more painful with time (Gilovich & Medvec, 1994, 1995a, 1995b). Research also shows that people regret more due to inaction rather than action if the outcome of prior action was negative (Zeelenberg et al., 2002). The study with Terman's geniuses in their old age showed that they also had more regret due to their inaction than action (Hattiangadi et al., 1995). Similarly, Morrison and Roesse's (2011) work on a nationally representative sample of Americans, showed that inaction regrets lasted longer and had greater loss severity than action regrets. Even cross-cultural research found that in the culture of China, Japan, and Russia, people regret more due to their inaction than action (Gilovich et al., 2003).

Regrets over not taken paths, i.e., regrets of omission deepened and became more painful with time (Gilovich & Medvec, 1994), even insignificant personal loss, signified that the probability of regret due to inaction was more than action. Kahneman (1995), however, proposed that different negative emotions are related to different kinds of regrets. He provided an alternative approach to the concept of the temporal pattern of regret regarding action and inaction. Kahneman (1995), however, proposed that different negative emotions are related to different kinds of regrets. He provided an alternative approach to the concept of the temporal pattern of regret regarding action and inaction. According to that, hot emotions like anger, guilt, and wistful emotions like dreamy, wistful, appear from different temporal distances for actions and inactions to which they are attached (Kahneman, 1995). Kahneman, and Gilovich along with Medvec, had reached the consensus that hot emotions were more associated with the action regret, on the other hand, wistful and despairs emotions, were found more in inaction regrets (Gilovich et al., 1998). These works not only show that the intensity of action or inaction regret change over time with the age of individuals but also that the emotions attached with action and inaction regrets are not similar.

Zeelenberg et al. (2002) showed in their studies that the action influence was not as strong as has been recommended by the numbers of studies reported previously. They suggested that, depending on the prior outcomes, inaction might result in more regret than action. Moreover, Roese et al. (1999) argued that regulatory focus moderate action versus inaction effects and thus account for some conflicting reports in the literature. Promotion goals are associated with counterfactuals centering on inactions, whereas prevention goals are associated with counterfactuals focusing on actions.



## **Regret and Health**

Regret is a commonly experienced aspect that can stimulate high levels of affective and emotional distress (Landman, 1987a; Lecci et al., 1994), and sometimes it may come from health or illness related issues (DeGenova, 1992; Hattiangadi et al., 1995; Roese & Summerville, 2005). Research on the relationship between health and regret is mainly done with three focuses— research related to the role of anticipated regret in health prevention and promotion; research related to regret after medical treatment or medical decision; and research related to regret due to poor health condition or illness. There is yet another line of research that suggests that life regrets negatively influence physical health and psychological well-being particularly in old age (e.g., Wrosch et al., 2005, 2007). However, this line of research does not deal with health regret, rather how do regrets influence an individual's health.

The major work related to health regret could be found on how anticipated regret help individuals to adopt a healthy lifestyle or protective health behaviors (Leder et al., 2015; Smerecnik & Ruiters, 2010; Ziarnowski et al., 2009). Many such studies showed that self-regulatory processes played an important role in adopting protective health behavior (Leder et al., 2015; Schwarzer, 1999; Uskul et al., 2008), even self-efficacy showed a positive impact on adopting health behavior (Schwarzer & Renner, 2000). However, most of these works showed that fear appeals or negative emotions played a more important role in thinking about the future and adopting and maintaining self-enhancing health behavior while leaving self-harming behavior (Chapman & Coups, 2006; Smerecnik & Ruiters, 2010; Weinstein et al., 2007). Another body of research on regret related to health comes from medical decisions or choices (see for a recent review, Becerra Pérez et al., 2016). People regret their medical choices mostly when they have any negative experience before, during, or

after the decision-making process (Brehaut et al., 2003). These regrets lead to poor recovery and lowered quality of life (Brehaut et al., 2003; Clark et al., 2001).

The third kind of health regret is regret due to poor health conditions or illness. Even though health regret is found as one of the most common sources of regret in many studies (Choi & Jun, 2009; Hattiangadi et al., 1995; Roesse & Summerville, 2005), very few works explore the link between poor health conditions or illness and regret (e.g., Newall et al., 2009). We believe that this kind of health regret is very different from the above-mentioned health regret due to its nature. While anticipatory health regret deals with action/inaction due to anticipation of the future, here people have retrospective regret, i.e., health-related outcomes are already there, and in the present people feel regretful about their wrong actions/inactions. Similarly, while medical decisions/choices make people feel regret sometimes due to their decisions, which are mostly an outcome of a recent decision and are largely outcomes of a well-thought process, however, general health regret is based on the action/inaction taken early in life and mainly occurs due to carelessness or unthoughtful action/inaction. Predominantly the reasons behind this kind of health regrets are action or inaction which could have prevented a disease or illness if it was followed within time. The quality of life, especially in old age, is always compromised by the experience of common health problems, such as arthritis, heart disease, or diabetes (Kramarow et al., 1999). Since many older adults face some or other health complications, which could be or could not be a result of their own mistakes but they take responsibility in many cases, therefore, in health regret could be a common feeling among older adults.

## **Personal Factors in Regret**

Recently researchers have focused on regret with the aim to study the role of personality traits, situational factors, and neural mechanisms. Van Putten et al. (2009) found that personality orientation affects the generation of regret. People with state orientation are easier immersed into regret mood than people with behavior orientation. Kuhnle and Sinclair (2011) found that decision-making style influences the generation and intensity of regret. Personality provides a basis for the generation of regret and contextual information plays a promoting and facilitating role in the generation of regret (Gao et al., 2013). Importantly, there are individual differences in people's intensity of regret experiences, associated with the frequency of regret-related intrusions or the extent to which people are angry or desperate about their regretted behaviors (Gilovich et al., 1998). Carr's (2011) work showed that hopeful or optimistic people attribute negative events, negative experiences, and setbacks to external, temporary, and specific factors that do not have the significance of widespread value and just because they attribute failure to external factors, the negative feeling dissolves quickly.

Usually, it is believed that regret is dependent on self-attribution and self-blame, and one would not experience the emotion if one was not the causal agent for failure. Although the personal agency has been proposed as a key antecedent of regret, its role is a matter of debate (Connolly et al., 1997; Zeelenberg et al., 2000). At one end of the spectrum, Landman (1993, p.36) defines regret as a "painful cognitive and emotional state of feeling sorry for misfortunes, limitations, losses, transgressions, shortcomings, or mistakes" and suggests that personal agency is not necessarily an antecedent condition. At the other end of the spectrum, Bell (1983), as well as Loomes and Sugden (1984, 1987), defines regret as explicitly including

personal agency as a necessary condition. Other researchers (Gilovich & Medvec, 1995a; Kelsey & Schepanski, 1991; Simonson, 1992) have proposed definitions of regret that lie between these two ends of the continuum and specify differing roles of personal agency.

Research shows that some aspects of regret include individual factors, such as personality traits, achievement motivation, risk appetite, attribution, etc., and property of decision-making information, such as the degree of importance, the level of risk, the number of information, etc. However, previous research has less mentioned the effect of optimistic personality and risk level to regret which are very common in daily life (Kuhnle & Sinclair, 2011).

### **Regret and Culture**

Regret is frequently affected by traditions and ethics (Zeelenberg & Pieters, 2007). Some cross-cultural studies have focused on the causes of regret or on the force with which regret is felt in different circumstances (Komiya et al., 2011). Many studies are suggesting that regret may not be similar in every culture. For example, Hur et al. (2009) found that, compared with Americans, Koreans were extra sensitive with regret, when an intrapersonal or interpersonal standard was dishonored. Komiya et al. (2011) uncovered that Japanese students felt regret more strongly as compared to American students in interpersonal circumstances, but no such difference appeared in intrapersonal conditions. In another cross-cultural research, Gilovech et al. (2015) conducted five studies in three cultures (i.e., China, Japan, & Russia) presumed to be less individualistic than the United States. Respondents in all three cultures tended to regret—like their counterparts in the United States—inactions more than actions in the long term. These data support the universality of the tendency for inaction to generate greater long-term regret than action (Gilovech et al., 2015).

There are reasons to believe that existing knowledge about cultural differences in the experience of regret is incomplete or insufficient. First, regret is not in the list of basic emotions that have been studied widely across cultures. Unlike negative feelings such as anger, fear, or disgust, regret is not characterized by visible (facial) expressions or psycho-physiological profiles that are used in cross-cultural studies. It has been found that regret is linked with the subjective experience of different emotional components, such as appraisals, action tendencies, and motivational goals (Zeelenberg & Breugelmans, 2008; Zeelenberg et al., 1998). Still, large-scale cross-cultural studies using such experiential measures typically have not included regret (Fontaine et al., 2007; Scherer & Wallbott, 1994). Secondly, only a few cross-cultural studies have focused on the antecedents of regret or on the intensity with which regret is experienced in different situations (e.g., Gilovich et al., 2003; Hur et al., 2009; Komiya, 2011).

In the Indian context, there are only a few studies that are conducted to understand the nature of regret. According to Badsiwal (2015), around 30 percent of women reported that they regret their present condition due to the nature of their work. They put much physical labor into daily activities, such as cleaning, washing, bringing drinking water, cooking, feeding cattle, farming, making milk products, rearing children, naming a few, probably that make them dissatisfied with their present situation and make them regret on their past life decisions (Badsiwal, 2015). Some Indian studies focused on anticipated regret as well. For example, Tzini and Jain (2018) explored the role of anticipated regret in advice taking. Another study was done on career regret after the downfall of IT professionals during the recession period; the study attempted to investigate the career regret of IT professionals due to their career outcome. The finding suggested that participants were experiencing

weaker satisfaction and strong career regret (Santa & Giri, 2017). There are many studies conducted to see the effect of sterilization regret among women. Like in a study, Indian women have shown their regret regarding sterilization, especially those women who lost children after sterilization were more likely to feel regret than those who had not experienced such loss (Singh, 2018). Only a handful of studies are found in the context of Indian culture, which creates a huge scope to examine the feeling of regret on the Indian population.

### **Regret and Gender**

Some researchers have suggested that the role of gender presents regarding the experience of regret. For instance, the family domain among the various domains of life regret was found more frequent among women than men (Jokisaari, 2004). Whereas in Kinnier and Metha's (1989) work, three different types of regrets were found frequent, first, the regret of missed educational opportunity, the regret of not having spent more quality time with family, and the failure to have been more assertive. There was a main effect of both genders and age for the regret of not having spent more quality time with family. Twenty percent of the men and 10 percent of the women mentioned this regret.

It has been claimed that in most cultures there are many gender inequalities in life prospects and social perspectives (e.g., Gilligan, 1982). For example, women's relationships have been assumed to be more self-defining than men's relationships (Cross & Madson, 1997). Additionally, women have shown to have personal goals related to close relationships (Diener & Fujita, 1995) and interpersonal matters in everyday problems (Strough et al., 1996) more than men. In some cultures including Indian, family or male members of the family usually take decisions of females' lives but the regret regarding those decisions fall to females' side, for instance, Das Gupta

and colleagues stated that Indian education mixed with urban culture has, of course, changed the outlook towards early marriage and education of girl child. However, women are still not provided their due share of importance in making decisions regarding marriage, the age of marriage, selection of spouse, age of childbearing, etc. (Das Gupta et al., 2008). Though only limited studies showed gender differences in regret, however, given the nature of Indian culture, it could be worthwhile to explore among Indian older adults.

### **Regret across Life Span**

At every stage of life, people face the challenge of making adaptive decisions to pursue their goals (Carver & Scheier, 1998). These experiences give direction to people's lives in the specific biographical pathway (Schulz & Heckhausen, 1996). As a consequence of actions/inactions, the feeling of regret is emerged approximately late in childhood, at the age of around five to seven years (Guttentag & Ferrell, 2004). Committing mistakes is common for humans, and these mistakes are the source of regret. Studies indicated that the nature of mistakes and wrong choices depends on age, therefore, the feelings of regret also may get influenced by age.

Sometimes people may recognize that a selected route is not fit for their current needs. In such conditions, people may speculate on their lives (Staudinger, 2001; Wong & Watt, 1991) and start to feel regret for having or not having proceeded a particular path (Gilovich & Medvec, 1995a). For example, when people would experience separation from their life partners over their extramarital affair, they regret their action, or if a person who is not happy with his or her job may regret his educational choices. Gradually in life, decisions become more compelled. A new relationship (like romance, marriage, parenting) or a new job may appear with lots of opportunities for the younger people to amend and revise their mistakes. Still, it is not

easy for elderly people due to fewer opportunities as they enter the later part of their life. Personal opportunities fade with time, Wrosch & Heckhausen (2000) revealed that although older people have regrets for their inactions, they also make themselves regretful by focusing on their actions as well. As people get older, their chances of feeling regret are higher. This is supported by psychologist Erikson's theory of psycho-social development. During late adulthood, which is the stage of integrity versus despair, people start to reminisce their past, what they have achieved, their experiences in life, and the regrets that they have not in life (Erikson, 1982).

There is evidence suggesting that regrets can be more harmful to the quality of life of older adults as compared to young people because there is a lack of opportunity of making changes in life in old age (Wrosch et al., 2005). A comparative study demonstrates that regrets lead to a lower level of life satisfaction among older adults but not among young adults (Lecci et al., 1994). Jokisaari's (2004) study shows that young adults were more likely to identify regrets in the domains of leisure and relationships, however, middle-aged and older adults have shown more regret related to their work and family. Research on older adult shows that regrets related to career, education, and marriage is more common in old age, but the intensity of regret is higher in regret related to finance, family conflict, loss/grief, children's problem, and health (Choi & Jun, 2009). Similarly, DeGenova's (1992) work shows that education, finance, health, and leisure are the most preferred areas that people want to change if they get a chance to relive their life. Though in old age people have fewer opportunities available in comparison to young people for the betterment of their education, nevertheless, people linger with the feeling of regret of their educational choices (Lang & Carstensen 2002).



## **Regret Coping**

At a fundamental level, like any other negative emotion, regret is intrinsically aversive. Hence individuals are motivated to avoid it, even if this means sacrificing an objectively superior reward (Zeelenberg et al., 1996). However, regret on its appearance makes the individual re-think about wrong decisions, and it attempts to provide an understanding of the corrective action associated with the particular regret (Zeelenberg, 1999). People cannot change what already is done, but they can understand and learn from it so that appropriate changes may indicate a new beginning. It is not surprising that people have a remarkable capacity to adapt to life-changing aversive circumstances such as regret. Regret itself raises negative emotions upon the sentiments of humans. Still, the other part of regret is that people have the potential to try for the alteration of the earlier wrong decision/action with some coping strategies. Regret coping not necessarily be appropriate for learning in life; nevertheless, moving on with regretful thoughts and situations may lead to coping. For example- an attempt to justify one's course of action may deny the personal responsibilities for taken action. Thinking about the negative consequences of other unchosen options, that could diminish the sting of regret even if it could no longer be making a new beginning with no regret (Zeelenberg & Pieters, 2007). An inquiry showed that lay conceptions of regret are positive experiences as opposed to negative ones. That might be the reason why people appraised regret as the most beneficial among 12 negative emotions among several life dimensions (Saffrey et al., 2008).

Many works on regret suggest that there is a positive correlation between regrets, self-regulation processes, and quality of life outcomes, especially among the adult lifespan (Bauer et al., 2008). Bauer and colleagues (2008) also found that people in their latter part of life reduces regret with downward social comparisons with same-

age peers. However, sometimes people make social comparisons to intensify their regret, and even many a time they experience regret by comparing with others. In this regard, comparing one's regret with those who have no regret or less severe regrets in their life, that is involving oneself in upward social comparison, can motivate one to take action and move ahead in life. The downward comparison means people compare with those who have more severe regrets, which may help them to justify their wrong decisions and help in reducing their regret feeling (Wills, 1981). People also deal with their regret by reducing dissonance, however, it is more used in action regret than inaction regret (Gilovich et al., 1995). In a recent study, Zhang and Chen (2016) found that self-compassion helps people in dealing with their regrets. It is also found that people use different strategies for coping with a different kind of regret, i.e., action regrets lead to rationalization more than inaction regret (Ueichi & Kusumi, 2004).

Some studies disprove the hypothesis that regrets are experienced as aversive consequences only (Saffrey et al., 2008). Regret is painful, despite this, it can motivate corrective action (Markman et al., 2008). The adaptive value of self-regulation processes should depend on life opportunities to undo the consequences of regret. Two categories can define self-regulation processes and that could be consistent with different theoretical frameworks of coping. First, when opportunities are not favorable, self-protective methods focus on making changes in internal appraisals of regret with the concern of a person's quality of life. Second, if opportunities are beneficial, processes focus on taking action to make oneself regret less and eliminate the cause of the regret so that the effects take place positively on the quality of life (Heckhausen et al., 2010). The studies indicate that regret is not a

negative emotion alone, it has the potential for forcing people to learn from their mistakes and take corrective actions as well (Roese, 2005).

A growing counterfactual assumption predicted that regret is indicated by both laboratory and field research. Counterfactual thinking draws the act of enhancement utilizing its inferential uses for future act improvements (Morris & Moore, 2000). These outcomes indicate that regret produces corrective action. The influence of regret cannot be considered rational emotion, but if the individual gives proper attention to it, it can become functional. It is because regret helps us to identify the “wrong” decisions and inspires us not to make these decisions again in terms of triggering behavior change aimed at remediation (Landman, 1993; Roese & Summerville, 2005; Zeelenberg, 1999). In other words, information gleaned from regrets can guide future behavior aimed at achieving desired outcomes (Zeelenberg et al., 2001). It may help us to make wise observations of a similar situation in the future. For example, it is helpful when health regret leads people to drink less alcohol, eat less junk food, and force them to involve in more health-enhancing behaviors. Research shows that majority of older adults may be able to cope with their negative emotions and feelings of regret (Strough & Parker, 2014).

### **Personal Carelessness and Regret**

Regret is an outcome of wrong action or inaction. Sometimes, even when people make decisions very carefully and thoughtfully, their decisions can go wrong and lead to regret. However, sometimes while taking the decision people do not show such carefulness, or in other words, they show carelessness, which many a time leads to unfortunate or unwanted outcomes. Hence causes regret, however, probably the feeling/intensity of the regret may not be the same when the decision was taken with care and when the decision was taken carelessly. The difference might be because in

the latter case the responsibility of the wrong decision is more on the actor since he/she was not careful while taking the decision. There is limited literature (e.g., Teigen, 1998; Wagenaar, 1992) available which indicates the relationship between regret and carelessness. This personal carelessness while making the decision can come from two sources: when a person consciously avoids getting information that can be important for decision making, i.e. willful ignorance; and when a person deliberately avoids using information, which is with him/her at the time of decision making, i.e. personal negligence.

### ***Willful Ignorance***

Ignorance is not a new concept in academic discourses; however, social scientists have recently started understanding ignorance with its important epistemological and political implications (Gross & McGoey, 2015). However, some still believe willful ignorance is purely a selfish act, which is a socially harmful behavior (Grossman & van der Weele, 2017). Recently, psychologists have also shown interest in willful ignorance with much enthusiasm, however, their focus is more limited to why and when people deliberately ignore the information (Gigerenzer & Gracia-Reamer, 2017; Hertwig & Engel, 2016). Research suggests that people avoid available but unwanted information that threatens their desired thoughts, emotions, or actions (Shepperd & Howell, 2015; Sweeny et al., 2010). The most interesting form of ignorance is when it is intentional or willful. Willful ignorance is the form of ignorance that occurs due to one's preferences rather than the external barriers, i.e., being ignorant not because it is challenging to know, but because one is not interested to know, even though it is relatively easy to do so (Calhoun, 1989).

By nature, humans are curious and many of us have a high need for cognition, but why is it that sometimes people do not want to know the truth is a puzzling

question. According to the classic economics of information perspective, individuals derive utility, not from information per se but its potential material consequences (Stigler, 1961). Therefore, if the outcomes are not very pleasant then they may avoid knowing or postpone knowing such information. The importance of information arises from its anticipatory outcome and if the outcome is perceived as negative or unwanted then it may not be welcomed (Fels, 2015). In a recent paper on *Homo Ignorans* (Hertwig & Engel, 2016), the authors mentioned various reasons ranging from purely selfish motives to socially beneficial motives, behind the decision to not know. The motivation to ignore information may come from avoiding negative emotions, maintaining suspense and surprise, performance improvement, being impartial and fair, dealing with cognitive overloading of information, and avoiding information as a strategic gain (Hertwig & Engel, 2016). Similarly, Gigerenzer and Gracia-Reamero (2017) showed that people do not want to know something mainly because of four reasons- to avoid negative emotions, to gain a strategic advantage to maintain the surprise, to maintain fairness, and impartiality. Research also shows that people avoid knowing sometimes because they don't want to take responsibility (Gross & McGoey, 2015; Hertwig & Engel, 2016).

Willful ignorance necessitates action that requires learning about the effects of one's actions on others and may sometimes involve sacrificing personal pleasure for the benefit of others. The regret theory of willful or deliberate ignorance covers both depressing feelings and constructive feelings (Gigerenzer & Gracia-Reamero, 2017; Luce & Raiffa, 1957). Depressive feelings refer to those feelings that may arise from prior knowledge of adverse events, such as death and divorce, and that's why people don't want to know about it. The constructive feelings are about the experiences of surprise and suspense that may disappear after the foreknowledge of positive events

feelings (Gigerenzer & Gracia-Reamero, 2017; Hertwig & Engel, 2016; Luce & Raiffa, 1957).

A study showed that 29 percent of Americans would avoid visiting doctors, even if they suspect that there might be something wrong with their health (Persoskie et al., 2014). Similarly, 39 percent of participants indicated that they would avoid knowing their risk for cancer (Emanuel, 2015). In another study, more than one-third of participants agreed or strongly agreed with the statements like “I would avoid learning about my health,” and “when it comes to my health, sometimes ignorance is bliss” (Howell et al., 2014). The findings suggest that, despite the potential benefits of seeking health information, people often opt to avoid learning such information. These studies show that people use willful avoidance even in the case, which may cost them high in the long term.

### ***Personal Negligence***

Negligence in simple sense is an action that a reasonable person would not act or an inaction where a reasonable person would act. Negligence is an act of a person who is carelessly responsible for producing harm to another person, a group, or a property (Deering, 1886). Negligence could be due to inaction, i.e., failure to act or perform one's responsibility, and it could also be an outcome of reckless action. For example, not changing the faulty parts in a machine, which caused an accident in a factory is negligence in the form of inaction, however, driving in the wrong lane and causing accidents is an example of negligence based on action. Previous studies have also suggested that negligence is the requirement of a causal connection between the respondent's poor services and the damage that was natural, probable, and obvious (Hale, 1896). Negligence can be divided into two broad categories- first, when negligence causes harm to others, which is the most popular form of negligence,

especially in the legal sense, however, the second form of negligence could be when the perpetrator causes harm to one's self. The later form of regret which is not well explored or researched can be called personal negligence. In this case the perpetrator, himself/herself is the victim. The person's negligence is not causing harm to anyone else but to himself/herself, for example, even after the instruction of the doctor, a patient does not stop alcohol consumption or does not take medicine. Personal negligence has no legal connotations, but it could be dangerous and harmful to self and, therefore, it has psychological implications.

Personal negligence though causes harm to oneself only, but many people, especially family and friends are also indirectly affected by this carelessness. Before moving further, the difference between willful ignorance and personal negligence, overlapping but different concepts need to be made clear. The basic difference is that, in the case of willful ignorance, people do not want to know the information, which means, they do not know the consequences of their action/inaction, however, in the case of personal negligence they have complete or partial knowledge but they ignore to use that in their action/inaction. Though many scholars have used ignorance and negligence interchangeably (e.g., Hefferenan, 2011), however, we believe that 'not wanting to know', i.e., willful ignorance, and 'to not use' any information/knowledge, i.e., personal negligence, are two related but quite different phenomena.

Historically, in legal practices, it was followed that negligence includes four elements- duty, breach, cause, and damage, however recently scholars are emphasizing on five elements model of negligence, which includes, duty, breach, harm, the cause in fact, and proximate cause (Owen, 2007). Though, these componential models are developed in the legal context, where the individuals go on trial for causing harm to others. However, these elements can be used to understand

whether any harmful act is based on personal negligence or not. For example, if X cut his/her toe because a knife was lying on the floor. So, to establish whether it was the outcome of X's negligence or not, we need to explore these elements. Whether it was X's duty/responsibility to keep the knife on the shelf? Whether X did not perform his duty (breach of duty)? Whether the action has done any harm to X? If X would have put the knife on the shelf, the accident could have been avoided (cause in fact)? And finally, whether leaving the knife on the floor is directly linking with cutting the toe (proximal causation)? If the answer to any of these questions is not affirmative, then we cannot say X has cut his toe because of his/her negligence. The argument here is, be it harmful behavior towards others or self, the negligence could be one reason behind it, and to establish it, we can deploy the models of legal negligence to personal negligence.

### **The Present Study**

The present study explores the experiences of life regrets from the perspective of older adults. This age group is selected for the present research for the following reasons. First, the older adults are in the stage of life where they have already undergone major life decisions, be it education, career, marriage, parenting, etc. Most research on regret is done in laboratory settings on student participants, who hardly have any experience of major decisions of life or regrets (Morrison & Roese, 2011). Therefore, older adults will have more experience to put light on the range of regrets. Second, not only do they have all sorts of regret experiences but also, they might have handled those regrets. Since one aim of this study is to look into how people cope-up with the negative feeling of their regrets, therefore, older adults may provide a better understanding of coping strategies. Third, in old age, people hardly get any opportunity to change their course of action or undo their



mistakes (Wrosch et al., 2005), therefore, the regrets they hold mostly do not have hope of improvement, but the dead end. Subsequently, it will give a different and probably better understanding of regret coping and learning. Finally, much of the research shows that elderly people face more problems due to regret, such as the poor quality of life, lack of satisfaction, and so on (Wrosch et al., 2005). Therefore, the application of the present research will not be only for older adults but also for young adults who can learn from the mistakes of their seniors.

The present research explores various aspects of life regrets concerning people in old age. The primary aim of the present study is to understand the role of personal carelessness on regrets, particularly the role of willful ignorance and personal negligence. The ignorance or negligence as a subject is treated as a social problem in need of eradication (Ungar, 2008) by behavioral and social scientists. However, social scientists have started understanding ignorance or negligence for its importance and implications (Gross & McGoey, 2015). Psychologists have also shown interest in exploring why and when people deliberately ignore the information (e.g., Gigerenzer & Gracia-Retamero, 2017; Hertwig & Engel, 2016). Moreover, in most of these works ignorance and negligence are used interchangeably or synonymously. However, as mentioned earlier, ignorance is an act of deliberate avoidance of access to information or refrainment of oneself from getting information, on the other hand, negligence is an act of carelessness by avoiding some information even when having partial or complete knowledge of the consequences associated with such avoidance. In the present study, both willful ignorance and personal negligence are considered as overlapping but separate concepts. We argue that regret due to personal carelessness would be different in nature from regular regret since, in the case of personal carelessness, the personal responsibility for the wrong action/inaction would much

higher. Unfortunately, there is not much research focusing on personal carelessness and regret experiences. Therefore, the present work examines the role of willful ignorance and personal negligence in life regrets.

The study also aims to explore what do older adults regret most. There are several pieces of research about major life regrets (Kinnier & Metha, 1989; Roesse & Summerville, 2005; Wrosch & Heckhausen 2002), some focusing on elderly people as well (Choi & Jun, 2009; DeGenova, 1992). However, most of them deal with the Western population, especially Americans. Though there are a few studies that look into the cross-cultural aspect of regret (e.g., Gilovich et al., 2003), however, they focus mostly on the action-inaction dichotomy and hardly any research shows the difference or similarity in domains of regret across cultures. The national culture, social norms, and conventions may influence the nature of regret people hold and how they deal with those regrets within their cultural parameters. The present study primarily examines the elderly Indian population to see what they regret most and also whether their regret is based on their actions or inactions.

Another aim of the study is to explore what factors instigate counterfactual thinking among older adults, which ultimately leads to regret. To understand the objective, one needs to understand two points. First, we all have some or other regrets in our lives, but we do not hold it all the time, rather, only on some occasions, we indulge in thinking about the wrong decisions we have taken in the past. Unfortunately, the feeling of regret is not a one-time affair, it may reappear and indulge people again in self-blame mode. Second, regret is an outcome of counterfactual thinking (e.g., van Dijk & Zeelenberg, 2005), however, what puts individuals in counterfactual thinking is altogether a different question. Though many researchers talk about cognitive processes involved in regret (e.g., Connolly &

Zeelenberg, 2002; Roese, 1997; van Dijk & Zeelenberg, 2005; Zeelenberg & Pieters, 2007), however, very limited knowledge available about what triggers or instigates counterfactual thinking at the first time as well as in reappearance of regret. Therefore, here, the researcher tries to understand the factors which lead to or cause counterfactual thinking and hence arises a feeling of regret in an individual.

One of the major sources of regret in old age is health regret (DeGenova, 1992; Hattiangadi et al., 1995). Though people cannot undo their mistakes in early life, however, in the case of health regret, people get more opportunities to learn from their mistakes and apply them to subdue their regret to some extent. Many older adults suffer from various health-related issues such as diabetes, heart problem, arthritis, etc., therefore, health becomes a major issue in old age. Many of these diseases/illnesses could be genetic, still, sometimes people blame themselves (e.g., lifestyle, food habits, work habits, etc.) for them. On the contrary, sometimes even when they are responsible for their poor health, they blame external factors, genes, God, etc. Therefore, it will be worthy to know what leads to taking responsibility for their poor health and caused regret for their past actions, since taking responsibility can help in dealing with the problem. Hence, one of the aims of the present study is to examine health regrets among older adults.

Lastly, the study explores the way people handle their regrets. Research shows that in old age people have fewer opportunities to correct their mistakes (Wrosch et al., 2005), therefore, they may deal differently with their regrets from a young age person. However, only a handful of research explores the difference in coping mechanisms between young and older adults (Bauer et al., 2008). Therefore, the present research investigates the coping strategies the older adults use to manage the negative feeling of regret. The research also explores the process of regret learning.

## **Research Questions**

RQ1: What do older adults regret? Is there any gender difference in the sources of their regret?

RQ2: What instigates counterfactual thinking and hence regret?

RQ3: When, why, and who does ignore or neglect health related information?

RQ4: When, how, and why does intentional avoidance can create regret?

RQ5: Which individual factors do contribute to these regrets?

RQ6: How do people handle/cope-up with these regrets?

RQ7: Can these regrets be learning for self and others?

In the present thesis, two studies are planned to address the above-mentioned research questions. The first study is based on the qualitative method. Through the narratives of older adults about their regret incidents, the researcher would attempt to answer a few research questions. The second study follows quantitative methods, i.e. a survey on a representative sample to validate the findings of narrative studies and addresses a few questions which could not be addressed in study one. The ethical clearance for this research was taken from the university Ethical Review Board.

### **Chapter 3: Narrative Inquiry**

Regret plays a vital role in human life, especially in old age, when people have time and opportunities to reflect on their entire life. It is not surprising that aging provides a considerable number of experiences, but also an understanding of how one should correctly deal with the problematic situation. In old age, people reflect more on their life not only because they are retired and have time, but they have fulfilled most of their responsibilities and duties. Regret is a conscious experience because we become attentive towards the entire process of decision-making and how it went wrong. Various research on regret has identified cognitive consequences, including the feelings of blame and expectations (Connolly & Zeelenberg, 2002). Though humans start having regrets at a very early age, however, major life regrets appear much later in one's life. Studies indicate that approximately 90 percent of people reported having a life regret (Landman 1987a; Wrosch et al., 2005). Research also suggests that regrets are more harmful to the quality of life of older adults as compared to young people (Lecci et al., 1994; Wrosch et al., 2005). In this context, this qualitative study examines the regret feelings in old age, specifically, what do they regret, and what instigates the feeling of regret. This study further addresses the potential functional aspects of regret by exploring various coping strategies practiced by older adults to deal with their life regrets. Moreover, the study emphasizes health-based regret and examines the role of willful ignorance and personal negligence on regret experiences.

#### **Method**

The present study is proposed to examine the experiences of regret along with coping mechanisms in old age. Recently, many scholars have preferred and advocated narrative gerontology for gaining a better understanding of the experiences of older

adults (e.g., Blix et al., 2015; Lloyd et al., 2020; Moffatt & Heaven, 2017). Therefore, the present study followed the narrative method to get a deeper understanding of the experiences of regret among older adults.

### ***Participants***

A total of 60 retired older adults, 30 females and 30 males were interviewed. The age range was 60 to 80 years, with the mean age was 67.5 years. Fifty-seven participants were Hindus, and remaining three were Muslims. A total of 47 participants were married, nine were widows/widowers and four were unmarried. The majority, i.e., 53 participants were living with their family and seven participants were living alone. The interview request to the participants was made through a telephonic call. Interestingly, all the people who were contacted accepted the request and invited the researcher for the interview, i.e., 100 percent response rate. Though many participants reported physical illness such as heart problems, diabetes, etc., however, no participant was suffering from any mental or cognitive illness including dementia. The participants were selected from different districts (Purina, Katihar, Patna, and Bhagalpur) of Bihar state.

### ***Interview Questions***

Though the narrative inquiry was unstructured still there were few questions around the whole inquiry was focused. For example,

1. What could be the common reasons for regret?
2. Do you have any regret in your life? If yes, what is that? (the details about the regret, like when it appeared first, cause behind regret, how they handled it, were asked for each regret incident).
3. What is the biggest regret of your life?
4. Have you ever felt that your carelessness has led to regret? If yes, in what ways?

5. Do you have any regret related to your present health condition? If yes, what?
6. Do you think you are responsible for your present health in some way? If yes, how?
7. How have you coped/dealt with your regrets?

### ***Procedure***

The researcher selected the retired government employees with the help of the list of state-pensioners, retired professors, and retired bank employees. The researcher took a prior appointment through telephone from each participant. They were told about the purpose of the study and how they can help in the study. As mentioned earlier none of the contacted participants denied the interview, however, in some cases they gave the time for the interview after a week or two. The interviewer visited the participants according to their convenient place and time. The researcher developed a rapport and informed them about the purpose of the study again before starting the interview. They were also told that they can stop the interview at any time and can deny answering any question with which they are not comfortable. Informed consent was taken from each participant verbally and recorded. Also, prior permission was taken from the participants for voice recording. They were convinced that their data, their information will be kept strictly confidential and will be used only for research and research-related publication maintaining their anonymity. All the interviews were conducted in the local language, which was Hindi. All the participants were debriefed and thanked after the interview. During the interview, only two participants mentioned that they did not have any regret in their life, though their interviews were not terminated and continued with other life experiences, however, their interviews were not included in the analysis.

## ***Data Analysis***

A total of 157 life regret incidents with an average of around three life regret per person were narrated by the participants. The narrative analysis was done on these 157 regret incidents to formulate major ideas about what they regret most, their action or inaction regret, the reasons of health regret, and the role of early life carelessness in regret. The process-related to regret instigation and how they cope-up with those feelings, are also analyzed. Besides, quantitative content analysis is also done to see the distribution of responses across various life regret domains and action-inaction regret.

## **Results**

### ***Major Life Regrets***

Hundred and fifty-seven life regrets narrated by participants were analyzed to understand what do they regret more in their old age. For the nomenclature of the regret domains, Roses and Summerville's (2005) regret categories were followed. Although in Indian culture, especially older adults hardly talk about romance or their sex life, so we did not get any regret in this category. Yet, many of them mentioned regret related to their marriage, like early marriage, marriage with the wrong person, etc., therefore, instead of taking romance as a domain, we opted for marriage as a regret domain. Overall, seven major domains of regret have emerged in the analysis. They were related to— career, family, education, health, parenting, marriage, and finance matters. Table 3.1 shows the frequency and percent of regret on these domains overall and also gender-wise. The table shows regrets related to the career as the most prevalent sources of regret in old age, however, the prevalence of this regret was much higher in the case of males than females. The second major domain was related to relationships with family and parents, however, in contrast to the previous



domain, this domain was more frequently seen among female participants than male participants. Similarly, education, the third frequent regret domain overall, was mostly mentioned by female participants. Overall results indicated that there is a difference between what males regret more in their life as compared to what females regret.

**Table 3.1**

*Frequency Analysis of Regret Domains*

Domain of regret	Overall		Male		Female	
	f	%	f	%	f	%
Career	45	28.66	31	39.24	14	17.94
Family	25	15.92	5	6.32	20	25.64
Education	21	13.38	6	7.59	15	19.23
Health	19	12.10	15	18.98	4	5.12
Parenting	18	11.45	8	10.12	10	12.82
Marriage	15	9.55	5	6.32	10	12.82
Finance	6	3.82	5	6.32	1	1.28
Others	8	5.10	4	5.06	4	5.12
Total	157	100	79	50.32	78	49.68

*Note.* Frequencies and percentage of life regret incidents for various regret domains are given in the table. The percentage for overall participants was calculated from the total of 157 regret incidents, i.e. across domains. However, percentages of males and females were calculated from the frequency of each regret category, i.e. across gender for each regret domain.

**Career.** The career-related regrets included regret about the selection of a wrong occupation/job, lack of professional growth, unfulfilled career goals, missed opportunities, workplace wrong decisions, etc. Though career was the most prominent reason for regret, it has been more found in male participants, but even females were not resistant to it. For example, one female (70 years) participant quoted “I was selected for my higher studies in a foreign university. I chose not to go there, because of my family responsibilities. That time, I thought it would be better if I stayed back in

India. That would help me to make a balance between family and my career. However, very soon I realized that I made a blunder.... If I had gone there then my life would have been very different”.

**Family.** The most prominent and recurring reason for regret, especially in the case of female participants was related to the family relationship. It included the unfulfilled duties towards them and unpleasant relationships with them because of certain actions/inactions. For example, a female participant (66 years) said, “I was expecting my parents to allow me to do the job after my studies. But they were in the impression that working girls were not considered homely and good for marriage. Hence, they did not allow me to do a job. Somehow, I managed to get a job after wasting two years but still, they were not happy with my decisions, which sometimes made me regretful about my decision of taking up a job.”

**Education.** Education regrets include self-distractions and carelessness in studies, and sometimes due to the unsupportive environment, lack of resources, because of which people were not able to study what they wanted to or what they think they should have. Interestingly, the result shows that this regret is also more common amongst females than in males. For example, a 66 years old female participant said “one of the biggest regrets of my life is that I could not complete my postgraduate studies. I was married and had a kid.... My husband and in-laws were not very supportive of my studies and wanted me to focus only on child-rearing.... Finally, I had to leave my studies incomplete to focus on my kid”.

**Health.** The quality of life in old age is poorly restricted by bad health, which made people regret their unhealthy lifestyle and health-related decisions. The health regret domains include regret related to the early life carelessness of health in the form of the prevalence of health-threatening behavior, absence of health-enhancing

behavior, and medical carelessness. One of the participants says, “My improper daily routine with an unhealthy diet once made me very sick. I had developed a skin disease throughout my body including my face. Doctors said that it's all due to my carelessness and my lifestyle” (Male, 77 years).

**Parenting.** This domain includes the mistakes of parenthood days and self-blame for their children's breakdown, especially in their careers. Interestingly, this is the only regret domain where males and females both show regret almost equally. A male participant, age 77 years, said, “I could not provide proper support and guidance to my children. I was always busy with my work and never had time for them. Today somehow, I feel responsible for their problems and struggle in their life. I feel, if I was there when they needed me most, then probably the situation would be very different today for them” (Male, age 77).

**Marriage.** In India, many people still think that marriage should be arranged by families only. Instead of accepting marriage as a right and choice of partners, it is considered the family decision, and hence family plays a very crucial role in the marriage decision. Therefore, it is evident that many people have regret related to their marriage. This domain covers regret due to early marriage, incompatible spouse, remarriage, the decision to not marring or remarriage, etc. For example, a 69 years old female narrated that “After the early death of my husband, I decided not to go for remarriage. Probably that time, my decision was full of emotions but today at this age, I regret my decision. I have no one to share my feelings, problems..... I do feel lonely”.

**Finance.** This regret domain constitutes regrets related to the loss of money, properties, or businesses. The reasons behind various financial losses include indulgence in wrong investments, trusting the wrong people, and dissatisfied returns.

A participant mentioned the biggest regrets of his as “I faced a huge loss in my business. It was because of my business partner, who cheated on me. But I had blind faith in him, which prevented me to see his real side. I am still not able to recover from my loss” (Male, Age 66).

### ***Action and Inaction Regrets***

The frequency analysis of 157 regret incidents, given in Table 3.2 indicated that older adults have almost two-third of regrets due to inaction and less than one-third of regrets because of their action. This reflects that people in old age hold more life regret because of their inactions than because of their actions. The gender-wise analysis revealed no difference between males and females for action and inaction regrets.

**Table 3.2**

#### *Frequency Analysis of Action and Inaction Regret*

Regret	Overall		Male		Female	
	f	%	f	%	f	%
Action regret	44	28.03	28	35.44	16	20.51
Inaction regret	103	65.61	50	63.29	53	67.95
Undetermined	10	6.36	1	1.27	9	11.54
Total	157	100	79	50.32	78	59.68

*Note.* Undermined cases were the regret incidents where the regret was mixed or not clear. The percentage for overall participants was calculated from the total of 157 regret incidents, i.e. across regret categories. However, percentages of males and females were calculated from the frequency of each kind of regret, i.e. across gender.

### ***The Process of Regret***

The process of regret represented the process that instigates people to involve in counterfactual thinking and hence led people to fall into the feeling of regret. The

analysis revealed that there are two main sources of instigation- unfulfilled expectations and comparisons. That is, either people regret when they realize something has not happened according to their expectations or when they indulge in any form of comparison of their outcomes. In the following section, we present the results related to these processes.

**Unfulfilled Expectations of Self.** The most common and widespread source of regret reported in regret incidents is the unfulfilled dreams or goals of the individual. In general, people set some goals, see some dreams for their life, but sometimes due to various constraints, such as family responsibilities, lack of courage, or lack of resources, people could not meet those self-expectations. Many of these unfulfilled expectations haunt people throughout their life and made them regret again and again their failure in achieving their goals/dreams. Participants mentioned that these feelings trigger when they come across someone who had achieved a goal similar to their unfulfilled goal or they get involved in self-reflection or meet a person who lived his/her dreams. A 62 years old male participant said “the biggest regret of my life is that I could not become an IAS (Indian Administrative Services) officer. That was my childhood dream. I tried but due to lack of resources and proper guidance, I could not clear the exam”.

**Unfulfilled Expectations of Others.** The inability of not being able to stand up to the expectations of others sometimes also creates regret. Sometimes a situation or others made people realized that they are not able to achieve the goal set by their significant others (like parents, spouse, siblings, friends, teachers, etc.) can also trigger the feeling of regret. In many incidents, participants mentioned that they have a feeling of regret due to unfulfilled expectations of signification others. Interestingly, the unachieved goal or dream was never visioned by individuals, still, somehow, they

blame themselves for missing the opportunity to make others happy in the pursuit of achieving their goals/dreams. For example, a male (76 years of age) explained “I was too busy in my work that I could not spend enough time with my son. I did not know his interest or dreams. I asked him to go for the engineering program, after the 12<sup>th</sup> class and he did what I wanted. After two years of study, he left engineering and took admission in B.A. English Literature. Later, he did well in his career. Still, I believe I was responsible for wasting his two years and even today, whenever I think about that episode, I feel like I had not performed my duties properly”.

**Unfulfilled Expectations from Others.** In a few cases, the reason for indulgence in regret feeling was participants’ self-blame for unfulfilled expectations they had from others. That is when a person expects something from others and if they are not able to meet the person’s expectation, rather than blaming them, the person takes the responsibility since he/she did not perform duties properly. Here, it is to be noted that though the person himself/herself is not the direct actor, however, he/she feels responsible as the secondary actor who could not perform his/her duty properly, and, therefore, the direct actors cannot do their job properly. For example, a female (61 years) said “the only regret I have in my life is related to my decision about my daughters’ education. My both daughters would have done much better in their studies if I had not interfered in their education”.

**Comparison between the Anticipated and the Real Outcomes.** A decision not necessarily delivers an expected outcome, which creates a gap between the assumed and expected outcomes. While a positive gap may create happiness and a sense of elation, a negative gap may cause disappointment and regret. The upsetting outcomes may make people realize that they had taken the wrong decision in the first place, which led to regret. A female participant of 67 years of age said “I invested all

my savings and retirement benefits on the construction of my son's house. I thought he will look after me in my old age... Today he is happy with his family in his home. Forget about asking me to live with him, I never received a single word of appreciation from him. I did not remarry after the early death of my husband, just because of his future, and now look at me where I am”.

**Comparison between Self and Others.** This is a human tendency to compare oneself with others. Participants mentioned that they have been involved in upward social comparison in two ways. First, when they compare their overall life with others and feel sad and regretful about their whole life and various life decisions. This type of comparison generally occurred with the people who started from the same place and position in life, such as school, job, neighborhoods, etc. On the other hand, people can also compare one decisional outcome of self with others. For example, a female aged 65 said “I regret that I could not do much in my life. My friends were weaker than me in studies, but they got all kinds of resources and support, and I was better than them but had no help or resources. They did much better than me in their career”.

**Comparison between pre and post Decisional Lives.** Few regret incidents mentioned by the participants show regret can emerge when people compare their life before and after a significant/important life decision. Though if the actual outcome of the decision is less than the expected outcomes, people do regret it, as shown earlier. However, sometimes even when the actual outcome is similar or better than the expected outcome, still people may compare their life pre and post-decision on some parameters. If people realize that life before the decision was better than after the decision was made, they regret their decision. A female participant (63 years) said “I was pursuing my Master’s degree/course at that time when my parents fixed my marriage. I was not happy... I knew I would not be able to complete my Master’s

after marriage and would not be allowed to do a job as well. But still, I could not say no to my marriage. Things happened as expected, my in-laws forced me to leave my education incomplete... But later I started regretting my decision of leaving my education in-between”.

### ***Personal Carelessness and Regret***

One of the major focuses of this research was to understand the role of personal carelessness, i.e., willful ignorance and personal negligence, in regrets. Many a time people do not consider or take care of information in hand or easily available while taking a decision, which may lead to a wrong decision. Reflection on the process of such failed decisions may expose the carelessness of decision-maker and causes regret for their mindless mistakes. From the participants' narratives, we extracted various reason reasons for willful ignorance and personal negligence during decisions making.

**Willful Ignorance.** As mentioned earlier, willful ignorance is an act of deliberate avoidance of access to information or refrainment of oneself from getting information. In the regret context, it refers to the situation when a person regrets for avoiding information relevant to the decision, which was freely or easily available to the person at the time of decision making. So why do people not want to know/get such information? Primarily because of two reasons- either people are not motivated to know or they are motivated to not know.

**Motivated to not Know.** The present category motivation to not know is guided by a proverbial principle “ignorance is bliss”. That means sometimes people do not want to know maybe because they are scared of the information. People avoid and postpone receiving the information as long as they can, especially the information which they anticipate can be negative or beyond their control. However, ignorance is



bliss does not prove to be beneficial always, rather many a time, it turned out to be a dangerous philosophy. Because sometimes knowing things when they are at the nascent stage is easy to handle, but not knowing or avoiding such information is not a solution for sure. However, since we are not ready to know or do not want to deal with the anticipated outcome, we willfully ignore the information, which may make us regret our ignorance later. For example, a 62 years old female participant mentioned that “I should have taken proper care of my health, especially regarding my knee pain because my mother had arthritis. But I neglected the symptoms and pain. I was afraid to visit the doctor because I never wanted to know why the symptoms were there. Probably because I was not eager to confirm my apprehensions”.

***Not Motivated to Know.*** Another prominent and recurring reason behind information ignorance is the lack of motivation to know what could be the harm or benefit of any information. Sometimes people do not have time, sometimes they do believe that the information is not relevant to them, and at other times, their prioritization of other activities such as professional life, or some passion, etc., leaves them less willing to know about something. Not necessarily but sometimes this ignorance could lead to serious trouble in long run. For example, a 62 years old male said “In my busy schedule and hectic work life, I never showed any interest to know or take care of my health. I never thought of the consequences of my hectic lifestyle. I was healthy then and that was enough for me. I never went for a regular check-up, I used to believe that was only for sick people and I was healthy”.

**Personal Negligence.** Personal negligence is an act of carelessness towards oneself by avoiding some information even when having partial or complete knowledge of the consequences associated with such avoidance. Negligence in the

legal and social context is a well-researched area, however, when a person's negligence causes harm to the person, not to others, is not well explored. Many times, we neglect the information which we had at our disposal, probably because we think the information would not influence us, or we can escape from its negative consequences. In the present study, it is found that people are involved in many risk behaviors or carelessness due to sheer personal negligence. It is found that there are mainly five reasons why people involve in personal negligence- the illusion of invulnerability, easy alternatives, personal rigidity, hopelessness, and perceived irrelevance.

***Illusion of Invulnerability.*** The illusion of invulnerability is one of the major reasons for information negligence. Many a time people get information that can be useful for them, however, they neglect the information in the belief the information is not going to affect them or their case the outcome would be different from other cases. We called it the illusion of invulnerability since, despite the available data and examples, people developed an irrational hope that they can escape the negative consequences of information avoidance. We can easily see this phenomenon in the various realm of life, like when a person is madly in love with someone, or investing in a failed venture, or not following health measures. For example, a regular visit to doctors and not avoiding the unhealthy growing symptoms in the body can help to find potential health issues before they fully developed. However, many participants said that when they were young, they had this impression that their immunity is very strong and they cannot catch any chronic or terminal diseases, in short, they thought they were invulnerable to any big disease. Even when signs and symptoms were in front of them, they overlooked them in the shadow of an irrational hope that nothing wrong would happen to them or things would automatically improve. For example, a

participant suffering from heart disease said, “I never realized or even thought that I might suffer from heart disease. I was doing regular Yoga practices and was under the impression that nothing wrong can go with my health” (Male, age 67).

***Easy Alternatives.*** At every juncture of life, we get various directions, some of them are easy and others are difficult but more accurate and effective. However, many a time we select an easy way, despite no surety of reaching the goal but because it is more convenient and efficient. Undoubtedly, easy alternatives look handier and efficient in terms of cost, time, and energy, and therefore, they lure us easily. However, they also made us ignorant toward the information which is essential for the correct course of action, since that information or course of action looks inconvenient and costly in term of time, money and resources. Many participants in the present study mentioned that they did not use the useful information/path just because there were other easy alternatives available. For example, a male participant of 70 years of age said “when we were planning to buy our house, my wife had suggested me to purchase some land and get a house constructed on it. But I thought who will take so much trouble of construction, so I opted for a ready-made flat. Though my wife was not happy with my decision still I deposited the advance to the builder. Unfortunately, the builder ran away without completing the building. Though we get the possession, however, it was incomplete. So, we had to complete the incomplete work with extra money.... I was trying to save my work and money, in the end, I had to spend both in excess”.

***Hopelessness.*** The belief that everything is predetermined in life and nothing can be changed no matter how much one try, can lead to hopelessness. Some participants mentioned that the misfortune/suffering was already written in their destiny because of their past/early life Karma or just fate. Some also mentioned that

they believed that the outcome was unavoidable, no matter what they would have done, they could not have escaped. This hopelessness could be an outcome of external attribution or learned from the others' failed attempts, but it had stopped them to take action when they had a chance to change their life. As one participant narrated "My cancer is the consequence of the bad deeds of my last birth. I never took alcohol or tobacco or spicy food, but still, I was diagnosed with mouth cancer. It was already written in my fate, what could have I done?" (Male, 66 years).

***Perceived Irrelevance.*** The situation where people disregard the importance of knowledge-based information over their perceived or experiential understanding. That is, negligence appeared due to the perception that the information or the behavior is useless or irrelevant especially for them. Attention is selective and motivated; people avoid the information which they feel is not related to them or not of their use. The problem arises when this perceived uselessness is not that true, and the information which was neglected costs them profoundly. Perceived irrelevance and illusion of invulnerability look very similar but there is a difference between these two, while the former believes the information is useless, in the latter case, people do not believe that information is useless, however, they have hope that the ignorance of that information will not harm them. For example, a participant said "On my joining, I was told about all the rules and procedures of work and duties. But due to my irresponsible and careless attitude, I never followed those rules and regulations. I ignored them, till the situation got out of my hand.... I had to face the departmental inquiry because of my carelessness" (Male, age 68).

***Personal Rigidity.*** Sometimes people neglect information or a correct course of action because of their personal rigidity. That is, people show an unwillingness to follow something due to inability/habitual difficulty to modify their behavior or way

of living. Similarly, sometimes, personal values or beliefs are challenged by new information, and people found it difficult to handle it, which leads to the neglected use of new information or opting for new behavior. Sometimes people also pursue other alternatives because these have already become part of their life and it will be difficult for them to change the status quo. A male participant of 72 years of age narrated that “my son wanted to marry a girl from different community and culture, but I was very against the idea. I used to love my culture and community very much so I could not give him permission. My son followed my wish did not marry the girl he used to love. I selected a girl for him and he married according to my wish. But, I guess he never forgot his love, and probably due to unhappiness and stress he died very early with a heart attack. I never saw him very happy in his married life. I blame myself, my orthodox thinking for his unhappy life and untimely death. If I would have allowed him, probably he would have been alive today. He was the only son of mine.... this regret will never disappear until I die”.

### ***Health Regret***

One of the major focuses of this research is to understand what are the factors, which made the individuals take responsibility for their present health situations and regret their past actions/inactions? Clearly, not every health condition or illness leads to regret, but only those in which the victims believe that somehow, they are responsible for their present health situation. The analysis of health narratives shows that there are three major sources of health regret- the absence of health-enhancing behavior, the prevalence of health-threatening behavior, and medical carelessness. A detailed description of each category is as follows.

**Absence of Health-Enhancing Behavior.** A healthy life requires people to follow health-enhancing behaviors at the level of individuals, which generally keep

them physically fit. It includes, but not limited to, having a healthy diet, physical activity, exercise, proper rest and sleep, routine life, etc. The absence of these components in life may lead to health-related problems and poor quality of life at a later stage in life and could also lead to health-based regrets. For example, a 62 years old lady said “when I was young, I never used to eat properly what people call a balanced diet. I, regularly miss my breakfast or lunch. I believe due to that, after my marriage, I have faced many health issues, especially in conceiving my baby, during childbirth, and even in breastfeeding. You know my body could not produce enough milk for my baby. Because of that, my baby girl was never very healthy; and it's not only me but my girl also paid for my foolishness”.

**Prevalence of Health-Threatening Behavior.** Involvement in self-harming activities can severely damage one’s health, especially at a later age. The prevalence of adverse health practices increases the risk of diseases and illness as well as diminishes the physical wellbeing of individuals. Many participants mentioned in the interviews about the prevalence of negative habits at their young age, which now they regret because that has cost them heavily, especially in terms of their health. For example, a 69 years old male participant shared that “I had a very irregular lifestyle during my workdays. I was kind of a workaholic, throughout life I focused only on work. No rest, no proper sleeping, only work. No proper food, no Yoga, nothing... Now when I am very sick, and there is nothing which I can do about my health, I feel sorry for myself, my lifestyle”.

**Medical Carelessness.** Ignoring illness symptoms, not approaching medical experts, not following prescribed medicines, or not going for regular medical check-ups are a few examples of medical carelessness. This medical carelessness sometimes causes big problems later, and sometimes they go unnoticed. Like any other regret

here too, people only reflect when something goes wrong and then they regret their carelessness. Many of the participants of the study has accepted that due to their medical carelessness they had suffered or are suffering now. For example, a male participant of 71 years narrated that “at one time I was suffering from stomach pain. It was liver related disease but I did not know that time and thought it is just a regular stomach pain, which would go in a few days. So, whenever I felt pain, I used to take a painkiller, which continued for months. Now, when I have developed liver cancer, I wish I would have gone for a proper check-up earlier, probably I would have saved myself with this deadly disease”.

### ***Regret Coping***

Regret can lead to a retrospective analysis that may help people to understand the reason why they thought or acted as they did. Regret coping cannot always lead to learning, but the acts, which help in reducing the negative feelings of regret are considered as methods of regret coping. That is, regret coping represents strategies, which help people to come out or effectively deal with their life regrets. It is to be noted that not all strategies are adaptive or future-oriented, still, they can be effective in dealing with the negative feeling of regret. Based on their nature, the regret coping strategies could be clubbed into two big categories– Adaptive strategies and Maladaptive strategies. While adaptive strategies include positive reappraisal, downward social comparison, religious/spiritual involvement, and seeking social support, on other hand, the maladaptive strategies include justification/rationalization, denial and suppression, and attributing externally.

**Positive Reappraisal.** A positive reappraisal is a form of coping that drives people to think progressively and to look into the situation in a temporary way. Participants reported that though regret is unavoidable, however, one can change the

way he/she sees regrets, it cannot be just negative, regret also can be a source of learning. For example, 70 years aged male participant said “I believe that whatever happens, happens for good. I agree that I made many mistakes in my life and also, I am regretful for those. However, the brighter aspect of mistakes is, they may help me to retrospect the circumstances in which I took the decisions and also help me to use the experience next time”.

**Denial and Suppression.** This category of coping is about denial and/or suppression of negative emotions that are associated with regret. Though this approach cannot be called a positive way of dealing with regret feelings, however, it turns out to be a very commonly used method of coping with regrets in old age. For example, a female (62 years) said “I want to forget my regret of not being with my father during his last days. I always attempt to suppress memories related to my father, even good memories with him because they also give me regret of not being there when he needed me the most. Whenever his thought comes to my mind, I try to be busy with my work and other things...”.

**Downward Social Comparison.** In this method of coping, participants tried to overcome their regret by comparing their regretful outcomes with other worse possible scenarios or with someone in a much sorrier state. That is, comparing the bad outcome of a decision with other possible worse outcomes supports people not only handling their regret but sometimes make them even feel happy with their decisions.

Interestingly, one of the significant sources of regret is the upward comparison, however, one of the considerable ways of coping way is the downward comparison. A female participant (67 years) said “I was not happy with the decision of my early marriage. I used to regret that and blamed my mother for not supporting me. However, just after one year of my marriage, my father died and his death made me realize that



it was good that I got married when he was alive otherwise the situation would have been more difficult for me and my mother as well”.

**Attributing Externally.** Putting off the responsibilities of wrong deeds and regrets towards others or circumstances of life represents this category of coping. This is an example of self-serving bias, where the failures are attributed to external agencies. Therefore, the actor is not responsible for the wrong action rather a victim of his/her circumstances. “When my sister was ill, I was not able to manage money for her treatment. I was not economically good and could not save my sister only because of money (Male, 74 years).

**Justification/Rationalization.** The present category of coping approach is about saving one’s face by justifying and rationalizing one’s wrong decision. They not only reject to accept their mistakes but try to convince themselves and others that others could have done the same. For example, 60 years aged female participant said “I could not give enough time to my children when they were kids... But what option I had. I was doing the job. Because of the financial condition of my family, I could not have left the job and looked after them full time”.

**Seeking Social Support.** Many participants mentioned that one of the common and effective ways to deal with regret is getting support from others. Interestingly, in many regret incidents, participants blame the unsupportive family for their life regrets, however, when they have support from their family it helps them to deal with their mistakes. A female participant (70 years) said “At one time due to lack of preparation I could not pass one exam. I was very sad for a few days, but my husband was very supportive at that time. I could overcome my failure only because of his help”.

**Spiritual/Religious Involvement.** People, sometimes turn towards the religious and spiritual way of coping to deal with their regrets, especially in old age. Gratitude for the present moment, prayers, reading religious/spiritual books, and meditations can represent a religious/spiritual involvement of a person. For example, a female (75 years) said “The only way to keep a person calm in such a situation is Adhyatma (meditation). You cannot undo what have you done, but you can believe that God will help you to handle that. In many such situations mediation, religious readings showed me the meaning of my life”.

## **Discussion**

The present narrative inquiry aimed to answer five questions related to regret experiences among Indian older adults: 1) what do they regret, i.e., major domains of regret and prevalence of action or inaction-based regret; 2) how does the feeling of regret emerge, i.e., the process of regret; 3) how do personal carelessness, i.e., willful ignorance and personal negligence, influence regret; 4) what are the major causes of health regret; and 4) how do people handle their regret, i.e., regret coping. The results are discussed below under the following five aims of the study.

### ***Regrets People have in Old Age***

The purpose behind this exploration was two-folded: firstly, to explore whether Indian older adults regret differently from their Western counterparts, and secondly, to examine do males and females regret different things? According to Roese and Summerville’s (2005) meta-analysis and other studies (e.g., Kinnier & Metha, 1989; Landman & Manis, 1992), the biggest regret among Americans is related to their education. The present study also shows that education is one of the prominent domains of regret, however, not the biggest in the case of Indian older adults. It shows that career regret is the foremost regret among them. In India, where

most people study to find a good job, therefore, the education itself is not an end but an instrument to get a decent job. The entire education process moves around to get a good job and good earning. In the book *The Great Indian obsession: The untold story of India's engineers*, Iyer (2014) rightly said Indians first become engineers and then decide what to do with their lives. So, it is obvious to expect more from professional experience as compared to education. The results are supported by the work of Landman et al. (1995) where they found career was the strongest source of regret among participants

Like many Western studies, we also found education as one the biggest source of regret (e.g., Kinnier & Metha, 1989; Landman & Manis, 1992; Landman et al., 1995; Roese & Summerville, 2005). What is interesting in the present study is that regret related to education is more common among females. Probably because of the patriarchal nature of Indian society, especially 30-40 years ago when the participants of the present study were in college/university. Many females have mentioned that they were denied higher education, which was hardly found in the narratives of males.

Moreover, the results show that family is reported as the second biggest source of regret. That could be probably because of the collectivist culture of Indian society, where the happiness of others matters more than self-accomplishment. The social norms made people sacrifice their dreams/aspirations for family and parents, however, they cannot stop people from regretting the same in their later life. Family regret is one of the major domains of life as found in many studies, however, it did not even come under the five big reasons of regret (e.g., Gilovich & Medvec, 1994; Hattiangadi et. al., 1995; Roese & Summerville, 2005). This shows that the cultural contrast of individualistic and collectivistic cultures also influences the nature of regret that people of these cultures hold. The result shows that female participants

expressed this regret more, which is supported by the earlier findings that suggest women tend to list the domain of relationships more frequently among women (Jokisaari, 2004).

Health is found as the fourth most mentioned regret by the participants. Since the participants were older adults, and many reported sufferings from various diseases/illnesses, therefore, it is logical that health is cited as one of the biggest regrets by them. The results are supported by various studies, especially on older adults (Choi & Jun, 2009; DeGenova, 1992; Hattiangadi et al., 1995). Like many previous studies, parenting is also found a very common source of regret in old age (DeGenova, 1992; Kinnier & Metha, 1989; Landman & Manis, 1992; Landman et al., 1995; Roesse & Summerville, 2005). What is interesting here is that this is the only domain where both genders have reported almost equal regrets.

The next major source of regret is marriage, unlike American studies which show romance as one of the major sources of regret across age (DeGenova, 1992; Kinnier & Metha, 1989; Landman & Manis, 1992; Roesse & Summerville, 2005; Wrosch & Heckhausen, 2002), the present study shows in Indian culture many people have marriage-related regrets. The reason why Indians do not report romance or sex-life related rather marriage related regret could be credited to Indian culture, where even when people are not happy with romance or their sexual life, hardly anyone speaks about that, especially older adults. Secondly, the Indian marriage system focuses more on companionship rather than intimacy or passion, therefore, it is difficult to find anyone especially in old age to have regret about love, romance, or sex. However, many participants, especially females, mentioned marriage regret, which they had due to early marriage, marriage with the wrong person or in the wrong family, or issues related to remarriage. The last major source of regret among Indian

older adults is related to financial matters. This is not surprising results in the context of a country where people worship money. So any monetary loss will be a big matter of concern and probably of regret as well. Finance is also found as one major source of regret in many previous studies (DeGenova, 1992; Kinnier & Metha, 1989).

### ***Action or Inaction Regrets***

The present research also shows that people regret more because of their inaction than due to their actions. The results are supported by various studies, which show that in old age people regret more because of inaction (Hattiangadi et. al., 1995). Gilovich and Medvec (1994, 1995a) have suggested that there is a time course to the experience of regret such that in the long run, people experience more regret over things they failed to do. In a recent article, Blix et al. (2015) argued that the missed opportunities are not just representing regret but help people to develop their identity around that, especially in old age. That could be a reason why people remember more such inactions or omissions than their actions or commissions.

### ***Process of Regret***

According to regret theory, regret arises from comparing an obtained result with a better result than might have occurred if different choices have been made (Loomes & Sugden, 1987). Unfulfilled expectations put people in counterfactual mode is well established (Gilovich & Medvec, 1995b; van Dijk & Zeelenberg, 2005), however, what is new here is, these unfulfilled expectations come from various sources and whenever people encounter situations that remind them of these unfulfilled expectations, they re-indulge in regret again and again. The most important source of such unfulfilled expectations is self-expectations. Previous research also shows that people regret their unfulfilled wishes and aspiration more than missing duties and responsibilities (Davidai & Gilovich, 2018). People can also regret when

they cannot fulfill the expectations of significant others. The third source of unfulfilled expectations comes from others' wrong actions. Here, though, the person has not done the actual act or made the wrong decision, but still, he/she believes that any antecedent cause (done by him/her) has led to immediate action/inaction (performed by others) and therefore makes him/her responsible for the failure/misfortune.

Similarly, it is found that regret feelings could surface due to various forms of comparison. Though the process of counterfactual thinking is a comparison between what is and what could be (Gilovich & Medvec, 1995b; van Dijk & Zeelenberg, 2005), however, before coming to a counterfactual model, people already go through various comparisons. One most common way of comparison is the social comparison where people compare them with similar others (Festinger, 1954). The discrepancy between the actual and expected outcome can create regret, and the higher the discrepancy, the higher the regret would be. The final way of regret comparison is when people compare their life before and after the decision. If they find life before the decision was better than the life post-decision, then they regret their decision.

### ***Willful Ignorance and Personal Negligence***

The results of the present study confirm that there are mainly two reasons why people show such carelessness at a young age which makes them regret later. The first reason being willful ignorance, i.e., not attending the useful information, either due to motivation to not know or due to lack of motivation to know. Researchers provided a range of reasons for why people avoid knowing the truth, such as to avoid negative emotion, to gain strategic advantage, maintaining surprise and spontaneity in life, avoiding responsibility, etc (Gigerenzer & Gracia-Reamero, 2017; Gross & McGoey, 2015; Hertwig & Engel, 2016). The second source of ignorance is a lack of

motivation to know. Probably because the youth do not perceive themselves at risk and that is why they need not take care or attend such things. The study shows that such ignorance, whether causes a health problem or marital problem, or financial problem, may make a person regret their silly ignorance.

Personal negligence is the second source of careless behavior. Negligence in the legal and social context is a well-researched area, however, when a person's negligence causes harm to the person, not to others is not explored. Heffernan (2011) shows that at my point of life, we neglect the information which we had at our disposal, probably because we think the information would not influence us, or we can escape from its negative consequences. In the present study, we found that people involved in many such reckless behaviors just due to personal negligence. Results show that there are mainly five reasons why people involve in personal-negligence- an illusion of invulnerability, easy alternatives, personal rigidity, felt hopelessness, and perceived irrelevance. Whatever the reason is for such negligence, but neglecting beneficial or useful information while making a decision may lead to severe consequences and make people regret later about such avoidance of information because they were completely aware of the outcome of their negligence.

### ***Causes of Health Regret***

Health regret, like any other form of regret, is also guided by a perceived sense of responsibility for wrong action or inaction. This sense of responsibility that made people regret their health condition or illness comes from three major sources- the absence of health-enhancing behavior, the prevalence of health-threatening behavior, and medical carelessness early in life. While the absence of health-enhancing or health-promotional behavior refers to missing or not following a lifestyle, which is vital for good and flourishing health, on the other hand, the prevalence of health-

threatening or health-risk behavior refers to indulgence in such behavior which makes people more vulnerable to poor health/illness. Many studies have shown that adolescents and young adults excessively involve in health-threatening behaviors (Jackson et al., 2012; Millstein et al., 1992; Peltzer et al., 2016). Probably, young age, which is less vulnerable in terms of physical health and illness, sometimes makes people think that nothing wrong could happen if they indulge in health-threatening behaviors or avoid health-enhancing behavior. People usually involve in these kinds of behaviors at a young age when the stamina and immune system are at peak and no immediate consequences of such behaviors are visible. As a participant mentioned in the interview that “due to young age and high stamina, we successfully avoid little health-related problems.” (Female, 68 years). Another reason could be that the health-threatening behaviors are more associated with positive feelings than health-enhancing behavior, and this associating pleasure could lead young people to involve more in health-threatening behavior (Benthin et al., 1995).

### ***Regret Coping***

Regret may hold people back from growing in life, or it can show what is needed to move ahead in life, depends on how people manage to handle their regrets (Zeelenberg, 1999). Regret could push people to fix their errors and faults, should make amendments regarding bad behaviors, and spring into action when they are falling short of important goals (Roese & Summerville, 2005; Zeelenberg, 1999). It is important to realize that the impact of regret may be considered rational because it can result in increased satisfaction of needs or increased well-being and forces us to think more carefully about our decisions (Parker et al., 1996). Changing life after regret needs self-compassion, and that is why not everyone manages their regret very well



(Zhang & Chen, 2016). In the present study, participants mentioned a few strategies they used or are using to deal with their life regrets.

Positive reappraisal, a form of meaning-based coping, is the adaptive process by which regretful events are reconstrued as benign, valuable, or beneficial. There are many ways through which people reconstruct their regret experiences such as regulating thoughts, cognitive dissonance, etc (Zeelenberg & Pieters, 2007). Research shows that cognitive self-regulation helps older adults to deal with their life regrets (Bauer et al., 2008). Studies have shown that people by reducing cognitive dissonance, deal with their regrets, especially when they are based on action (Gilovich et al., 1995).

Similarly, social support from significant others can provide instrumental, informational, and emotional assistance to deal with regret (House et al., 1985). Studies have also shown that not only instrumental but emotional support from others is also useful in coping with difficulties (Carver et al., 1989). Another effective method to handle one's regret is by indulging in downward social comparison (van Harreveld et al., 2008). Bauer et al. (2008) show that people in their latter part of life reduces regret with downward social comparisons with same-age peers. Similarly, it is also found that thinking about the negative consequences of other unchosen options could help in dealing with the unsatisfied decision (Zeelenberg & Pieters, 2007). Older adults also adopt religious/spiritual ways of coping (Boswell et al., 2006; Carver et al., 1989; Ng et al., 2017). The religious/spiritual involvement not only helps people to think about their regret as a part of a bigger plan or see them in a more meaningful way but also provides support in the form that God or the universal energy is with them.

Like any other coping, regret coping can also be maladaptive, such as when people try to suppress or deny their regrets rather than accept and face their mistake. In some cases, participants mentioned that they do not mind their wrong decisions or they do not care about them but deep down they continue blaming themselves for their decisions. Previous studies have shown that people suppress and deny their memories and thoughts to deal with their stress (Scheier et al., 1986). However, the suppression and denial can never resolve the problem completely from their system, and whenever they come across the confronting situations, they regret it again and again. Similarly, sometimes people use scapegoats to deal with their mistakes i.e., by attributing externally. Guided by the principle of self-serving, people blame situations or others for their mistakes. In other words, by sharing responsibility with others they try to reduce their regret and get some solace. It seems an efficient way to deal with regret since it was mentioned in many regret stories, sometimes they blame their parents, spouse, children, boss, or even the system for their wrong decision. Another maladaptive strategy is justification/rationalization. In this coping mechanism, people generally try to defend their wrong decisions/actions by marking it the need of the hours, or by arguing that they took the right choice but it turned out to be wrong, or they could not have foreseen the outcomes. The basic difference between external attribution and justification/ rationalization methods of coping is while in the first case people accept the decision was wrong but they blame someone else, while in the second case, they deny that the decision was wrong or it was the mistake of decision-maker, or he/she had no other option to go with.

## Chapter 4: Survey Study

Chapter three, *Narrative Inquiry*, examined the common regret among Indian older adults and what instigates the feeling of regret among them. The study also examined the role of willful ignorance and personal negligence in regret experience. Furthermore, it explored what leads to health regret and how do older adults handle their life regrets. The study analyzed 157 oral narratives given by older adults about their life regrets. Results of the study indicate that major sources of regret in old age are related to their career, family relationship, health education, parenting, marriage, and finance. The study shows that there are mainly two sources of regret instigation- the realization of unfulfilled expectations and comparisons. Moreover, the participants mentioned that the major reasons for health regret in their age are due to the mistakes they had made early in life, in terms of- the absence of health-enhancing behavior, the prevalence of health-threatening behavior, and medical carelessness. Results show that willful ignorance and personal negligence, both are the common reason for regret and there are many reasons as to why people involve in such ignorance and negligence. Finally, the study shows that older adults use various coping strategies to deal with their life regrets such as positive reappraisal, seeking social support, rationalization/justification, etc., however, several of them could be labeled as maladaptive ways of coping.

The present chapter, which is built on the findings of the previous chapter has four focal aims. First, it is aimed to validate the findings of the narrative inquiry on a bigger sample of older adults, such as to confirm prevalent domains of life regret, gender differences. Second, it is designed to develop measures of a few variables based on the findings of the previous study. Measures for most of these variables are

either not available or not fit for the older adult population, such as health regret, personal negligence, willful ignorance, regret copings. Third, the survey study addresses a few questions which could not be well answered in the narrative inquiry, such as what is the role of regret attribution on regret experience in old age; what is the contribution of individual factors such as self-esteem, indecisiveness, and health condition on regret experiences. Lastly, the study examines the influence of regret experiences on individuals' well-being, particularly on happiness and satisfaction with the life of older adults.

The present chapter is divided into two broad sections– the pilot study, and the main survey study. The pilot study includes scale development and test of the scale items on a small sample. Therefore, the pilot study is further divided into two subsections– item development and item analysis. The main survey study uses a self-reporting questionnaire, which includes the scales developed in the pilot study along with various standardized scales, such as a general health questionnaire, self-esteem scale, satisfaction with life scale, etc. Both pilot and main survey studies are conducted on retired older adults from the state of Bihar in India.

### **Pilot Study**

The pilot study aims to develop the measures of a few study variables, namely, health regret, willful ignorance, personal negligence, and regret coping. To achieve the aim, the pilot study is conducted in two-phase. Phase 1 focuses on item development, which includes variables operationalization and item development. Phase 2 focuses on testing the usefulness of items, i.e. item analysis, and scale finalization.

### ***Item Development***

The researcher has developed the scales to measure four study variables– health regret, willful ignorance, personal negligence, and regret coping. In this section,

the definitions of various variables used for scale development are presented along with sample items.

**Health Regret.** Health regret is caused by the illness or poor health condition of the individual for which the person feels responsible. That is, people have health regret when they realize that the health problems that they are facing are because of their own mistakes or wrong action/inaction and, therefore, they regret those mistakes. The narrative accounts of health regrets showed that there could be three main reasons for such regrets: the absence of health-enhancing behavior, the prevalence of health-threatening behavior, and medical carelessness.

***Absence of Health-Enhancing Behavior.*** The absence of health-enhancing behavior is a state of affairs when a person does not follow the measures or methods of a positive or healthy lifestyle, such as taking proper diet, sleep, exercise. A total of six items were constructed to measure regret due to the absence of health-enhancing behavior. An example item— I should have involved myself more in physical activities, e.g., sports, outings, etc.

***Prevalence of Health-Threatening Behavior.*** The prevalence of health-threatening behavior is a condition where a person indulges himself/herself in negative health habits, such as hectic work life, addictions. For measuring regret due to the prevalence of health-threatening behavior, eight items were developed. For example— I should not have indulged in tobacco or smoking.

***Medical Carelessness.*** When a person involves in any kind of medical negligence or ignorance towards his/her health, such as excessive medication, ignoring symptoms, is called medical carelessness. Eight items were made to measure health regret due to medical carelessness, for example— I should not have neglected the symptoms of even minor diseases.

**Willful Ignorance.** Willful ignorance is an act of deliberate avoidance of information or refrainment of oneself from getting information. People involve in willful ignorance either because they are motivated to not know, or they are not motivated to know.

***Motivated to not know.*** Many a time people avoid or escape from the information to evade negative emotion, gain strategic advantage, maintaining suspense and surprise, fairness and impartiality, etc. A total of 10 items were developed to measure motivation to not know any information. For example– I didn't want to know the truth because it might have disturbed me.

***Not Motivated to know.*** Sometimes people are not motivated to know the information because they feel that the information is worthless or because being cognitively busy, or they are satisfied with the status quo, or the information is not of their interest, etc. In all these situations, they restrain themselves from knowing the information, not because they have fear or looking for some kind of surprise or gain but because they perceive that the information is not important to be acquainted or to be acquired. Similar to the previous dimension, 10 items were developed to measure no motivation to know any information. An example item– I did not realize that information could be important for me.

**Personal Negligence.** Personal negligence is an act of carelessness towards oneself by avoiding some information even when having partial or complete knowledge of the consequences associated with such avoidance. The primary difference between personal negligence and willful ignorance in this study is– personal negligence refers to not using or applying the information that people have or know, however, willful ignorance is restricting oneself from knowing the information. People are generally involved in personal negligence due to five main

reasons: an illusion of invulnerability, availability of easy alternatives, personal rigidity, hopelessness, and perceived irrelevance of information use. For each reason, two items were developed except for easy alternatives, which had four items.

***Illusion of Invulnerability.*** Many a time people do not use or apply the information simply because they believe they are invulnerable or can escape the negative consequences of not applying the information. In other words, they disregard the important information in a hope that nothing wrong will happen to them. An example item— I was hopeful that the neglect of information would not create any problem in my case.

***Easy Alternatives.*** Easy alternative refers to a situation when people avoid information because of the availability of easy substitutes or because of the difficulty in applying the information because of the additional costs required in terms of money, time, energy, etc. That is many a time people do not use the information merely because they have simple and cheaper options. An example item measuring this reason of negligence is: The alternatives were easier to follow.

***Hopelessness.*** The situations where people start believing that nothing will improve their condition or no matter how much they try, they cannot escape from their fate. In these situations, people do not care about using any information or knowledge because they do not have hope of any positive result out of that. For example— I was hopeless that even applying the information could do any better.

***Perceived Irrelevance.*** The perceived state in which a person believes that the information/knowledge is not useful or relevant for them. It is different from hopelessness in the sense that their people are not hopeless but they believe that the information is garbage or useless. An example item— The information was not perceived as important to be considered at that time.

***Personal Rigidity.*** The state of refusing to follow or apply the information because of the inability or habitual difficulty to modify one's thoughts or behaviors. That is people already have ways of solving problems and managing their lives, therefore, sometimes it may be difficult for them to adapt to a new way that is different or even opposite from their familiar ways/knowledge. An example item– My habits made it difficult to apply new information.

***Regret Coping.*** Regret copings are the strategies people use to manage their regrets and the future negative outcomes of those regrets. Coping from regret is not often found adaptive, however, no matter whether people use adaptive or maladaptive ways, they are helpful to reduce the negative feelings of regret. In the narrative inquiry, it is found that older adults use various strategies to deal with their regret coping, such as positive reappraisal, downwards comparison, seeking social support, spiritual/religious involvement, attributing externally, denial or suppression, and by justifying/rationalizing their wrong decisions. These coping strategies are clubbed into two broad categories for the present work– adaptive coping and maladaptive coping. A total of 36 items were made to measure regret coping.

***Adaptive Coping.*** Adaptive coping of regret includes those methods of coping where people confront, accept, and deal with their regret feeling. They may use various adaptive ways, such as reappraisal of situation, downwards comparison, seeking social support, or extending their religious/spiritual engagement. For the measurement purpose, a total of 21 items were made on these four dimensions. Example items– I look into the bright sides of my wrong decisions; I remind myself that things could have been worse than the present.

***Maladaptive coping.*** The maladaptive coping method involves the ways of dealing with regrets by not confronting or accepting them rather escaping and



avoiding the responsibility of the wrong action/inaction. People in this coping method, generally use suppression or denial, justification or rationalization, or simply by blaming others or situations for their mistakes. A total of 15 items were developed to measure maladaptive ways of coping. Example items– I believe, that was not totally my fault, and others were responsible too; I suppress my thoughts of regret.

**Item overview.** Originally, in the first draft, more than 150 items were developed. The items along with the variable's conceptual definition were shown to two fellow researchers for their feedback. Based on their feedback and suggestions, nearly 60 items were dropped and several items were rephrased or modified. Hence, a total of 90 items were retained to measure– health regret, willful ignorance, personal negligence, and regret coping; 22, 20, 12, and 36 items respectively. All the items were constructed bilingually in English and Hindi. To measure the responses, a five-point Likert rating scale was used, which ranges from strongly disagree (1) to strongly agree (5).

### ***Item Analysis***

To see the usefulness of items developed and to finalize the scale for the main survey study, a pilot survey study was conducted on a small sample of older adults.

**Participants and Procedure.** In the pilot survey, the data of 50 participants were collected. The sample of 50 participants was comprised of 25 retired females and 25 retired males. Participants were from the Purnea district of Bihar. The mean age of participants was 65.06 (SD= 3.15) with the age range from 60 to 74 years.

Data were collected randomly according to pensioner lists provided by the pensioner office. It was made sure that participants from the qualitative study would not be considered in this pilot study. The participants had to fill up the 90-items questionnaire. Alongside, they had to fill in some demographic information as well.

The researcher visited the residence of participants after taking a prior appointment from them. She explained the purpose of the study and gave the self-reported questionnaire to the participants. She collected the questionnaire back after a few days from their residence. While collecting the data back, she also took the feedback regarding the questions. The data were collected exclusively from older adults who were retired from their service and were more than 60 years of age.

**Data Analysis and Results.** The collected data were analyzed to see how appropriate items were in measuring their respective variables. Item analysis includes descriptive statistics (mean and SD), t for item discrimination, item-total correlation (ITC) for item correlation with the variable total, skewness, and kurtosis for data distribution. Items that were not having significant t or ITC were dropped. Similarly, items that were having skewness and kurtosis of more than  $\pm 2$ , were also dropped. Moreover, some items were dropped following participants' feedback.

**Table 4.1**  
*Item Analysis Statistics for Health Regret*

Item	M	SD	t	ITC	Skewness	Kurtosis
1. I should have practiced Yoga, Meditation or exercise. <sup>a</sup>	3.84	1.419	.185	.047	-1.044	-.357
<b>2. I should have taken healthy food more such as green vegetables, fruits.</b>	<b>4.02</b>	<b>1.020</b>	<b>2.352**</b>	<b>.382**</b>	<b>-1.243</b>	<b>1.577</b>
<b>3. I should have maintained a balance between my work and my health.</b>	<b>3.96</b>	<b>1.049</b>	<b>3.739**</b>	<b>.606***</b>	<b>-1.244</b>	<b>1.735</b>
<b>4. I should have involved myself more in physical activities, e.g. sports, outing, etc.</b>	<b>4.10</b>	<b>.974</b>	<b>3.561**</b>	<b>.515***</b>	<b>-1.035</b>	<b>.860</b>
<b>5. I should have taken proper rest and sleep.</b>	<b>3.66</b>	<b>1.349</b>	<b>5.074**</b>	<b>.653***</b>	<b>-.692</b>	<b>-.719</b>
<b>6. I should have maintained a regular routine.</b>	<b>3.88</b>	<b>1.136</b>	<b>3.259**</b>	<b>.576***</b>	<b>-.538</b>	<b>-.804</b>
7. I should not have often skipped my daily meals. <sup>a</sup>	4.02	.869	2.481*	.394**	-1.207	2.311
<b>8. I should not have excessively relied on outside food.</b>	<b>3.58</b>	<b>1.247</b>	<b>5.989**</b>	<b>.690***</b>	<b>-.914</b>	<b>-.035</b>

9. I should not have eaten too many sweets. <sup>b</sup>	3.14	1.178	4.043**	.525***	-.516	-.616
<b>10. I should not have taken too much work stress.</b>	<b>3.78</b>	<b>.954</b>	<b>3.801**</b>	<b>.483***</b>	<b>-.418</b>	<b>-.659</b>
<b>11. I should not have developed late night working habits.</b>	<b>3.74</b>	<b>1.209</b>	<b>4.98**</b>	<b>.605***</b>	<b>-.556</b>	<b>-.757</b>
<b>12. I should not have indulged in tobacco or smoking.</b>	<b>3.40</b>	<b>1.539</b>	<b>11.719**</b>	<b>.792***</b>	<b>-.434</b>	<b>-1.273</b>
<b>13. I should not have developed unhealthy diet habits.</b>	<b>3.32</b>	<b>1.449</b>	<b>8.772**</b>	<b>.770***</b>	<b>-.506</b>	<b>-1.095</b>
14. I should not have consumed alcohol too much. <sup>b</sup>	3.50	1.474	8.814**	.773***	-.617	-.975
<b>15. I should have taken regular medical check-up.</b>	<b>3.92</b>	<b>1.047</b>	<b>5.060**</b>	<b>.661***</b>	<b>-.725</b>	<b>-.128</b>
16. I should not have ignored my health conditions. <sup>b</sup>	4.12	.982	5.024**	.673***	-.922	-.130
<b>17. I should not have neglected the symptoms of even minor diseases.</b>	<b>3.90</b>	<b>1.093</b>	<b>6.672**</b>	<b>.610***</b>	<b>-.675</b>	<b>-.427</b>
<b>18. I should not have tried saving money when it came to visiting doctors or medical checkups.<sup>c</sup></b>	<b>3.62</b>	<b>1.105</b>	<b>5.815**</b>	<b>.706***</b>	<b>-.507</b>	<b>-.382</b>
19. I should not have been dependent on excessive medication. <sup>b</sup>	4.08	1.122	3.701**	.569***	-.886	-.653
<b>20. I should have taken medication only with the consultation of doctors.</b>	<b>3.84</b>	<b>1.057</b>	<b>5.299**</b>	<b>.683***</b>	<b>-.424</b>	<b>-1.038</b>
21. I should not have totally relied on Allopathic (English) medication. <sup>b</sup>	3.46	1.164	3.560**	.517***	-.182	-1.193
<b>22. I should not have skipped my appointments with doctors.</b>	<b>3.60</b>	<b>1.278</b>	<b>5.027**</b>	<b>.710***</b>	<b>-.416</b>	<b>-1.180</b>

*Note.* t is showing item discrimination and ITC is showing the item-total correlation. Boldface items were retained and normal face items were dropped. <sup>a</sup> Items were dropped based on item analysis statistics. <sup>b</sup> Items were dropped on participants' feedback. <sup>c</sup> the language of items was modified based on the participants' feedback.

\* p < .05, \*\* p < .01, \*\*\* p < .001

Table 4.1 shows the item analysis indicators along with descriptive statistics of health regret items. As we can see, out of 22 items seven items were needed to be dropped due to either poor item analysis indicators or participants' feedback. The wording/language of a few items was modified following the feedback from participants. For example- item number 18- 'I should not have tried saving money when it came to visiting doctors or medical check-ups' was modified into 'I should

not have worried about money when it came to visiting doctors or medical check-ups’ as per the participants’ feedback. Finally, 15 items were finalized for health regret.

**Table 4.2**

*Item Analysis Statistics for Willful Ignorance*

Item	M	SD	t	ITC	Skewness	Kurtosis
<b>1. I didn’t want to know the truth because it might have disturbed me.</b>	<b>3.84</b>	<b>1.131</b>	<b>4.135**</b>	<b>.349*</b>	<b>-1.082</b>	<b>.625</b>
<b>2. I thought, I would not be able to handle the truth.</b>	<b>3.08</b>	<b>1.441</b>	<b>4.088**</b>	<b>.321*</b>	<b>-.060</b>	<b>-1.367</b>
3. I was happy, and the new information could ruin my happiness. <sup>b</sup>	2.74	1.454	2.792*	.394**	.060	-1.450
4. I believed ‘ignorance is bliss and to know is pain’. <sup>b</sup>	2.46	1.403	2.168*	.403**	.547	-1.003
<b>5. I believed that there should be some surprises in life that’s why I don’t want to know everything.</b>	<b>3.26</b>	<b>1.523</b>	<b>3.300**</b>	<b>.504***</b>	<b>-.172</b>	<b>-1.527</b>
<b>6. Knowing everything kills the excitement from the life.</b>	<b>3.24</b>	<b>1.451</b>	<b>2.712*</b>	<b>.377**</b>	<b>-.396</b>	<b>-1.355</b>
7. I believed that sometime it is beneficial to not know. <sup>a</sup>	3.68	1.168	.846	.224	-.455	-.981
<b>8. Sometime, knowing less gives us advantage over others.</b>	<b>3.18</b>	<b>1.289</b>	<b>3.797**</b>	<b>.308*</b>	<b>-.052</b>	<b>-1.295</b>
9. Not knowing things/people make us less biased. <sup>a</sup>	3.44	1.402	1.235	.088	-.520	-1.027
10. I thought it was difficult to take impartial decisions when we know a lot. <sup>a</sup>	3.76	1.255	1.875	.347*	-.881	-.188
<b>11. I thought that information was not worthy to be noted.</b>	<b>3.88</b>	<b>1.100</b>	<b>3.998**</b>	<b>.532***</b>	<b>-1.000</b>	<b>.414</b>
<b>12. I did not realize that information could be important for me.</b>	<b>3.70</b>	<b>1.233</b>	<b>5.352**</b>	<b>.489***</b>	<b>-.415</b>	<b>-.973</b>
13. I avoid attending information which is not of my interest. <sup>b</sup>	3.28	1.499	3.439**	.437***	-.313	-1.395
<b>14. I thought the information was not adding anything to my existing knowledge.</b>	<b>3.44</b>	<b>1.541</b>	<b>3.607**</b>	<b>.381**</b>	<b>-.510</b>	<b>-1.382</b>
15. I felt lazy to know the things in detail. <sup>b</sup>	3.46	1.417	2.076*	.423**	-.655	-.933
16. Knowing required extra effort to mind. <sup>a</sup>	3.76	1.451	1.489	.298*	-.940	-.565
17. The new information was against my existing belief. <sup>a</sup>	3.46	1.403	1.575	.356*	-.515	-1.135

18. I had already made up my mind and knowing more would have only created confusion. <sup>a</sup>	3.16	1.390	1.043	.335*	-.156	-1.353
<b>19. The first option was satisfactory for me and knowing other possibility was useless.</b>	<b>3.60</b>	<b>1.443</b>	<b>4.296**</b>	<b>.483***</b>	<b>-.612</b>	<b>-1.060</b>
<b>20. I was satisfied with what I knew and knowing more was not required.</b>	<b>3.40</b>	<b>1.414</b>	<b>5.078**</b>	<b>.627***</b>	<b>-.126</b>	<b>-1.592</b>

Notes. t is showing item discrimination and ITC is showing the item-total correlation. Boldface items were retained and normal face items were dropped. <sup>a</sup> Items were dropped based on item analysis statistics. <sup>b</sup> Items were dropped on participants' feedback.

\* p < .05, \*\* p < .01, \*\*\* p < .001

Results of item analysis for the willful ignorance scale are given in Table 4.2.

Only 10 items were retained for the final study out of 20 items. Six items were dropped because of poor item analysis indices and four items were dropped based on participants' suggestion or duplication.

**Table 4.3**

*Item Analysis Statistics for Personal Negligence*

Item	M	SD	t	ITC	Skewness	Kurtosis
<b>1. The information was costly (in terms of money, time, energy, resources) to apply.</b>	<b>3.62</b>	<b>1.067</b>	<b>3.234**</b>	<b>.492***</b>	<b>-.642</b>	<b>-.525</b>
2. The information was difficult to implement. <sup>b</sup>	3.84	.997	2.915**	.354*	-.824	.305
3. The other options were more attractive. <sup>a</sup>	3.84	1.149	1.393	.311*	-.682	-.643
<b>4. The alternatives were easier to follow.</b>	<b>4.02</b>	<b>1.00</b>	<b>5.513**</b>	<b>.514***</b>	<b>-1.062</b>	<b>.798</b>
<b>5. The information was not perceived important to be considered that time.</b>	<b>3.98</b>	<b>1.186</b>	<b>4.929**</b>	<b>.626***</b>	<b>-1.411</b>	<b>1.277</b>
<b>6. The probability was very less that ignoring the information will cause any damage.</b>	<b>3.62</b>	<b>1.067</b>	<b>4.730**</b>	<b>.664***</b>	<b>-.537</b>	<b>-.149</b>
<b>7. I was hopeful that nothing bad will happen even if I don't pay attention to that information.</b>	<b>3.74</b>	<b>1.226</b>	<b>7.092**</b>	<b>.751***</b>	<b>-1.001</b>	<b>.044</b>
<b>8. I was hopeful that the neglect of information would</b>	<b>3.84</b>	<b>1.299</b>	<b>7.869**</b>	<b>.761***</b>	<b>-1.261</b>	<b>.498</b>

<b>not create any problem in my case.</b>							
<b>9. It was challenging my previous beliefs or knowledge.</b>	<b>3.26</b>	<b>1.440</b>	<b>8.310**</b>	<b>.601***</b>	<b>-.435</b>	<b>-1.288</b>	
<b>10. My habits made it difficult to apply new information.</b>	<b>3.58</b>	<b>1.326</b>	<b>8.026**</b>	<b>.716***</b>	<b>-.525</b>	<b>-.959</b>	
<b>11. Even if the information was used, I don't think the outcome would be very different.</b>	<b>4.06</b>	<b>1.202</b>	<b>5.951**</b>	<b>.695***</b>	<b>-1.221</b>	<b>.622</b>	
<b>12. I was hopeless that even applying the information could do any better</b>	<b>3.94</b>	<b>1.268</b>	<b>7.361**</b>	<b>.795***</b>	<b>-1.196</b>	<b>.353</b>	

Note. t is showing item discrimination and ITC is showing the item-total correlation. Boldface items were retained and normal face items were dropped. <sup>a</sup> Items were dropped based on item analysis statistics. <sup>b</sup> Items were dropped on participants' feedback.

\* p < .05, \*\* p < .01, \*\*\* p < .001

Table 4.3 shows the item analysis of personal negligence items. Only two items were required to be dropped. One due to the poor item analysis indicator and the other on participants' suggestions.

**Table 4.4**

*Item Analysis Statistics for Regret Coping*

Item	M	SD	t	ITC	Skewness	Kurtosis
<b>1. I look into the bright sides of my wrong decisions.</b>	<b>2.54</b>	<b>1.644</b>	<b>3.672**</b>	<b>.468**</b>	<b>.443</b>	<b>-1.528</b>
2. I try to learn from my past mistakes. <sup>a</sup>	4.12	1.003	2.038*	.229	-1.135	.902
3. I console myself that committing errors is a part of lifelong learning. <sup>a</sup>	4.08	1.104	1.913	.239	-.923	-.512
4. I try to believe that the learnings from my bad decision will be useful in my future actions. <sup>a</sup>	3.94	1.252	1.653	.270	-.792	-.849
<b>5. I believe that life will give me a second chance to rectify my mistakes.</b>	<b>3.16</b>	<b>1.448</b>	<b>5.189***</b>	<b>.527***</b>	<b>-.375</b>	<b>-1.290</b>
<b>6. I explain myself that everything happens, happens for a reason.</b>	<b>4.12</b>	<b>1.118</b>	<b>2.140*</b>	<b>.397**</b>	<b>-1.340</b>	<b>1.099</b>
7. I console myself by looking at those who have done bigger mistakes in their life. <sup>a</sup>	4.26	.944	1.267	.199	-1.314	.971

8. I look towards those who are suffering more than me. <sup>a</sup>	4.32	.957	.157	.111	-1.424	1.126
9. I think about the other alternatives, which might have produced a worse outcome. <sup>b</sup>	3.82	1.101	2.164*	.331*	-.775	.049
<b>10. I remind myself that things could have been worse than the present.</b>	<b>3.98</b>	<b>.979</b>	<b>2.438*</b>	<b>.342*</b>	<b>-.910</b>	<b>.613</b>
<b>11. I make myself understand that I am still in a much better position than many others.</b>	<b>4.24</b>	<b>.847</b>	<b>2.193*</b>	<b>.285*</b>	<b>-1.331</b>	<b>1.754</b>
<b>12. I seek support of my family members, who helped me to come out from regret.</b>	<b>3.34</b>	<b>1.451</b>	<b>5.469***</b>	<b>.623***</b>	<b>-.502</b>	<b>-1.181</b>
13. Get social support to absorb the negative thoughts associated with my regret. <sup>b</sup>	4.10	1.015	4.087**	.511***	-1.304	1.273
14. Not to discuss these things with any of my family members or friends. <sup>a</sup>	3.84	1.131	2.429*	.278	-.906	.057
15. Not to include anyone in the problem that arises from my wrong decision. <sup>a</sup>	4.14	1.069	1.267	.269	-1.333	.996
<b>16. I share my mistakes and get some encouragement from my well-wishers.</b>	<b>3.10</b>	<b>1.632</b>	<b>8.382***</b>	<b>.593***</b>	<b>-.255</b>	<b>-1.671</b>
<b>17. I focus myself on the lessons of preaching given in religious books and magazines.</b>	<b>3.64</b>	<b>1.191</b>	<b>4.755***</b>	<b>.494***</b>	<b>-.762</b>	<b>-.375</b>
18. I sit before God and ask for courage to handle the situation. <sup>a</sup>	4.26	1.046	2.412*	.243	-2.000	4.032
<b>19. I sit alone and try to read religious books to help me out from this feeling/thought.</b>	<b>3.56</b>	<b>1.473</b>	<b>4.799**</b>	<b>.544***</b>	<b>-.940</b>	<b>-.578</b>
20. I do meditation to relax my mind and have some positive energy. <sup>a</sup>	4.14	1.107	.228	.117	-1.605	2.207
21. The only way to get relief from regret is believing and worshipping in God. <sup>a</sup>	3.90	1.298	.527	.100	-1.325	.710
<b>22. I explain to myself that I took the right decision, but somehow things did not turn out the way I expected.</b>	<b>3.52</b>	<b>1.165</b>	<b>4.373**</b>	<b>.629***</b>	<b>-.575</b>	<b>-.519</b>
<b>23. I explain to myself that I did the best in that situation.</b>	<b>3.52</b>	<b>1.328</b>	<b>7.794***</b>	<b>.768***</b>	<b>-.779</b>	<b>-.506</b>
24. I console myself by believing that it was part of my fate. <sup>a</sup>	4.14	.783	1.044	.038	-.521	-.364
<b>25. I think even if I would have done something else, the</b>	<b>3.66</b>	<b>1.349</b>	<b>3.619*</b>	<b>.359*</b>	<b>-.900</b>	<b>-.278</b>

<b>outcome would be more or less the same since it was in my destination.</b>							
<b>26. I believe that it was not totally my fault, and others were responsible too.</b>	<b>3.64</b>	<b>1.336</b>	<b>5.083***</b>	<b>.644***</b>	<b>-.687</b>	<b>-.691</b>	
<b>27. I believe that others have done the same.</b>	<b>3.20</b>	<b>1.340</b>	<b>4.811***</b>	<b>.634***</b>	<b>-.064</b>	<b>-1.286</b>	
28. I explain to myself that I took the wrong decision because of the circumstances of that time. <sup>a</sup>	3.94	1.077	.959	.064	-.898	.017	
<b>29. I explain to myself that I only had control over decisions but not over the outcomes.</b>	<b>3.72</b>	<b>1.196</b>	<b>3.042**</b>	<b>.599***</b>	<b>-.995</b>	<b>.180</b>	
<b>30. I believe that my decision was very thoughtful and rational.</b>	<b>3.48</b>	<b>1.460</b>	<b>4.888***</b>	<b>.589***</b>	<b>-.655</b>	<b>-.954</b>	
31. I convince myself that sometimes best decisions may go wrong. <sup>b</sup>	3.54	1.474	2.423*	.489***	-.580	-1.143	
<b>32. I think about other things to distract myself.</b>	<b>4.04</b>	<b>.856</b>	<b>4.624***</b>	<b>.447***</b>	<b>-.688</b>	<b>.023</b>	
33. I enhance my social engagement to forget about my past mistakes. <sup>b</sup>	3.80	1.143	3.373***	.518***	-.872	-.088	
<b>34. I suppress my thoughts of regret</b>	<b>3.56</b>	<b>1.296</b>	<b>5.383***</b>	<b>.674***</b>	<b>-.342</b>	<b>-1.094</b>	
<b>35. I avoid conversation regarding my past mistakes.</b>	<b>3.74</b>	<b>1.322</b>	<b>3.530***</b>	<b>.565**</b>	<b>-.877</b>	<b>-.360</b>	
<b>36. I engage myself busy into work to avoid my mistakes.</b>	<b>4.02</b>	<b>.979</b>	<b>2.345***</b>	<b>.414**</b>	<b>-.992</b>	<b>.782</b>	

*Note.* t is showing item discrimination and ITC is showing the item-total correlation. Boldface items were retained and normal face items were dropped. <sup>a</sup> Items were dropped based on item analysis statistics. <sup>b</sup> Items were dropped on participants' feedback.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table 4.4 shows the item analysis results of regret coping. From 36 items developed, 20 items were found useful and 16 items were required to be dropped. Out of 16 items that were dropped, 12 were dropped due to poor item analysis indicators and four were dropped due to duplication or feedback received from the participants. The final 20 items include 9 items from adaptive coping and 11 items from maladaptive coping.



Overall, a total of 34 items were removed due to poor item analysis fit or participants' feedback. Some items were revised or modified based on feedback received from participants. In Table 4.5, a breakdown of the items along with the various study variables is given. The final health regret scale has 15 items spread across three categories equally. The willful ignorance scale has 10 items, five items in each dimension. The personal negligence scale has finally 10 items, two items in each dimension. The regret coping has 20 items, representing both adaptive and maladaptive strategies of coping.

**Table 4.5**

*Numbers of Items Retained and Removed from Each Variable Scale*

Variable	Number of items drafted	Number of items retained	Number of items dropped
Health regret	22	15	7
Willful ignorance	20	10	10
Personal negligence	12	10	2
Regret coping	36	20	16

### **Survey Study**

The main survey study was conducted on a bigger sample of older adults in order to meet the objectives of the present work. The study not only explores quantitatively the various mechanism of regret but also shows how regret can influence the wellbeing of individuals. The survey includes the questionnaires developed in the previous section, namely health regret, willful ignorance, personal negligence, and regret coping. It also includes a few standardized scales, such as indecisiveness, social comparison, satisfaction with life, self-esteem, religiosity in thought, happiness.

## ***Method***

**Participants.** The participants of the study were retired older adults. They were randomly contacted from the pensioner's associations of various districts of Bihar. The participants' pool consisted of various retired government employees i.e., professors, bank employees, retired administrative officers, etc. Around 330 questionnaires were given, out of that 310 were received back. Few questionnaires were partially incomplete hence were not included in the final data set, and a couple of questionnaires were dropped due to maintaining equal male and female proportion in the data set. Finally, a total of 300 participants' data were collected and analyzed. The sample was comprised of 150 retired females and 150 retired males; the mean age was 65.792 and  $SD = 3.811$ . A total of 248 participants' present marital status was mentioned married while 48 were reported widow or widower and two participants did not disclose their marital status. Only 14 participants mentioned living alone, the rest 286 were living with their spouse and/or with their children. All the participants were having at least a bachelor's degree. Participants were mostly native Hindi speakers and almost 90 percent were Hindu and the remaining follow Islam.

**Materials.** Along with self-developed scales of health regret, willful ignorance, personal negligence, and regret coping, the researcher included few standard questionnaires in the survey. The survey also included a brief sociodemographic sheet. A detailed description is given below.

***Sociodemographic Details.*** Information regarding participants' age, gender, education, and occupation before retirement was asked. Participants were also asked to mention their present marital status (i.e., married, unmarried, widow/widower, any other) and their present living arrangements (alone, with the spouse, with children, with spouse and children, or any other).

***Domains of Regret.*** A meta-analysis by Roese and Summerville (2005) reveals 12 major life domains of life regret— education, career, romance, parenting, self, leisure, finance, family, health, friends, spirituality, and community. In the present study, we also follow the same 12 domains to understand the prominent regrets in old age. However, based on the findings of the first study, the ‘romance’ domain was replaced with the ‘marriage’ domain. Participants were asked to select the top three domains of regret of their life which indicate their major life regrets with the following instruction “Look over your whole life and if you could live it again, what are the three aspects of your life that you would like to change. Give your answer by selecting the three aspects from the given list”.

***Regret Feelings.*** Gilovich et al. (1998) work provided a series of emotions associated with regret. They clubbed them into three broad categories— hot, wistful, and despair. To measure the feeling of regret in old age, the present study follows the work of Gilovich et al. (1998) and has taken nine emotions from the three categories of emotions. These emotions were— guilty, disgusted, embarrassed as hot emotions, dreamy, wistful, and nostalgic as wistful emotions, empty, miserable, and unfulfilled as despair emotions. The participants were asked to “think about the biggest regrets of your entire life and indicate how much each regret made you feel each of the following emotions”. The response for each emotion was taken on a three-point rating scale— not at all (1), somewhat (2), and a great deal (3).

***Regret due to action or inaction.*** Gilovich and Medvec’s (1994) work included an item to examine whether participants have more regret related to their action or inaction. The present study opted for the same question to see the prevalence of action and inaction regret among older adults. The question was “When you look back on your experiences in life and think of those things that you regret, what would

you say you regret more– Those things that you did but wish you hadn't or Those things that you didn't do but wish you had”.

***Regret due to Expectations from Self or Others.*** In recent experimental work, Davidai and Gilovich (2018) showed that the most enduring regrets come from the discrepancies between ideal and actual self rather than ought and actual self. That is, more life-long regret comes from not fulfilling the self-expectations than not fulfilling the expectations of others. To see this effect on Indian older adults, we asked one question to measure that. This question was formed based on a question measuring the prevalence of action/inaction regret. That was “When you look back on your experiences in life and think of those things that you regret, what would you say you regret more– Those things that you wanted to do but you could not or Those things that others (your family members, friends, etc.) wanted you to do but you could not”.

***Regret Attribution.*** The revised causal dimension scale by McAuley et al. (1992) was used to measure regret attribution. The scale covers four regret dimensions– the locus of causality (the cause was situational or self-aspect), personal control (the cause was in control of actor or not), stability (the cause was stable or unstable over time), and external control (the cause was in control of others or not). The scale has 12 items, three items for each attribution dimension. Participants were told to “Think about the major regrets of your life and reasons/causes behind those. The items below concern your impressions or opinions of those causes”. They needed to select responses from the nine-point bipolar options such as ‘You could regulate’ or ‘You could not regulate’.

***Regret Involvement.*** Self-developed items were used to measure involvement in regret instigating activities. It included six items, one for each source of instigators found in study one. These regret instigators were– unfulfilled expectations of self;

unfulfilled expectations of others; unfulfilled expectations from others; comparison between the anticipated and the real outcomes; comparison between self and others; and comparison between pre and post decisional lives. Participants were asked to answer “In general, when do you have regret”. The question was followed by six items, which were– ‘When my decision does not meet my expectations’, ‘When my decision does not meet others’ expectations’, ‘When the others’ decision does not meet my expectations and I feel responsible for their wrong decisions’, ‘When the outcomes of others’ decisions are better than the outcomes my decisions’, ‘When the real outcome of my decision is below the expected outcome’, and ‘When my life before my decision was better than after the decision’. The responses for each item were taken on a five-point Likert scale ranging from strongly disagree to strongly agree.

***Learning from Regret.*** The three items were taken from the work of Davidai and Gilovich (2018) to measure learning from regrets. These items were– ‘I tried to change my behavior following regrets’, ‘I tried to fix or correct the situations’, and ‘I tried to undo my behavior that led to those regrets’. The responses were taken on a five-point Likert scale ranging from strongly disagree to strongly agree.

***General Health.*** The 12-items of the General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988) were taken to understand the self-reported health status of participants. GHQ-12 mainly contains three factors– anxiety and depression, social dysfunction, and loss of confidence. Participants were asked to think about their health in the past few weeks to answer the statements related to their general health, e.g. ‘able to concentrate’. The responses were taken on a four-point scale, ranging from never(1) to always(4).

***Indecisiveness.*** The 11 items Indecisiveness scale by Frost and Show (1993) was taken to investigate the indecisiveness of participants. An example item ‘I find it easy to make decisions’. The responses were taken on a five-point rating scale, ranging from strongly disagree to strongly agree.

***Social Comparison.*** Gibbons and Buunk (1999) developed a scale to measures individual tendency to engage in social comparison. In the present study, we used the same scale with 11 items. An example item– I often compare how my loved ones (wife or husband, family member, etc.) are doing with how others are doing. The responses were taken on a five-point rating scale, ranging from strongly disagree to strongly agree.

***Satisfaction with Life.*** The Satisfaction with Life Scale by Diener et al. (1985) was taken to assess participant’s satisfaction with life. The scale has five items measuring one’s overall life satisfaction. Example item ‘In most ways, my life is close to my ideal’. The responses were taken on a five-point rating scale, ranging from strongly disagree to strongly agree.

***Self-Esteem.*** The Rosenberg Self-Esteem Scale was taken in the study to see the self-esteem of the participants. It is a widely used self-reported measure for evaluating individuals’ self-esteem (Rosenberg, 1965). It is a 10-item scale that measures global self-worth by measuring both positive and negative feelings about the self. Example item– On the whole, I am satisfied with myself. The responses were taken on a five-point rating scale, ranging from strongly disagree to strongly agree.

***Religious Engagement.*** To measure the religious involvement of participants, the Religious Orientation Scale (Allport & Ross, 1967) was used. In the present study, nine items of the intrinsic religiosity scale were taken. Example item ‘It is important for me to spend periods of time in private religious thought and meditation’. The

responses were taken on a five-point rating scale, ranging from strongly disagree to strongly agree.

**Happiness.** The Subjective Happiness Scale (Lyubomirsky & Lepper, 1999) was used to measure the overall happiness of participants. The scale has four items, for example, 'In general, I consider myself– Not a very happy person or A very happy person'. Participants need to give their response on a seven-point bipolar scale.

**Overall Life Regrets.** A single item was developed to measure overall regret in an individual's life. They were asked 'On a scale of 1 to 10, with 10 being people who believe that their life is full of regrets, and 1 being the people who believe that they do not have any regret in their life, how would you rate the amount of regret you have in your life overall'. The response was taken on a ten-point scale.

**Control over Life.** Similar to life regret measurement, an item is used to measure the overall perceived control participants have over their lives. They were asked 'On a scale of 1 to 10, with 10 being people who have full control over their life, and 1 being the people who have the least control over their life, how would you rate the amount of control you have over your life overall.'. The response was taken on a ten-point scale.

**Procedure.** The researcher first contacted the pensioner association office and asked for the details of retired people. There, the researcher explained her research work and the purpose behind the inquiry. After verifying the documents and recommendations later provided by the University, she was allowed to take the required information (retired people's registered numbers and addresses). The author randomly selected participants from the list and called them to make an appointment. She described the purpose of her call and requested them to participate in her study. Those who agreed to participate were visited by the researcher at their convenient

place and time for data collection. In many cases, the registered number was either old or was not working, and in a few cases, participants decline to participate. In those cases, the next person on the list was contacted.

In meeting with the participants, they were again briefed about the purpose and objectives of the study, and their initial queries were answered by the researcher. The written informed consent was taken from each participant. The informed consent form (given in the appendix) included a brief introduction of the study and the rights of the participants while filling the questionnaire. After that, the main questionnaires were given to them. Both the informed consent form and the main questionnaire were bilingually typed (Hindi and English). The scales developed by the author were developed bilingually, however, the standardized scales were translated in Hindi using a multiple translator approach. The questionnaire was self-explanatory; each scale has the instructions before the items. Few participants fill the questionnaire immediately and returned that to the researcher. In many other cases, the participants asked for a day or two to fill the questionnaire, in those cases researcher visited their place again after a few days to collect the questionnaire.

**Data Analysis.** Once the data completion was over, the data were screened and analyzed using SPSS-23. Very few missing values were found in the data, however, for the analysis purpose, those missing values were replaced by the series mean. In many scales, there were reverse items, for these items reverse coding was done. To see the internal consistency of each scale, self-developed as well as standardized scales, Cronbach's alpha was calculated (alpha values are given in Table 4.10). Except for the locus of causality dimension of the regret attribution scale, the alpha values came acceptable (more than .600) for all other scales. In the case of locus of causality, we needed to drop an item and only two items were considered, for which the alpha value



was found to be .634. For the purpose of analyses, items of each scale were summated to get the total score of each scale, except for domains of regret measure and single-item measures such as action/inaction, overall life control. Items related to regret emotions were added as one variable, i.e., regret feeling, rather than in three kinds of emotions. However, since the items measuring regret attribution were related to four different styles of attribution, which cannot be clubbed, therefore, these items were added in four attribution styles. Three kinds of statistics were used for various analyses. Chi-square and t-test to see the significant differences; Pearson correlation to explore the relationship between variables; and regression analysis in order to see the magnitude of the effect of various variables on the dependent variable of interest.

### ***Results***

Results of Table 4.6 show the frequencies of action/inaction-based regret, expectation-based regret, and counterfactual thinking regarding the major decisions of life, across two genders and their chi-square values. The results of action/inaction regret show that overall 70 percent of participants reported that they have more regret from their inactions than actions, and less than one-third of participants said they have more regret due to life actions. This displays that in old age people have regret more from their inactions than actions. Interestingly, no significant difference between males and females is found in the action/inaction regret dimension. That shows both genders are almost equal in having regret due to their action or inaction. For expectation-based regret, it is seen that almost 80 percent of participants mentioned that they have more regret due to unfulfilled self-expectation and only 20 percent said they have more regret due to unfulfilled expectation of others. Gender difference shows that males had significantly higher regret due to expectations of others as compared to females. In the question related to counterfactual thinking, around two-

thirds of participants reported downward comparisons, and nearly one-third preferred upward comparison for counterfactual thinking. Females reported significantly higher involvement in upward counterfactual thinking than males, who showed more inclination towards downward counterfactual thinking.

**Table 4.6**

*Frequency and Gender Differences on Regrets and Counterfactual Thinking.*

Variable	Category	Overall	Male		Female		X <sup>2</sup>	w
			f	%	f	%		
Action/Inaction (N=300)	Action	90	48	53.333	42	46.667	.571	.044
	Inaction	210	102	48.571	108	51.429		
Expectation (N= 299)	Self	242	110	45.455	132	54.545	9.734***	.180
	Others	57	39	68.421	18	31.579		
Counterfactual thinking (N= 296)	Upward	96	34	35.417	62	64.583	12.654***	.207
	Downward	200	115	57.5	85	42.5		

*Note.* \* p < .05, \*\* p < .01, \*\*\* p < .001

Table 4.7 shows the prevalence of various domains of major life regret in old age. Results show that education is reported as the highest regret followed by health and career regret. The least regret domain is related to friendship followed by regret related to leisure and self. The table further shows the gender differences across various regret domains. Males show significantly higher regret for health, spirituality, and friends regret than female participants. On the other hand, females show significantly higher regret for education, career, and marriage regret than their male counterparts. However, no gender difference was found in the case of regret related to finance, parenting, family, community, self, and leisure.

**Table 4.7***Prevalence of Regret Sources and Gender Differences*

Regret Domain	Overall		Male		Female		X <sup>2</sup>	w
	f	%	f	%	f	%		
Education	155	17.280	68	43.871	87	56.129	4.819*	.127
Health	137	15.273	83	60.584	54	39.416	11.298***	.194
Career	118	13.155	46	38.983	72	61.017	9.444**	.177
Finance	90	10.033	47	52.222	43	47.778	.254	.029
Parenting	85	9.476	38	44.706	47	55.294	1.330	.067
Spirituality	59	6.577	39	66.102	20	33.898	7.617**	.159
Marriage	52	5.797	13	25	39	75	15.726***	.229
Family	52	5.797	25	48.077	27	51.923	.093	.018
Community	44	4.905	23	52.273	21	47.727	.107	.019
Self	43	4.794	20	46.512	23	53.488	.244	.029
Leisure	32	3.567	19	59.375	13	40.625	1.259	.065
Friends	30	3.344	25	83.333	5	16.667	14.815***	.222

*Note.* N= 897. The percentage for overall participants was calculated from the total of 897 responses, i.e across categories. However, percentages of males and females were calculated from the frequency of each regret category, i.e. across gender in each category.

\* p < .05, \*\* p < .01, \*\*\* p < .001

Table 4.8 presents the results of gender differences in various kinds of emotions associated with life regrets. It has emerged that males have reported significantly higher feelings of embarrassment, disgust, and dreamy in comparison to female participants. However, females show higher feelings associated with their major life regrets in terms of being nostalgic, wistful, empty, miserable, and unfulfilled. Interestingly, dimension-wise analysis shows that males feel hot emotions more for their life regrets, on the other hand, females feel more wistful, and despair emotions for their life regrets.

**Table 4.8***Gender Differences in Various Emotions Related to Regret*

Emotion	Overall		Male		Female		t	df	p	d
	M	SD	M	SD	M	SD				
Guilty	1.667	.641	1.627	.661	1.707	.619	1.082	298	.280	.124
Disgusted	1.221	.475	1.307	.543	1.135	.378	3.182	266.12	.002	.367
Embarrassed	1.487	.631	1.600	.655	1.373	.586	3.159	294.29	.002	.365
Dreamy	1.555	.684	1.693	.714	1.417	.625	3.567	292.91	<.001	.411
Nostalgic	1.714	.575	1.601	.576	1.827	.553	3.463	297.89	.001	.400
Wistful	2.024	.760	1.780	.767	2.267	.672	5.835	292.89	<.001	.675
Empty	1.943	.713	1.786	.799	2.099	.577	3.900	271.05	<.001	.449
Miserable	2.114	.731	1.875	.689	2.354	.696	5.994	298	<.001	.691
Unfulfilled	2.023	.701	1.913	.759	2.134	.620	2.750	288.61	.006	.319
Hot emotions	4.374	1.219	4.533	1.299	4.215	1.116	2.278	291.39	.023	.262
Wistful emotions	5.293	1.175	5.075	1.339	5.511	1.173	2.995	298	.003	.346
Despairs emotion	6.081	1.693	5.574	1.717	6.587	1.511	5.424	293.27	<.001	.626

*Note.* For the variables where the assumption of equal variance is violated, the Wald t-test is performed, therefore, df values are not 298 in all the cases.

The results of Table 4.9 show the gender difference in various study variables.

Results show that females significantly more involve in regret thoughts as well as they have stronger feelings for regrets than males. On the other hand, analysis of regret attribution data shows that males attribute more to the internal locus, personal control, and stable features than females. However, females reported significantly higher attribution on external control for their regret than males. Moreover, females show significantly higher scores for health regret, willful ignorance, personal negligence, indecisiveness as well as for social comparison. In contrast, males reported significantly higher scores for regret coping, general health, and satisfaction

with life. Interestingly, no gender difference is found in the case of overall life regrets, regret learning, control over life, self-esteem, religious engagement, and happiness.

**Table 4.9**

*Gender Differences in the Various Study Variables*

Variables	Male		Female		t	df	p	d
	M	SD	M	SD				
Regret feeling	15.183	3.208	16.312	2.838	3.233	298	.001	.373
Regret involvement	19.825	4.211	21.727	2.611	4.701	248.83	<.001	.543
RA <sup>a</sup> : Locus of causality <sup>b</sup>	7.466	5.398	5.999	5.260	2.383	298	.018	.275
RA: Personal control	13.980	8.900	9.337	7.891	4.780	293.79	<.001	.552
RA: Stability	11.865	7.879	8.853	7.413	3.410	298	<.001	.393
RA: External control	15.574	8.199	17.062	9.799	1.427	289.01	.155	.164
Health regret	58.163	10.799	60.361	8.199	1.985	277.93	.048	.229
Overall life regret	3.900	2.410	4.013	2.482	.401	298	.689	.046
Willful ignorance	32.375	8.135	36.238	5.319	4.868	256.72	<.001	.562
Personal negligence	34.207	6.909	37.986	4.987	5.432	271.12	<.001	.608
Regret coping	76.951	9.625	79.666	7.199	2.767	275.97	.006	.319
Regret learning	12.293	1.823	12.174	1.251	.660	263.96	.510	.076
General health	25.136	5.760	23.378	4.028	3.063	266.61	.002	.353
Indecisiveness	38.321	8.795	40.120	6.162	2.051	266.87	.041	.236
Social comparison	34.179	7.209	37.028	6.961	3.483	298	.001	.402
Control over life	7.307	2.408	7.493	2.305	.686	298	.493	.079
Self-Esteem	37.289	5.543	36.576	5.073	1.163	298	.246	.134
Religious engagement	34.453	5.560	34.247	3.363	.389	245.18	.698	.044
Satisfaction with life	18.618	3.300	16.483	2.484	6.331	276.81	<.001	.731
Happiness	20.682	4.550	20.653	5.332	.050	290.80	.961	.006

*Note.* For the variables where the assumption of equal variance is violated, the Wald t-test is performed, therefore, df values vary from 298. <sup>a</sup>RA= regret attribution. <sup>b</sup>high score of locus of causality shows attribution more towards self or internal aspects.

Results of Pearson correlation between variables along with their descriptive and scales Cronbach's alphas are given in Table 4.10. Regret feeling shows strong positive relationships with regret involvement, regret coping, personal negligence, and social comparison. However, it also shows weak but significant positive relationships with regret attribution: external control, overall life regrets, willful ignorance, and indecisiveness. Regret feeling is found negatively correlated with regret attribution: stability, general health, self-esteem, and satisfaction with life. Similarly, Regret involvement shows a negative relationship with satisfaction with life, general health, and regret attribution: personal control as well as stability. Moreover, regret involvement shows a positive correlation with health regret, overall life regrets, regret coping, willful ignorance, personal negligence, indecisiveness, social comparison, and with regret attribution: external control.

Dimensions of regret attribution show significant relationships with each other except for the relationship between stability and external control. Locus of causality, while shows positive relationships with personal control and stability, and negative relation with external control. Similarly, personal control shows positive relationships with the locus of causality and stability but a negative relationship with external control. Moreover, stability shows positive relations with the locus of causality and personal control but no relationship with external control. All four regret dimensions do not show any significant relationship with health regret, overall life regrets, regret learning, general health, indecisiveness, and control over life. Locus of causality shows a significant positive relationship with personal negligence and a negative relationship with regret coping.

**Table 4.10***Descriptive, Cronbach's  $\alpha$  and Correlation Coefficients for Different Variables*

Variable	M	SD	$\alpha$	RF	RI	RA:LC	RA: PC	RA: S	RA: EC	HR	OLR	RC	RL
RF	15.748	3.077	.656										
RI	20.776	3.625	.605	.320***									
RA:LC	6.733	5.371	.634	-.071	-.073								
RA: PC	11.659	8.713	.830	-.094	-.221***	.674***							
RA: S	10.359	7.785	.732	-.159**	-.146*	.282***	.336***						
RA: EC	16.319	9.050	.842	.129*	.138*	-.202***	-.347***	.102					
HR	59.262	9.635	.884	.058	.285***	.055	-.061	-.031	.104				
OLR	3.960	2.443	--- <sup>a</sup>	.154**	.172**	.071	-.029	.037	.059	.167**			
RC	78.308	8.593	.803	.250***	.429***	-.134*	-.171**	-.136**	.098	.108	.045		
RL	12.233	1.562	.714	.094	.063	-.113	.006	.000	.019	.006	.036	.300***	
WI	34.307	7.130	.824	.193**	.553***	.002	-.110	-.049	.125*	.307***	.106	.505***	.152**
PN	36.097	6.306	.788	.364***	.469***	.117*	-.013	-.140*	.066	.340***	.118*	.458***	.042
GH	24.257	5.039	.735	-.166**	-.308***	-.044	.033	-.053	-.083	-.215***	-.296***	-.097	.046
Ind	39.221	7.635	.758	.125*	.303***	.071	.005	.031	-.045	.192***	.213***	.226***	-.021
SCom	35.604	7.217	.786	.306***	.366***	.001	-.119*	-.165**	.148*	.092	-.026	.485***	.201***
SE	36.932	5.317	.669	-.143*	-.006	-.035	-.087	-.156**	.069	.001	-.331***	.104	.050
REng	34.351	4.588	.732	-.033	-.024	-.008	.065	.136*	-.124*	-.075	-.038	.205***	.187**
COL	7.400	2.355	--- <sup>a</sup>	-.048	-.123*	-.044	.032	-.103	-.098	-.130*	-.325***	.056	.058
SWL	17.551	3.106	.623	-.239***	-.318***	-.015	.189***	.223***	-.143*	-.074	-.106	-.169**	.135*
Hap	20.667	3.929	.713	-.077	-.064	.050	.117**	-.117*	.042	-.063	-.362***	.113*	.054

*Note.* N = 300. RF= Regret feeling; RI= Regret involvement; RA:LC= Regret attribution: Locus of causality; RA: PC= Regret attribution: Personal control; RA: S= Regret attribution: Stability; RA: EC= Regret attribution: External control; HR= Health regret; OLR= Overall life regrets; RC= Regret coping; RL= Regret learning; WI= Willful ignorance; PN= Personal negligence; GH= General health; Ind= Indecisiveness; SCom= Social comparison; SE= Self-Esteem; REng= Religious engagement; COL= perceived control over life; SWL= Satisfaction with life; Hap= Happiness. <sup>a</sup> single items.

\* p<.05, \*\* p<.01, \*\*\* p<.001.

**Table 4.10 (continued)**

Variable	M	SD	$\alpha$	WI	PN	GH	Ind	SCom	SE	REng	SWL	SWL	Hap
RF	9.818	2.549	.780										
RI	20.776	3.625	.605										
RA:LC	12.798	6.794	.508										
RA: PC	11.659	8.713	.830										
RA: S	10.359	7.785	.732										
RA: EC	16.319	9.050	.842										
HR	59.262	9.635	.884										
OLR	3.960	2.443	---										
RC	70.953	8.285	.806										
RL	23.103	3.228	.664										
WI	34.307	7.130	.824										
PN	36.097	6.306	.788	.624***									
GH	24.257	5.039	.735	-.264***	-.219***								
Ind	39.221	7.635	.758	.408***	.371***	-.504***							
SCom	35.604	7.217	.786	.431***	.477***	-.187***	.285***						
SE	36.932	5.317	.669	-.061	-.097	.415***	-.279***	.102					
REng	34.351	4.588	.732	.084	-.051	.116*	.026	.086	.034				
COL	7.400	2.355	---	-.086	-.084	.357***	-.224***	.066	.335***	.093			
SWL	17.551	3.106	.664	-.264***	-.279***	.368***	-.233***	-.310***	.102	.269***	.227***		
Hap	16.391	3.929	.793	.060	.041	.409***	-.238***	.111	.348***	-.014	.527***	.175***	

*Note.* N = 300. RF= Regret feeling; RI= Regret involvement; RA:LC= Regret attribution: Locus of causality; RA: PC= Regret attribution: Personal control; RA: S= Regret attribution: Stability; RA: EC= Regret attribution: External control; HR= Health regret; OLR= Overall life regrets; RC= Regret coping; RL= Regret learning; WI= Willful ignorance; PN= Personal negligence; GH= General health; Ind= Indecisiveness; SCom= Social comparison; SE= Self-Esteem; REng= Religious engagement; COL= perceived control over life; SWL= Satisfaction with life; Hap= Happiness. <sup>a</sup> single items.

\*p<.05, \*\*p<.01, \*\*\*p<.001.



Personal control, on the other hand, shows positive relationships with satisfaction with life and happiness, however, negative relationships with social comparison, and regret coping. Similarly, stability shows positive associations with religious involvement and satisfaction with life but negative relationships with regret coping, personal negligence, social comparison, self-esteem, and happiness. Lastly, the external control dimension shows positive relationships with willful ignorance and social comparison but negative relationships with satisfaction with life and religious involvement

The table further shows that health regret is positively correlated with overall life regrets, willful ignorance, personal negligence, indecisiveness, and regret involvement. However, it shows significant negative correlations with general health and control over life. Overall life regret shows positive relationships with regret feeling, regret involvement, health regrets, personal negligence, and indecisiveness. Moreover, it also shows significant relationships with general health, self-esteem, control over life, and happiness.

Regret coping is found positively related to regret involvement, regret feeling, regret learning, willful ignorance, personal negligence, indecisiveness, social comparisons, religious engagement, and weakly yet significantly with happiness. Regret coping further shows significant but weak negative relationships with satisfaction with life and all attribution dimensions except for external control. On the other hand, regret learning shows positive associations with regret coping, willful ignorance, social comparison, religious engagement, and satisfaction with life. However, it shows no significant negative relationship with any study variables

Willful ignorance and personal negligence show similar relationship patterns in most cases, that is, both show positive relationships with regret feeling, regret

involvement, health regret, regret coping, indecisiveness, and social comparison, and significant negative relationship with general health, and satisfaction with life. Not surprisingly, the correlation between willful ignorance and personal negligence is also found very high.

The correlation table also shows some interesting relationship, such as strong negative relationships between general health and indecisiveness, positive relationship between general health and self-esteem, positive relationship between general health and control over life, negative relationship between social comparison and satisfaction with life, and positive relationship between control over life and happiness.

Surprisingly, no significant relationship is found between self-esteem and satisfaction with life, between religious engagement and happiness, between religious engagement and control over life, and a weak relationship between happiness and satisfaction with life.

Results of regression analysis for various variables of interest are presented in Table 4.11 to Table 4.18. In all the regression analyses, we followed the hierarchical regression method, where four models were used. Model 1 includes only two demographic variables, i.e., age and gender. Model two includes personal variables, namely, general health, indecisiveness, self-esteem, social comparison, religious engagement, and perceived control over life. Model 3 adds two more variables- willful ignorance and personal negligence. Model 4 includes variables related to regret such as regret attribution, regret involvement. Except for Model 4, variables in the first three models are constants in all the regression analyses.

**Table 4.11***Regression Analysis: Regret Involvement*

Variable	Model I		Model II		Model III		Model IV	
	$\beta$	t	$\beta$	t	$\beta$	t	$\beta$	t
Age	-.075	1.349	-.360	.687	.010	.204	-.001	.020
Gender <sup>a</sup>	.264	4.724***	.179	3.386***	.083	1.678	.040	.775
General health			-.173	2.609**	-.176	2.922**	-.178	2.969**
Indecisiveness			.131	2.135*	-.001	.018	.004	.076
Social comparison			.256	4.586***	.087	1.540	.066	1.270
Self-esteem			.124	2.115***	.121	2.258*	.102	1.892
Religious involvement			-.016	.306	-.032	.658	-.013	.258
Control over life			-.094	1.661	.065	1.251	-.053	1.028
Willful ignorance					.364	5.725***	.348	5.472***
Personal negligence					.143	2.210*	.163	2.292**
RA: Locus of causality							.010	.163
RA: Personal control							-.138	1.986*
RA: Stability							.041	.770
RA: External control							.001	.017
R <sup>2</sup>	.075		.248		.383		.403	
R <sup>2</sup> change	---		.173***		.136***		.019	
F	11.990***		11.966***		17.954***		13.718***	

Note. N = 300. <sup>a</sup> Male = 0, female = 1. \* p < .05, \*\* p < .01, \*\*\* p < .001.

Table 4.11 shows the result of regression analysis for the regret involvement.

Model 1 shows that gender has a significant role in predicting regret involvement. In the second model, gender, social comparison, indecisiveness, and self-esteem are seen

to be significant positive predictors of regret involvement, while general health negatively predicts regret involvement. However, Model 3 shows that after entering willful ignorance and personal negligence in regression analysis, only general health and self-esteem remained significant predictors, apart from both willful ignorance and personal negligence. The final model shows that only willful ignorance and personal negligence are positively predicting regret involvement, however, general health and personal control (regret attribution) are negatively predicting regret involvement. That shows while willful ignorance and personal negligence increase involvement in regret thinking, good physical health, and personal control attribution style lessen it.

Table 4.12 shows the result of regression analysis for the regret feelings. Model 1 shows that gender has a significant role in predicting regret feelings. In model 2, the effect of gender is not found, however, social comparison and self-esteem show a significant impact on regret feelings. Social comparison has a positive influence on regret feelings, which means, people who are high on social comparison have stronger regret feelings. On the other hand, self-esteem shows a negative impact, referring that people with high self-esteem generally have less regret feeling. The third model adds a positive effect of personal negligence in the results of Model 2. The effect of personal negligence on regret feeling shows that people who are high on personal negligence are also high on regret feeling. In other words, personal negligence increases regret feeling. The final model shows the positive role of regret involvement in regret feelings, which indicates that people who involve more in regret thinking have stronger regret feelings.

**Table 4.12***Regression Analysis: Regret Feeling*

Variable	Model I		Model II		Model III		Model IV	
	$\beta$	t	$\beta$	t	$\beta$	t	$\beta$	t
Age	.068	1.189	.096	1.735	.094	1.714	.084	1.570
Gender <sup>a</sup>	.183	3.217***	.106	1.889	.060	1.054	.028	.490
General health			-.047	.671	-.071	1.026	-.030	.436
Indecisiveness			-.033	.503	-.083	1.254	-.062	.941
Social comparison			.306	5.147***	.210	3.237***	.167	2.621**
Self-esteem			-.163	2.603**	-.141	2.310*	-.180	2.947**
Religious involvement			-.057	1.021	-.025	.458	.005	.094
Control over life			-.010	.161	.004	.070	.020	.349
Willful ignorance					-.079	1.091	-.167	2.217*
Personal negligence					.301	4.096***	.276	3.704***
RA: Locus of causality							-.090	1.255
RA: Personal control							.086	1.093
RA: Stability							-.095	1.575
RA: External control							.111	1.875
Regret involvement							.214	3.219***
R <sup>2</sup>	.038		.149		.198		.249	
R <sup>2</sup> change	---		.111***		.049***		.051**	
F	5.932**		6.375***		7.141***		6.256***	

Note. N = 300. <sup>a</sup> Male = 0, female = 1. \* p < .05, \*\* p < .01, \*\*\* p < .001.

Table 4.13 shows the result of the regression analysis predicting health regret.

Overall results show that personal negligence has a positive impact on health regret.

That reflects participants who have reported higher personal negligence are also showing more health regret. However, general health and social comparison are

negatively associated with health regret. That means participants with good health hold less health regret and participants who involve more in social comparison also show fewer health regrets.

**Table 4.13**

*Regression Analysis: Health Regret*

Variable	Model I		Model II		Model III		Model IV	
	$\beta$	t	$\beta$	t	$\beta$	t	$\beta$	t
Age	-.087	1.513	-.048	.841	-.025	.446	-.018	.319
Gender <sup>a</sup>	.115	2.009*	.085	1.460	.000	.002	-.013	.218
General health			-.148	2.035*	-.166	2.392**	-.146	2.054*
Indecisiveness			.118	1.736	.009	.139	.012	.193
Social comparison			.010	.167	-.150	2.317**	-.158	2.358*
Self-esteem			.139	2.139*	.151	2.446**	.115	1.792
Religious involvement			-.050	.868	-.037	.673	-.023	.404
Control over life			-.093	1.495	-.067	1.134	-.047	.785
Willful ignorance					.150	2.049*	.098	1.247
Personal negligence					.284	3.820***	.288	3.650***
RA: Locus of causality							.070	.930
RA: Personal control							-.058	.708
RA: Stability							.010	.165
RA: External contro							.059	.954
Regret involvement							.107	1.517
Regret feeling							-.071	1.148
R <sup>2</sup>	.021		.085		.180		.196	
R <sup>2</sup> change	---		.065**		.095***		.016	
F	3.124*		3.391***		6.361***		4.304***	

Note. N = 300. <sup>a</sup> Male = 0, female = 1. \* p < .05, \*\* p < .01, \*\*\* p < .001.

**Table 4.14***Regression Analysis: Overall Life Regrets*

Variable	Model I		Model II		Model III		Model IV	
	$\beta$	t	$\beta$	t	$\beta$	t	$\beta$	t
Age	-.028	.483	.040	.731	.045	.809	.037	.672
Gender <sup>a</sup>	.024	.407	-.005	.096	-.023	.405	-.046	.790
General health			-.124	1.797	-.128	1.845	-.081	1.148
Indecisiveness			.067	1.040	.044	.657	.057	.846
Social comparison			-.034	.589	-.068	1.055	-.096	1.435
Self-esteem			-.195	3.184**	-.193	3.119**	-.223	3.501***
Religious involvement			-.003	.051	.000	.004	.024	.431
Control over life			-.200	3.386***	-.195	3.282***	-.168	2.826**
Willful ignorance					.029	.400	-.016	.207
Personal negligence					.062	.833	-.021	.261
RA: Locus of causality							.137	1.858
RA: Personal control							-.099	1.232
RA: Stability							-.026	.416
RA: External control							.041	.668
Regret involvement							.098	1.406
Regret feeling							.094	1.555
Health regret							.096	1.646
R <sup>2</sup>	.001		.180		.185		.222	
R <sup>2</sup> change	---		.179***		.004		.037	
F	.197		8.009***		6.546***		4.722***	

Note. N = 300. <sup>a</sup> Male = 0, female = 1. \* p < .05, \*\* p < .01, \*\*\* p < .001.

Table 4.14 shows the regression results for overall life regrets. As we can see only two variables are significantly predicting overall life regrets– self-esteem and perceived control over life. Both the variable shows negative associations, which

denotes that people with high self-esteem and high control over life reports fewer life regrets. Surprisingly, no role of health regret, regret feeling, regret involvement, or even of personal negligence and willful ignorance come significant.

**Table 4.15**

*Regression Analysis: Regret Coping*

Variable	Model I		Model II		Model III		Model IV	
	$\beta$	t	$\beta$	t	$\beta$	t	$\beta$	t
Age	.005	.091	-.017	.326	.020	.424	.003	.074
Gender <sup>a</sup>	.158	2.761**	.072	1.393	-.018	.359	-.059	1.181
General health			-.007	.108	-.027	.261	.001	.014
Indecisiveness			.120	1.996*	-.001	.015	.006	.111
Social comparison			.411	7.523***	.248	4.450***	.212	3.725***
Self-esteem			.096	1.666	.098	1.842	.107	1.923
Religious involvement			.167	3.279***	.161	3.377***	.169	3.534***
Control over life			.010	.172	.037	.724	.052	1.006
Willful ignorance					.280	4.435***	.225	3.405***
Personal negligence					.189	2.956**	.209	3.085**
RA: Locus of causality							-.138	2.186*
RA: Personal control							-.011	.159
RA: Stability							-.008	.149
RA: External control							-.002	.035
Regret involvement							.140	2.353*
Regret feeling							.038	.739
Health regret							-.071	1.412
Overall life regrets							.053	1.049
R <sup>2</sup>	.025		.283		.371		.403	
R <sup>2</sup> change	---		.258***		.110***		.046**	
F	3.820*		14.331***		18.666***		12.192***	

*Note.* N = 300. <sup>a</sup> Male = 0, female = 1. \* p < .05, \*\* p < .01, \*\*\* p < .001.



Results of regression analysis predicting regret coping are given in Table 4.15. Model 4 shows that all the predicting variables together contributing more than 40 percent in regret coping. Results further reveal that social comparison, religious engagement, willful ignorance, personal negligence, and regret involvement are the positive predictors of regret coping. While attribution style locus of control (internal attribution) shows a negative association with regret coping, that is, people who internally attribute their regrets perform less regret coping. As we can see both willful ignorance and personal negligence, positively influence regret coping, which means, people who involve in personal carelessness and probably accept those mistakes, involve more in dealing with regret caused by those mistakes.

Table 4.16 shows the result of the regression analysis for regret learning. Regret learning shows that not only do people cope up with their regrets but sometimes they even learn and change themselves due to their regret. As we can see from the results of Model 4, social comparison, personal control (regret attribution) and regret coping positively facilitate regret learning. This refers that people who involve in social comparison also involve in regret learning more. Similarly, those who attribute regrets to their personal control show higher learning from their regrets. Not surprisingly, people, who incorporate more regret coping show higher learning from their regrets. However, surprisingly, locus of causality (internal attribution) shows a negative association with regret learning. Another interesting result is related to religious engagement, which shows religious involvement was a significant predictor, however, when it was controlled by regret-related variables, especially by regret coping, it remained no longer a significant predictor of regret learning.

**Table 4.16***Regression Analysis: Regret Learning*

Variable	Model I		Model II		Model III		Model IV	
	$\beta$	t	$\beta$	t	$\beta$	t	$\beta$	t
Age	.054	.933	.019	.331	.039	.672	.029	.511
Gender <sup>a</sup>	-.039	.672	-.069	1.183	-.086	1.395	-.056	.912
General health			.022	.304	.033	.450	.041	.565
Indecisiveness			-.071	1.041	-.098	1.392	-.098	1.415
Social comparison			.226	3.659***	.207	3.052**	.165	2.327*
Self-esteem			-.018	.283	-.031	.473	-.008	.125
Religious involvement			.163	2.828**	.140	2.410*	.083	1.397
Control over life			.012	.187	.016	.265	.005	.082
Willful ignorance					.188	2.448***	.136	1.663
Personal negligence					-.098	1.260	-.156	1.868
RA: Locus of causality							-.195	2.525**
RA: Personal control							.178	2.128*
RA: Stability							.027	.414
RA: External control							-.009	.142
Regret involvement							-.060	.821
Regret feeling							.052	.822
Health regret							.042	.691
Overall life regrets							.083	1.350
Regret coping							.254	3.510***
R <sup>2</sup>	.004		.082		.101		.174	
R <sup>2</sup> change	---		.078***		.019		.073**	
F	0.653		3.245***		3.232***		3.105***	

Note. N = 300. <sup>a</sup> Male = 0, female = 1. \* p < .05, \*\* p < .01, \*\*\* p < .001.

**Table 4.17***Regression Analysis: Happiness*

Variables	Model I		Model II		Model III		Model IV	
	$\beta$	t	$\beta$	t	$\beta$	t	$\beta$	t
Age	.036	.075	-.052	1.081	-.032	.678	-.018	.379
Gender <sup>a</sup>	-.032	.573	.008	.158	-.030	.608	.007	.146
General health			.257	4.242***	.256	4.284***	.242	4.076***
Indecisiveness			-.039	.659	-.092	1.588	-.071	1.253
Social comparison			.141	2.768**	.075	1.355	.051	.857
Self-esteem			.092	1.704	.089	1.672	.036	.658
Religious involvement			-.088	1.850	-.097	2.023*	-.091	1.877
Control over life			.398	7.697***	.410	8.015***	.372	7.313***
Willful ignorance					.158	2.507*	.158	2.356*
Personal negligence					.043	.665	.014	.206
RA: Locus of causality							.014	.227
RA: Personal control							.214	3.125**
RA: Stability							-.116	2.230*
RA: External control							.153	2.987**
Regret involvement							-.015	.245
Regret feeling							-.066	1.282
Health regret							.003	.053
Overall life regrets							-.154	3.065**
Regret coping							.075	1.253
Regret learning							-.011	.218
R <sup>2</sup>	.001		.371		.394		.456	
R <sup>2</sup> change	---		.371***		.022**		.063***	
F	.890		21.497***		18.772***		11.712***	

Note. N = 300. <sup>a</sup> Male = 0, female = 1. \* p < .05, \*\* p < .01, \*\*\* p < .001.

Prediction results of subjective happiness are given in Table 4.17. Overall, it is found that predicting variables together predict the change in happiness by more than 45 percent. The complete model shows that general health condition, perceived control over life, and willful ignorance positively predicts happiness. The role of general health and control over life is easy to explain, however, the result of the role of personal negligence on happiness is interesting. That shows, ignorance can lead to happiness, or in other words, ignorance can be bliss. Results further show that overall life regrets negatively influence happiness. That means people who have fewer regrets in their lives are happier than people who have more regrets in their lives. Finally, regret attribution styles also show a significant impact on happiness, while both personal and external control show a positive impact, stability shows a negative association with happiness.

The final regression table, that is Table 4.18 shows the results of satisfaction with life. Overall, variables together are contributing more than 40 percent in the prediction of satisfaction with life. Model 4 shows that gender has a negative influence on satisfaction with life, which means males (coded as 0 in the analysis) are more satisfied with their life than females. General health, religious engagement, and control over life show positive contribution in satisfaction with life. Furthermore, regret learning shows a positive impact on satisfaction with life, which refers that those who learn from their mistakes generally have more satisfaction with their life. Interestingly, social comparison shows a negative association with satisfaction with life, which shows that social comparison makes people less satisfied with their life. It is also found that regret attribution on stable factors increases satisfaction, however, internal attribution decreases the satisfaction with life.

**Table 4.18***Regression Analysis: Satisfaction with Life*

Variables	Model I		Model II		Model III		Model IV	
	$\beta$	t	$\beta$	t	$\beta$	t	$\beta$	t
Age	.141	2.618**	.070	1.441	.065	1.311	.084	1.750
Gender <sup>a</sup>	-.346	6.425***	-.267	5.439***	-.260	5.099***	-.214	4.147***
General health			.187	3.039**	.186	2.997**	.181	2.933**
Indecisiveness			-.007	.120	.004	.073	.000	.008
Social comparison			-.249	4.784***	-.237	4.107***	-.182	3.013**
Self-esteem			-.044	.809	-.042	.766	-.014	.243
Religious involvement			.239	4.938***	.244	4.930***	.202	4.004***
Control over life			.174	3.300***	.171	3.239***	.172	3.244***
Willful ignorance					-.048	.742	-.062	.890
Personal negligence					.008	.114	.065	.912
RA: Locus of causality							-.162	2.446*
RA: Personal control							.102	1.438
RA: Stability							.154	2.840*
RA: External control							-.038	.713
Regret involvement							-.050	.805
Regret feeling							-.080	1.496
Health regret							.092	1.785
Overall life regrets							.023	.439
Regret coping							-.064	1.021
Regret learning							.121	2.292*
R <sup>2</sup>	.138		.349		.350		.413	
R <sup>2</sup> change	---		.210***		.001		.063***	
F	23.858***		19.467***		15.562***		9.810***	

Notes. N = 300. <sup>a</sup> Male = 0, female = 1. \* p < .05, \*\* p < .01, \*\*\* p < .001.

## *Discussion*

Regrets are outcome of counterfactual thinking due to past action/inaction and mostly because of unfulfilled expectations. One of the significant results of the present study is related to regret due to unfulfilled expectations of self vs. others. The result of Table 1 indicates that older people have more regrets due to the unfulfilled expectations of self than of others. The results are supported by the findings of Davidai and Gilovich (2018), which show that people regret more due to ideal-actual self-discrepancy than ought-actual self-discrepancy. Similarly, in the present research, it is found that most people hold regrets, not because that they were not able to fulfill the wishes/expectations of significant others but because they were not able to fulfill their own wishes/dreams. Results also show that the significant role of gender exists in this process. Though both genders reported more regret due to self-expectation, however, the number of males is significantly higher having regret due to unfulfilled expectations of others than the number of females. Willamas (1991) rightly pointed out that the gender system is an important part of decision/choice, which forces females to opt for less desirable and more orthodox choices than men. While females have to fulfill others' expectations throughout their lives, males have more freedom to by-pass them. Therefore, at a later age, females have less regret due to unfulfilled expectations of others than males.

Another important result comes from action-inaction regret prevalence in old age. Results confirm that older adults hold more regret due to inaction than the actions. That is, in old age, people show regret more for the things they wish they would have done than the things they wish would not have done. This result confirms the results of the narrative inquiry. Many previous studies (e.g., Gilovich & Medvec, 1994, 1995a; Hattiangadi et al., 1995; Zeelenberg et al., 2002) also shows that people

regret more for their inaction (omission) than action (commissions). Interestingly, no gender difference is found in this regard, which shows that both males and females have more regret from their inaction than action. Another result related to counterfactual thinking patterns shows that downward contractual thinking is more common in old age in comparison to upward counterfactual thinking. However, here we found significant gender difference, while males show more downward counterfactual thinking, females inclination is more towards upwards counterfactual thinking.

Results related to major sources or domains of regret have indicated that the most prominent sources of life regret are related to education, health, career, finance, and parenting. However, the least common sources of regret reported are related to friendship, leisure, self, and community. Similar to many western studies (Kinnier & Metha, 1989; Landman & Manis, 1992; Roese & Summerville, 2005), the results of the present study also show the biggest regret comes from education even in old age. The second prominent source, i.e., health is also found in many previous studies as one of the most prominent sources of regret, especially on older adults (Choi & Jun, 2009; DeGenova, 1992; Hattiangadi et. al., 1995). Similarly, career is also found a major source of regret in various studies (e.g., Landman et al. 1995; Roese & Summerville, 2005). Like the results of the present study, many previous studies also found friendship (DeGenova, 1992; Hattiangadi et. al., 1995; Kinnier & Metha, 1989; Roese & Summerville, 2005), leisure (Hattiangadi et. al., 1995; Kinnier & Metha, 1989; Landman et al. 1995), self (DeGenova, 1992; Landman et al. 1995), and community (Hattiangadi et. al., 1995; Roese & Summerville, 2005) are the less prevalent sources of regret. We also found the gender difference in the prevalence sources, like females reported more regret related to career followed by education,

and health, however, males reported more regret related to health, followed by education and career. Regrets associated with one's life path like 'pursuing a family' (marriage and children) versus 'pursuing a career' are particularly relevant to the lives of many women (Levinson & Levinson, 1996). Probably that is why females show more regret for career and education than males.

The results of the current study also show gender differences in emotions associated with regret and study variables. Kahneman (1995) argued that the existence of different emotional profiles is not only central to a comprehensive account of regret but also provides an alternative interpretation of the apparent temporal pattern associated with regrets of action and inaction. Originally, in the work of Gilovich et al. (1998), these three kinds of emotions were explored in the context of regret, while it was found that short-term regrets were more associated with hot emotion and long-term regrets were more related with despair and wistful emotion. However, in the present study, it is found that females have more despair and wistful emotions for their regrets, and males have more hot emotions for their regrets. These gender differences might be related to the nature of regret prevalent in males and females.

Regret is a reflective emotion that arises from the evaluation of an unfavorable decision. It makes people concern about the causes behind regret (Zeelenberg & Peiters, 2007). The current study attempted to understand the attributional process behind regret. Results indicate that the males and females follow quite different attribution processes when looking for causes behind their regrets. While males attribute more to internal factors, personal control over cause and stable causes females show a higher fondness for external control. It is interesting that though males reported more personal control and internal attribution, however, they reported less wilful ignorance and personal negligence.



Results of regression analysis show people with good health involve less in regret thoughts, however, people with higher willful ignorance and personal negligence show more involvement in regret thoughts. Similarly, regret feeling is more when social comparison and personal negligence are higher. It is also found that people with good health report less health-related regret. However, health regret is found more in the people who reported personal negligence, probably because their carelessness could have caused them some medical or other health problems. Social comparison's negative effect on health regret could be possible because people might involve more in downward comparison and look more towards people having severe problems. Overall life regrets show only two significant predictors— control over life and self-esteem. This shows that people who perceived higher control over their life generally report less regret, probably because they believe that they had control over their action and inaction which might have helped them to cope-up or correct their wrong decisions. Similarly, their high self-esteem might have led them to believe that they could not do mistakes and hence produces fewer regrets on their action or inactions. Interestingly, regret feeling and regret involvement show no significant role in overall regrets, which is showing that indulgence in regret or having strong regret feeling not necessarily because of the high number of regret, it could be just because of a few but big regrets. No effect of gender and age is consistent with previous research (e.g. Lecci et al., 1994; Newall et al., 2009), which suggests that sociodemographic variables such as gender, marital status have little role on regret feeling or numbers. Results of the present study along with the results of the narrative inquiry are discussed in greater length in the next chapter.

## **Chapter 5: Discussion**

The present work explores regret experiences in old age. In particular, the thesis examined certain research questions, like— What do older adults regret? Is there any gender difference in their regret content? Do they have inaction-based regret more than action-based regret? What instigates counterfactual thinking and hence regret? Who do have health regrets and why? What is the role of personal ignorance in regret experiences? Which individual factors do contribute to regrets? How do people handle/cope-up with these regrets? The author has conducted two studies in order to address these questions— the first followed the narrative methodology, and the second was based on the survey method. The results of both the studies along with their brief discussion are presented in the last two chapters. In the present chapter, the author tries to synthesize the results and present the discussion around the major research question.

### **Major Life Regrets**

One of the main aims of the present work was to examine the common sources of life regret among Indian older adults. There are many works that explore the sources or domains of regret (e.g., Jokisaari, 2003; Kinnier & Metha, 1989; Landman & Maish, 1992; Roese & Summerville, 2005), especially among older adults (e.g., Choi & Jun, 2009; DeGenova, 1992). In the present work, two studies have been conducted and both of them have addressed this question. Though there are some differences in the results of the narrative inquiry and the survey study regarding the regret index of the participants, however, mostly they tell the same story. In both the studies, it is found that participants have regrets more about their education, career, health, parenting, finance, marriage, and family. They showed the least regret about

friends, community, self, and leisure. These results are largely supported by the findings of earlier work (Choi & Jun, 2009; DeGenova, 1992; Jokisaari, 2003; Kinnier & Metha, 1989; Landman & Maish, 1992). However, the results of the present work do not completely go in line with the results of the meta-analytic review (Roese & Summerville, 2005), which shows that people's biggest regrets come from education, career, romance, parenting, self, and leisure domains. Differences are found mainly in self, leisure, and romance. The probable reason could be the age as well as cultural differences between participants of the present study and the studies included in the meta-analysis. As most of the studies included in the meta-analysis of Roese and Summerville (2005) are based on the American population and included all age group participants. The present study on the other hand is based on Indian older adults, which could have led to these differences. For example, not a single person mentioned regret related to romance in the narrative inquiry. It is primarily because of Indian culture as well as the age of participants, who do not share or accept such regrets. However, many of them had mention marriage-related regret, which is not a common regret in Western society and hence does not appear in meta-analysis results.

Some studies have indicated that people's intense life regrets are often related to crucial developmental domains such as work, education, and family (e.g., Gilovich & Medvec, 1995a; Jokisaari, 2004; Roese & Summerville, 2005; Wrosch & Heckhausen, 2002). The results of the present works also show that older adults' regrets come mainly from development sources such as education, career, marriage, family, parenting. This shows that people regret more when they make wrong decisions related to major goals of their life than decisions about other things in life, be it related to self or others. Such as very few participants have reported regrets related to self, friends, leisure, and community. The reason for such regret experience

could be the age of participants in the present work. Since the present work included only older adults, who have seen all the ups and downs in their life and performed their duties and responsibility, so when they look back about their entire life, they probably judge their life using standards yardsticks of life goals. The second possibility could be due to the impact since the decisions related to major development tasks have more impact in life, therefore, there is a possibility that they have haunted them more.

One striking difference that came in the present study from the previous studies is related to health regret. In both the studies, it is found that health played a very important contribution in life regrets. However, most earlier studies showed no such role (Hattiangadi, 1995; Joskiaari, 2004; Roesse & Summerville, 2005; Wrosch & Heckhuasen, 2002) except for a few (e.g., Choi & Jun, 2009; DeGenova, 1992). The participants of the present study were older adults, many of them were suffering from various terminal or chronic illnesses, which many of them believe was the outcome of their lifestyle or mistakes. Therefore, many of them have reported health as a major source of life regrets. The studies on elderly people (Choi & Jun 2009; DeGenova 1992; Hattiangadi et al., 1995) also found a similar pattern for health regret among older adults. Many studies conducted on the young population (Roesse & Summerville, 2005; Landman & Maish, 1992; Landman et al., 1995) did not find health as a major regret source, probably because young people generally have fewer health-related problems and therefore they reflect and regret less on health issues. The results also establish that in both the studies male reported significantly higher health regrets than females. The probable reason for such difference could be related to differences in men's and women's lifestyles and behavioral patterns, such as smoking, drinking, aggressive behavior, risky choices. Harvard Men's Health Watch rightly

pointed out that “men die younger than women, and they are more burdened by illness during life. They fall ill at a younger age and have more chronic illnesses than women” (2010).

Another important result is found related to the most frequent cause of regret. In the narrative inquiry, career has emerged as the topmost cause of life regrets, however, in the survey, people reported education as the biggest regret. Previous studies, which were mostly quantitative, showed education as the biggest regret (e.g., Kinnier & Metha, 1989; Landman & Manis, 1992; Roese & Summerville, 2005). That is also what we have found in the survey study. However, if we look towards regret incidents narrated by participants, we found career is the most prevalent source of regret. Although many studies (Kinnier & Metha, 1989; Landman & Manis, 1992; Roese & Summerville, 2005; Wrosch & Heckhausen, 2002) showed that career is one of the most prominent domains of regret across age groups, however, only a few found it is the biggest source like Landman et al. (1995). Although, the explanation for this difference is beyond the scope of the present work.

Regret related to finance is also found to be an important cause of life regrets in both the studies. This result is supported by the findings of previous studies (DeGenova, 1992; Kinnier & Metha, 1989). Choi and Jun’s work showed regrets related to career, education, and marriage might be more common among older adults, but the intensity of regret is higher in regrets related to finance, health, etc. (2009). The sources of financial regret could be related to participants’ financial mismanagement, lack of saving, wrong investment, etc. Since participants were retired employees and were surviving on their pension, hence it may be possible that the pension was not sufficient and therefore they have regretted their no-saving/no-investments and for wrong investments for their present financial situation.

Many western studies did not find finance as a major source of regret (Hattiangadi et al., 1995; Roese & Summerville, 2005; Wrosch & Heckhausen, 2002). The probable reason why it is reported extensively by Indian older adults could be related to the social security system. Indians do not have access to any good social security scheme, which makes people more vulnerable especially in old age. Therefore, if they commit any financial mistake or make a wrong decision, it would impact them more than the citizen of the country that has good social security schemes for the senior citizens.

Interestingly, regret due to parenting was found as the fifth most common regret in both studies. Many studies, especially on adults and older adults sample showed more or less the same pattern (DeGenova 1992; Kinnier & Metha 1989; Landman & Manis 1992; Wrosch & Heckhausen, 2002). Even Roese and Summerville's (2005) meta-analysis shows it is the fourth most common regret. Why is parenting is such a big regret among older adults? Mainly because our participants were the working population, who probably could not have spent enough time with their children, that could be a possible reason for their parenting regret. Another reason could be sometimes people do not do regret their wrong actions/inactions, but their children's. Many participants reported regrets for their children's mistakes or wrong decisions because somehow they believed the mistakes or failures that their children were facing is because of their poor parenting. The third possibility could be related to Indian culture, where parents have pretty high involvement in their children's lives, whether it is related to their education, career, marriage, or even family planning. Therefore, it is understandable if their children take any wrong decision, they will also share the responsibility. Probably that is why both men and women have reported almost equal regrets due to parenting. The results also indicated

that the regret from family is frequent among both women and men. DeGenova's (1992) work on older adults also showed the same pattern.

Results also show genders difference in the prevalence of these regrets. While, parenting, family, finance, self, community, and leisure do not show significant gender difference, health, education, career, spirituality, friends, and marriage related regret shows significant difference due to gender. Females reported significantly higher regrets for both education and career. Probably, is because of the patriarch or masculine nature of Indian society, where males have more freedom for education as well as for occupation, on the other hand, females have to face a lot of restrictions. That also reflects in marriage regret, which is more common in females than males. To understand these differences clearly, we need to understand these results in a temporal context. The participants were on an average of around 65 years old, they must have taken these decisions around 40 years back, at that time the Indian society was much more orthodox and patriarch than present India. Therefore, the freedom for selection of career, husband, or even education for women were very limited, so in their later life when they look back they regret these decisions more.

### **Action and Inaction Regrets**

People do regret their actions as well as inactions (Gilovich & Medvec 1995a; Landman 1993). Kahneman and Tversky (1982) were the first to show that people regret more due to the action than inaction. Many others also found action causes more regret than inaction (Gilovich & Medvec 1995a; Landman, 1987b; Zeelenberg et al., 1998). However, Gilovich and Medvec (1994, 1995a) argued that over time inaction regret becomes more grave than action. Many studies have confirmed that inaction causes more regret in the long term (Gilovich et al., 2003; Hattiangadi et al., 1995; Morrison & Roese, 2011). The present research also shows that people

regret more because of their inaction than due to their actions. The results are supported by various studies, which show that in old age people regret more because of inaction (Hattiangadi et.al., 1995). Gilovich and Medvec (1994, 1995a) have suggested that there is a time course to the experience of regret such that in the long run, people experience more regret over things they failed to do.

Blix et al. (2015) argued that the missed opportunities are not just representing regret but also helps people to develop their identity around that, especially in old age. That could be a reason why people remember more such inactions or omissions than their actions. Moreover, the results of the process of regret have suggested that an unfulfilled state of mind is a major source of regret feeling. These unfulfilled wishes/desires of life mostly come from inactions or missed opportunities. This could be one reason why people regret more about their inactions than actions. Another possible explanation may come from the Zeigarnik effect, which shows that people remember more about their unfinished tasks. Since unfinished tasks, be it related to the dream of life or life goal, comes mostly from inactions rather than actions, therefore, people do regret more their inaction than action, especially in old age. Regret on developmental tasks could be another reason for more inaction regrets than action regret. Since participants reported more regret in developmental tasks, such as education, career, marriage, parenting, which may come more from their inactions, missed opportunities, etc., probably, therefore, they have reported more regret from their inaction than action. Another explanation for why do people report more regret based on inaction than action comes from the self-enhancing mechanism. Feeney et al. (2005) showed that inaction regret is reported more by people with high self-esteem, which means inaction regret help in self-enhancing probably because inactions are not mistakes rather missed opportunity, however, action regrets are



mostly outcomes of one's mistakes or wrong decision. Accepting mistakes can be self-harming, hence people may report more regret due to their inactions than actions.

### **The Process of Regret**

Many studies have shown the role of cognitive processes, particularly of counterfactual thinking in regret feeling (Connolly & Zeelenberg, 2002; Roese, 1997; van Dijk & Zeelenberg, 2005; Zeelenberg & Pieters, 2007). However, very few studies explain what put people in such counterfactual mode or what lead people to indulge in regret feelings at the first time and then again for the same mistake they have committed in the past. Therefore, the present study aimed to understand the process behind regret involvement. Findings of the narrative inquiry show that mainly there are two sources of regret: first when people think about unfulfilled expectations and second when they are involved in some kind of comparison. In the following section, these two sources are discussed in detail.

Regret theory states that regret arises from comparing an obtained result with a better result, which might have occurred if a different choice had been made in the past (Loomes & Sugden, 1982, 1987). Unfulfilled expectations put people in counterfactual mode is well established through previous studies (Gilovich & Medvec, 1995b; van Dijk & Zeelenberg, 2005). However, the present thesis goes beyond this and explains that these unfulfilled expectations come from various sources, and whenever people encounter situations that remind them of these unfulfilled expectations, they re-indulge in regret again and again. The most important source of such unfulfilled expectations is self-expectations. As human beings, we dream/wish about our future, such as what we want to become, where we want to live, or with whom we want to marry. Over the period, many such dreams/wishes are achieved, many changes, and many remain unfulfilled with us. No matter how much

we try to forget these unfulfilled dreams/wishes, some of them linger with us, haunt us, and even in some situations, they shape what we are i.e. our identity (Blix et al., 2015). These unfulfilled dreams and goals instigate the feeling of self-blame. The process of self-blame is most likely to be found when the decision maker's expectations from self are violated. Zeelenberg and Pieters (2007) write that regret is a comparison-based emotion with the experience of self-blame. Sometimes, as mentioned by a few participants in the narrative inquiry, what they cannot do in their life, they tried to achieve through others, such as their children. Therefore, when people cannot achieve their dreams due to their personal limitations and social constraints, they try to achieve symbolically by helping others to achieve their dreams and goals.

Research shows that people regret their unfulfilled wishes and aspiration more than missing duties and responsibilities (Davidai & Gilovich, 2018). The result of the survey study also supports that the older adults have regret from their unfulfilled expectations more than from the expectation of others. One possible explanation why unfulfilled expectation from self is causing more regret may come from Reactance theory (Brehm, 1966). The situations where participants have forgone their dreams or wishes due to others' direct or indirect pressure, their freedom to pursue them was curtailed. Hence, they probably had developed more positive feelings for their dreams/wishes in order to restore their freedom. Therefore, in old age, they reported more regret due to missed self-expectation than others. Further analysis shows a significant gender difference, where it is found that females do have more regret from self-unfulfilled expectations than their male counterparts. Overall, males too regret more due to unfulfilled expectations of self but significantly less compared to females. The explanation for such difference comes from gender roles defined by

society. Since in many societies, including Indian, the gender roles are still very tight and conventional, which leaves little scope for variation especially for women. In today's world, where everyone is pursuing their own goals and dreams, many of them are still not completely free to choose and make decisions in their life. Williams (1991) stated that women have very less freedom when it comes to choosing between work or family. They are covertly and sometimes overtly forced to sacrifice their dreams for the family. She also questions the role and identity of women in the house and mentions that if mothers think about themselves, it is labeled as selfishness but if the same thing others do is called self-interest. However, if mothers think about the family and children, it is not called a sacrifice, rather it is considered as mothers' selflessness. In her work, Williams (1991) found that women themselves accepted that they should do more for the family care. Similarly, Gilligan's (1982) work also showed that women prioritize selflessness and caring for others. They leave their dream and prioritize family goals over their goals; hence, it is understandable that when in old age they reflect, they regret more about their dreams/goals rather than family duties or responsibility which they have been fulfilling their entire life.

People also regret when they cannot fulfill the expectations of others. At times people regret their past decision when the situations or others make them realize that they were not able to do/achieve something, which others wanted from them. The previous research has shown that missing opportunities to perform duties and responsibilities cause regret (Davidai & Gilovich, 2018; Roses & Summerville, 2005). However, these instances are not that regretful as the unfulfilled dreams, and desires (Davidai & Gilovich 2018). The present work also shows the same pattern, participants mentioned that they regret missing family responsibilities, parenting, etc., but the majority of their regrets were related to self, such as education, career, health,

etc. Though we did not find any cultural differences here, however, the individual differences in the regret due to unfulfilled expectations of self or others is possible.

The third source of unfulfilled expectations comes from others' wrong actions. Here, though, the person has not done the actual act or made the wrong decision, but still, he/she believes that any antecedent cause (done by him/her) has led to immediate action/inaction (performed by others) and therefore makes him/her responsible for the failure/misfortune. For example, many regret incidents cited by the participants are related to their children's failure in study/career or taking the wrong path, in which they blame themselves rather than their children. Though the previous studies show that a regret is an act of one's actions/inactions with the sense of responsibility (Zeelenberg et al., 1998, 2002), however, no research shows that people do regret others' behavior due to a sense of responsibility. The present research shows that for regretting something, it is not necessary for a person to perform the action or not but whether he/she is taking the responsibility or not makes difference. Synofzik et al. (2008) suggested that the sense of agency has two parts- feeling of agency and the judgment of agency. While the feeling of agency comes from lower-level sensorimotor processes, the judgment of agency associates with higher-level cognitive processes. So even when people do not perform the action directly, they can still take responsibility due to their belief and regret on the actions of others as well. The regret due to unfulfilled expectations from others is found quite high in the present work. It is probably because parenting regret is reported by many participants. That could have made them take responsibility for their children's failures or wrong decisions.

Similarly, we found that regret feelings could surface due to various forms of comparison. Though the process of counterfactual thinking is a comparison between what is and what could be (Gilovich & Medvec, 1995b; van Dijk & Zeelenberg,

2005), however, before arriving at counterfactual thoughts, people already go through various comparisons. Rye and colleagues (2008) found that self-referent upward counterfactuals and nonreferent upward counterfactuals were positively associated with depressive symptoms, but only self-referent upward counterfactuals were also significantly positively correlated with regret. In previous studies, it is also found that regret may come from social as well as temporal i.e. actual vs expected comparison (Huang & Tseng, 2007). The most common way of comparison is the social comparison where people compare them with similar others (Festinger, 1954). The studies have shown that people involve in social comparison when they are not sure about the quality of their decision (van Harreveld et al., 2008). Studies have also shown that social comparison can lead to regrets (White et al., 2006). Interestingly, it was mentioned by some participants that initially they were happy with their decisional outcomes, however, when they came across someone with better outcome/life, their happiness/satisfaction vanished and they started regretting their choices. That shows that even a good decision can turn into a nightmare if people select the wrong social reference for comparison. Results of the survey study show that people with high social comparison tendencies involve more in regret thinking as well as in regret feeling. Interestingly, results also show a strong positive correlation between social comparison and regret coping.

The second source of comparison-based regret involvement is the comparison between actual and expected outcomes of a decision. The research shows that people take steps based on what they expect, but things may not go the way it was intended, and hence regret surfaces (Zeelenberg, 1999). Disappointment arises from comparing an obtained outcome with a better outcome that might have resulted from the same choice being made, that is, from disconfirmed expectancies (Landman,

1993). The discrepancy between the actual and expected outcomes formulate regret, and the higher the discrepancy the higher the regret would be. There are two possibilities for such discrepancies, first when a person takes a decision with a certain expectation and the outcome is not the same. In this case, he/she regrets his decision. Second, when a person takes a decision with a very simplistic view of outcomes and does not consider other factors that might influence the outcome. That is, the other factors or contingencies might alter the outcomes. In this case, the person actually regrets his decision-making process, that is how he/she missed the other factors while making the decision.

The final way of regret comparison is when an individual compares his/her life before and after the decision. There are two possibilities of such regret: first, when people compare their life before and after, and they realize that they did not get what they wanted from their decision and this makes them regretful about their decision; second, when people compare their life pre and post-decision and find they get what they have expected but still they are not happy with their post-decisional lives and hence regret their decision. The first one is similar to the discrepancy between expected and real outcomes, therefore, there is no need to discuss it again. However, the second case is more interesting since even if people get what they have expected but still, they regret their decisions. There could be a few possibilities for such regret. First, even when people expect the unpleasant outcome/by-product of the decision, still, they hope that they will escape those unpleasant or negative outcomes. However, when in reality those unpleasant but expected outcome appears, they regret their optimism. Secondly, it is also possible that when people decide to change their life, they do not think that they would miss their original life. The new life, which probably would be an improvement on the earlier life in many ways but not in all, and

when people realize the cost is quite high, such as losing peace, love, leisure time, etc., then they might regret it. The third possibility, which (Zeelenberg, 1995) also discussed may come when after the decisions people get negative information or find out a better alternative. Ideally, they should be happy with their decisions because outcomes are what they had expected, however, in the light of new or additional information, they start regretting their decisions.

### **Role of Willful Ignorance and Personal Negligence in Regret**

One of the main aims of the present thesis was to see the role of personal carelessness in regret experiences. The work explores the two sources of personal carelessness in the context of regret experienced by older adults. The first source is willful ignorance, i.e., avoiding to know probable useful information, and the second is personal negligence, i.e., not using important information. Willful ignorance can be either due to motivation to not know or due to lack of motivation to know.

Researchers provided a range of reasons as to why do people avoid knowing the truth, such as avoiding negative emotion, gaining a strategic advantage, maintaining surprise and spontaneity in life, avoiding responsibility (Gigerenzer & Gracia-Reamero, 2017; Gross & McGoey, 2015; Hertwig & Engel, 2016). Among all these reasons, the biggest reason is avoiding negative emotions, or not knowing something because that could be heartfelt. Many participants in the narrative study also mentioned this reason for not attending or avoiding any information, be it related to their partner's affair or medical diagnosis. The second source of ignorance is a lack of motivation to know. That is people are not willing or interested to know something. The probable reason of why people do not show interest in knowing something could be not realizing or not perceiving the information to be important or useful for themselves. Therefore, people become cognitive misers and save their cognitive

energy by ignoring to know. In this process, however, occasionally they missed some important information, which they regret later. Participants, in their narratives, mentioned that in their youths they did not perceive themselves at the risk and therefore did not take care of information or things, which many of them wish they would not have done. Is avoiding the information solves the problem or has put them out of danger? Ignorance is not bliss, especially when it comes to big issues such as health, career, relationship (Hefferenan, 2011).

Personal negligence is the second source of careless behavior. Negligence in the legal and social context is a well-researched area, however, when a person's negligence causes harm to self and not to others, is yet to be explored. Heffernan (2011) shows that at many crucial points of life, we neglect the information which we had at our disposal, probably because we think that the information would not influence us, or we can escape from its negative consequences. In the present study, we found that people get involved in many reckless behaviors just because of personal negligence. Like any other form of negligence, personal negligence is an outcome of sheer carelessness, which includes all the five elements of negligence- duty, breach, harm, cause in fact, and proximate cause (Owen, 2007). Surely, in any condition it will be difficult to establish that if a person would not have shown negligence in the past, he/she must not have faced the problem or misfortune, still, if the person feels he/she is responsible, it would give him/her enough reasons to regret it. Results of narratives show that there are mainly five reasons as to why people involve in personal negligence— an illusion of invulnerability, easy alternatives, personal rigidity, felt hopelessness, and perceived irrelevance. The illusion of invulnerability makes people feel that they are invincible to negative outcomes even if they walk on a risky path. Therefore, they just avoid or neglect the information in decision making, which



later may turn out to be disastrous. Sometimes, people do not use information/knowledge because there is an easy alternative available. These alternatives could be efficient in terms of cost, time, or money, however, many a time their outcomes are not effective and even unwanted. People sometimes also cannot use a new way or information because of their personal rigidity or old habits. There is also a possibility that people avoid useful information because they find them useless or they are not convinced that using such information could change anything in the outcome. Whatever the reason is for such negligence, participants' several regret incidents have revealed that neglecting beneficial or useful information while making a decision had led to severe consequences and made them regret later about such avoidance of information since they were completely aware of the outcome of their negligence.

Results of the survey study indicate a strong relationship between willful ignorance and personal negligence. That shows people who are high on not attending the information are also high on not using them even when they know the possible consequences of that. This indicates that personal carelessness is an individual trait, which means some people have a higher tendency for such careless behavior than others. The strong relationship between personal negligence and willful ignorance could be a reason why many scholars (e.g., Heffernan, 2011) used negligence and ignorance interchangeably. Results further show that both willful ignorance and personal negligence have strong positive relationships with regret involvement, regret feeling, health regret as well as regret coping. The influence of willful ignorance and personal negligence on regret involvement, regret feeling, and health regret is as per expectation. Since people are high on carelessness, therefore, they may commit more mistakes and because they are expecting their carelessness therefore they will regret it

more. The interesting result is that they both have a significant impact on regret coping. The possible explanation why personal carelessness increases regret coping could come from the realization or acceptance of the reason for mistakes, which probably help them to understand and deal with their regret. Both, willful ignorance and personal carelessness show negative relationships with general health, satisfaction with life, and positive association with social comparison and indecisiveness. The negative relations with general health and satisfaction with life are understandable since people commit more mistakes just because of their sheer carelessness, which can create some health problems and ultimately reduces their satisfaction with themselves as well as with their life. However, positive relationships with indecisiveness and social comparison show that high on indecisiveness and social comparisons probably make people more careless.

### **Health Regret**

The present research confirms that health is one of the major sources of regret in old age. Previous studies, especially on older adults also found the prevalence of health regret (DeGenova, 1992; Hattiangadi, et al., 1995). The narrative inquiry shows that there are mainly three sources of health regret, particularly in old age- the absence of health-enhancing behavior, the prevalence of health-threatening behavior, and medical carelessness. The absence of health-enhancing or health-promotional behavior means that person is not following a lifestyle, which is considered good and healthy. Previous research has shown that involvement in health promotional or health-enhancing activities such as a healthy diet, exercise, produce better health outcomes and leads towards less illness/disease (Loef & Walach, 2012; Loprinzi, 2015). The prevalence of health-threatening or health-risk behavior refers to following such behavior that makes people more vulnerable and puts their health at

risk. Many studies have shown that adolescents and young adults excessively involve in health-threatening behaviors (Jackson et al., 2012; Millstein et al., 1992; Peltzer et al., 2016). Many such health-threatening behaviors start early in age but their negative impacts may reflect on future health outcomes (El Achhab et al., 2016). Research has shown that the prevalence of these health-threatening behaviors may increase the risk of various illnesses at a later age, such as heart attack, diabetes, or even cancer (Hurrelmann & Richter, 2006; von Bothmer & Fridlund, 2005). Medical carelessness includes ignoring illness symptoms, not approaching medical experts, not following prescribed medicines, or not having regular medical check-ups. This medical carelessness sometimes may cause big problems at a later stage and sometimes they may go unnoticed without creating a problem. Research shows that such medical negligence is very common among youths (Kovacs, et al., 1992; Naar-King, et al., 2009). Many participants have mentioned in the narrative study that they were involved in these kinds of health-risk behaviors when they were young because in the spirit of youth they never realized or thought about the possible negative outcome of those behaviors. However, in old age when health condition deteriorates, self-reflection may lead to health regret for involvement in such behaviors.

Results also show that participants believe that their own carelessness is responsible for facing health problems and health regret. They extensively attributed their ignorance and negligence of their involvement in such health deteriorating behaviors. In health-related ignorance, the prominent reason for not wanting to know could be to avoid the negative emotion, which may come from the medical check-up, knowing family medical history, etc., (Melnyk & Shepperd, 2012; Persoskie, et al., 2014). Negligence towards health and involvement in health-threatening behavior may lead to severe medical consequences (Hurrelmann, & Richter, 2006; von

Bothmer & Fridlund, 2005). Results of the survey study further confirm the important contribution of wilful ignorance and personal negligence in health regret. Moreover, it is found that participants who have good health encounter fewer health regrets. Social comparisons also show a negative impact on health regret, referring to people involve more in social comparisons shows less health regret. Probably, because they compare their health situation with someone in the worse condition. As the result of counterfactual thinking shows that the participants prefer comparing more with a worse situation than a better situation.

### **Individual Factors Contributing to Regret**

The present study explores the role of various personal factors in regret. The study mainly examines how general health, indecisiveness, social comparison, self-esteem, and religious involvement shape an individual's regret experiences. Results show that good physical health reduces health regret as well as involvement in regret thoughts. General health also shows significant negative relationships with willful ignorance and personal negligence. Overall results show that healthy older adults have less regret and they have involved less in careless behavior as well. Indecisiveness shows significant relationships with regret involvement and overall life regret. However, in both cases, it does predict them significantly. Social comparison, on the other hand, not only shows strong relationships with regret feeling, regret involvement, regret coping, and regret learning, but it also predicts significantly many regret variables, such as regret feeling, regret coping, health regret, and regret learning. Many works have documented that downward and lateral social comparisons are likely to serve self-protective functions by alleviating the negative emotional consequences of stressful encounters, threats to self-esteem (Wills, 1981), and failure experiences (Heckhausen & Brim, 1997). Similarly, it is also shown that

downward social comparison reduces regret (Bauer et al., 2008). What is interesting here is while downward social comparison reduces regret or helps in dealing with regrets, upwards social comparison can lead to regret (White et al., 2006).

Results of self-esteem show a significant negative relationship between self-esteem and overall life regrets. Since regret incidents led to self-blame, which probably influences the self-esteem of individuals as well. Many studies also suggest a link between self-esteem and regret experience (Feeney et al, 2005; Righetti & Visserman, 2018). Participants' religious involvement shows a significant relationship with regret coping as well as with regret learning. This shows that people high on religious activities generally deal better with their mistakes and even learns more from their mistakes. Past research on older adults also suggests that people in old age adopt religious/spiritual ways of dealing with their life problems (Boswell et al., 2006; Carver et al., 1989; Ng et al., 2017). Even in the narrative inquiry, many participants had mentioned that they involved themselves in religious/spiritual activities such as worship, meditation to bear with the outcome of their big mistakes.

### **Regret Coping**

Coping is a response aimed at diminishing the physical, emotional, and psychological burden that is linked to stressful life events (Snyder et al., 1987). Regrets are in general associated with stressful life events, negative setbacks, or wrong decisions. Regret may hold people back from growing in life, or it can show what is needed to move ahead in life, depending on how people manage to handle their regrets (Zeelenberg, 1999). People with high self-compassion are better at dealing with their regret and learning from their regret in comparison to people low on self-compassion (Zhang & Chen, 2016). This shows that not only the strategies and social surrounding influences regret coping but it is also self-love and willingness to

improve one's life helps in coping with regrets. Some actions like feeling bad or regretful may instigate people to take adaptive actions that might not occur otherwise. It is important to realize that the impact of regret may be considered rational because it forces us to think more carefully about our decisions (Parker et al., 1996).

Many research in coping shown people opt for various strategies, to cope with their negative life events, depending on their personality as well as situation (Carver et al., 1989; Scheier et al., 1986). These coping strategies consist of behavioral and cognitive attempts to manage specific situational demands which are appraised as taxing or exceeding one's ability to adapt (Lazarus & Folkman 1984). The qualitative study has shown that older adults deploy various coping strategies to deal with their regret feeling, namely, positive reappraisal, denial or suppression, downward comparison, attributing externally, justification/rationalization, seeking social support, and spiritual/religious involvement. While some of them are adaptive in nature, such as positive reappraisal, downwards comparison, others are maladaptive, like denial or suppression, justification/rationalization. Though there is not much research on regret coping, still some previous studies show that cognitive reappraisal, like regulating thoughts, reducing cognitive dissonance, is used to deal with regret (Bauer et al., 2008; Gilovich et al., 1995; Zeelenberg & Pieters, 2007). Similarly, it is also shown that downward social comparison reduces regret, particularly in old age (Bauer et al., 2008), and thinking about the negative consequences of other unchosen options could also be helpful in dealing with regrets (Zeelenberg & Pieters, 2007).

In the survey study, it is found that involvement in regret coping is positively associated with regret feelings as well as regret involvement, which shows that those who think and involve more in regret feeling are the ones who are involved in dealing with regrets. Results also show that willful ignorance and personal negligence

significantly predict regret coping. This could be because those who have accepted that they have committed carelessness and because of that they have regrets, their acceptance probably helps them in dealing with the problems. Moreover, religious involvement shows a significant impact on regret coping, which reflects that engagement in religious activities helps individuals to cope with their life regrets. Many previous studies show, that religious/spiritual involvement is one of the popular ways of stress coping among older adults (Boswell et al. 2006; Carver et al., 1989; Ng et al., 2017). Another interesting result comes from the relation with social comparison. As we can see that social comparison significantly predicts regret coping, which is also supported by some previous studies (Bauer et al., 2008; van Harreveld et al. 2008). The importance of downward comparison in dealing with regret is so high that Roese (2005) in his book *If only: how to turn regret into opportunity*, has suggested the readers think downwards, look for the worse outcome, and compare with people doing worse. Definitely, by looking downwards people will be able to face their outcomes or even appreciate them.

### **Regret Learning**

Regret helps us to identify the wrong decisions and inspires us not to make these decisions again (Landman 1993; Roese & Summerville 2005; Zeelenberg 1999). Regret can push people to fix their errors and faults, make amendments regarding bad behaviors, and put them into action when they are falling short of important goals (Roese & Summerville, 2005; Zeelenberg, 1999). Regret not only can be a learning lesson for oneself but could also become an example for others. For example, a male participant in the narrative inquiry mentioned that he quit smoking and drinking when he saw his father dying from liver disease and regretting his alcohol dependency on his death bed. Many participants regarding their health believed that regret has helped

them to make wise observations for similar situations in the future for themselves as well as for others. However, not everyone can take regret as an opportunity and learn from it (Zeelenberg, 1999), while some are open to learn and change themselves, others attribute their mistakes to situations or circumstances and close the doors of acceptance and learning.

Regret learning is the next step to regret coping, that is a person cannot learn from his/her mistakes until he/she has handled them first. As we have seen, regret coping is not always adaptive, people use maladaptive practices as well to deal with their regret feeling such as external attribution, denial or suppression, or by rationalizing or justifying their mistakes/wrong decisions. Though both maladaptive and adaptive strategies work for regret coping, however, maladaptive strategies cannot instigate regret learning. Since the person is not accepting his/her faults, running away from mistakes, or has developed irrational justifications, so there will be no learning at all. However, adaptive strategies such as social support, positive reappraisal give people different perspectives to understand their mistakes and probably facilitate learning from regrets.

The results of the qualitative analysis show that in many cases people mentioned learning along with coping from regret, whether regret is related to finance, or parenting, or relationship. However, the most such learning is reported in the case of health regret. Many participants mentioned that after the diagnosis of certain illnesses, they had realized the mistakes in their lifestyle, smoking/drinking habits, exercise routine, etc. This led to change and adapt them to a healthy lifestyle, exercise, healthy diet, a routine life, etc., which, not only help them to deal with their health issues but also helped them in dealing with their future health problems. Many studies have supported this idea that adopting a healthy lifestyle in old age increases



the wellbeing and reduces the mortality risk of individuals (Boswell, et al., 2006; Haveman-Nies, et al., 2003). Studies showed that self-regulation could be one way to deal with regret (Heckhausen, et al., 2010), it includes both regulating the thoughts, i.e., cognitive regulation, and it could also be regulating behavior. The self-regulation, after committing the mistakes, helps people to not indulge in similar mistakes. For example, if a married person involves in a one-time infidelity incident and if he/she regrets that later, then probably he/she will control such behavior in the future. In another example, if a person has invested some money in a scheme and faced fraud, then probably, not only him/her but his/her family members and friends will be very cautious of such kind of scheme in the future. A recent incident is useful in explaining how regret could be a source of learning for self and others. A man's life saving (around Rs. 5 lakhs), which he kept in the form of cash (currency notes) in a trunk box was eaten by termites (Times of India, Feb 17, 2021). Probably this tragic real-life incident may suggest many people to change their saving behavior, probably using a bank or safe vault, but definitely not a trunk box or suitcase.

The results of the survey analysis further show that regret learning is significantly predicted by social comparison and regret coping. Social comparison a source of regret coping, is also emerged as a source of regret learning. This indicates that people who compare themselves with others, probably with better off others, change themselves more, in comparison to people who involve less in social comparison. There could be another possibility for this result, that is, people who look more towards others, probably also learn from others mistakes and therefore their regret leaning is high. As expected, reget coping contribute significantly to regret learning. This result confirms the assumption that people first need to cope with their regret and then they learn from their mistakes. In other words, there is no learning

from regret, if there is no regret coping. Roese (2005), however, goes beyond coping and learning and argued that individuals cannot only turn regrets into learning experiences and but also into opportunities for the future.

## Chapter 6: Conclusion, Limitations, and Implications

*We all make choices. The hard thing is to live with them...*

(From the movie *The Words*)

Our existence is not by our choice, neither our demise would be, but whatever happens in between birth and death is the outcome of our choices and the decisions we make. In every moment of our life, we are either making choices or are thinking about them. These choices can be related to big issues, like ending or continuing a romantic relationship, changing the present job, or about trivial things, like eating an Italian or Chinese dish or selecting a dress for a party. Some decisions (big or small) that we made meets the expectation or may turn out as even better, however, some decisions go wrong and do not come any close to our expectations, and could even be disastrous at times. While the choices that give positive outcomes instil a feeling of elation, however, the choices that produce negative outcomes lead us to the feeling of regret (Landman, 1987). It is not surprising that we regret more for our wrong decisions than elation for positive outcomes of our decision (Landman, 1987b).

Regret, a self-attentive negative emotion, appears from an upward comparison that involves counterfactual thinking (Gilovich & Medvec, 1995a; Zeelenberg, 1999). While it comes from our action we have performed in the past that we wish we would not have done, it may also come from our inaction, that is, the things we did not do and we wish we would have done (Kahneman & Tversky 1982; Landman, 1987b). Regret in itself is a negative feeling and it can also lead to high levels of psychological distress (Landman, 1987a; Lecci et al., 1994) and hamper the subjective wellbeing of individuals (Landman, 1993; Wrosch et al., 2005). Regret is unavoidable

(Landman, 1993; Roese, 2005), however, individuals can deal with its negative outcomes (Roese, 2005; Zeelenberg, 1999). Though regrets start at a very early stage in life, however, its feeling and consequences become more severe in old age (Lecci et al., 1994; Wrosch et al., 2005). Therefore, the present study examined the regret experience, in terms of feeling, involvement, types, coping, learning, etc., and its meaning for the older adults. Since regrets mostly come from one's wrong decisions or mistakes, hence, the present work also explores the role of personal carelessness, i.e., willful ignorance and personal negligence, in regret experiences.

The present work includes two studies, a Narrative Inquiry, and a Survey Study. In the narrative inquiry, interviews of 60 retired participants were taken which gives 157 incidents of life regrets. These regret incidents included all sorts of regrets and explained the process, nature, as well as coping with regrets. Study two, the survey, was based on the findings of study one and was conducted on 300 older adults. The focus of this study was clearly to test and confirm the findings of study one on a larger sample and also to address a few questions which could not be dealt with in the narrative inquiry. The results of both the studies mostly go hand to hand except for a few cases, which are discussed in the last chapter. In the following section, the major findings of the present research are summarized as under:

Nearly all the participants in both studies reported some or the other kinds of life regret. Only two people in the first study mentioned that they did not have any major regret in their life, however, not a single participant in the survey study said he/she did not want to change anything if he/she had a chance to live their life again. This confirms the high prevalence of regret in human life, especially in old age. These regrets, as both the studies suggested, comes from a few dominant sources, namely, education, health, career, finance, and parenting. However, sources/domains like

friendship, leisure, community, and self, are less frequent sources of regret among older adults. Results confirm that older adults regret more about development tasks such as education, career, marriage, and parenting. Interestingly, the studies show gender differences in the prevalence of the sources for regret. While for men the five biggest sources of regrets are health, education, finance, career, and spirituality (given in descending order). However, in the case of women, the five prominent domains are education, career, health, parenting, and family (given in descending order). It is also found that women do report higher regret related to marriage than men.

Both the studies show that in old age, people regret more about their inactions than their actions. Moreover, no gender difference is found in this case, which means both men and women regret more for their inaction almost equally. Results due to not meeting self-expectations (ideal-actual selves discrepancy) versus not fulfilling others' expectations (ought-actual selves discrepancy) show that people regret more about their missed dreams, wishes, aspiration (not meeting self-expectations) than missed duties and responsibilities (not fulfilling others expectations). Though both, men and women overall show more regret due to self-expectations, however, men reported significantly higher regret from others' expectations than women whereas women reported significantly more regret from self-exceptions than men. This difference could be due to the gender role, Indian culture of masculinity, or even because women prioritize family over self. It is also found that nearly two-thirds of older adults prefer downward counterfactual thinking over upward counterfactual thinking. That is most of them preferred to compare their situation with a worse situation than a better. Interestingly, gender again shows differences here, while men show a significantly higher inclination towards downward counterfactuals, women prefer nearly both downward and upward counterfactuals.

Results of regret emotions show that people experience more miserable, wistful, and unfulfilled than disgusted, embarrassed, and guilty feelings for their life regrets. Overall despair emotions are reported most, followed by wistful emotions while hot emotions are found least associated with lifelong regrets. Interestingly, both despair and wistful emotion are experienced more by women, and men reported experiencing more hot emotions for their regret than women.

The study shows that the counterfactual thoughts, responsible for regrets, originate from various unfulfilled expectations and comparison processes. Unfulfilled expectations could be due to self, or others, and even come from expectations towards others. On the other hand, a comparison that can lead to counterfactual thinking could be a comparison between the anticipated and the real outcomes, or between self and others, or even between pre-and post-decisional lives.

Findings regarding regret attributions indicate that females attribute their regret more to external and unstable factors and show a lack of personal control over events. Males, on the other hand, attribute more on internal and stable factors and show more personal control over events. Moreover, it is also found that females reported higher indulgence in both willful ignorance and personal negligence in comparison to males.

Among others, health regret emerged as one of the biggest regrets in this study. This could be because of the advanced age of the participants, which probably caused them several chronic and terminal diseases. The adverse health conditions in many cases lead to self-blame. Results show that there are three main sources behind health regrets: the absence of health-enhancing behavior, the prevalence of health-threatening behavior, and medical negligence at an early stage. Unsurprisingly, good

physical health leads to less health regret and as expected, willful ignorance and personal negligence contribute significantly to health regret.

Willful ignorance and personal negligence show significant association with regret feeling, regret involvement, health regret as well as regret coping, however, they do not contribute to overall life regrets. This shows that while personal negligence and willful ignorance can lead to mistakes and hence cause regrets and accepting such carelessness help in coping with regret, but the big life regrets (except for few cases, such as health, finance) are not the outcomes of carelessness rather they are the product of a well-thought process.

People use several coping strategies to handle their regrets. However, not all these strategies could be labeled as adaptive methods. That is, participants deploy both adaptive ways, such as positive reappraisal, downward comparison, social support religious/spiritual involvement and maladaptive strategies, like denial or suppression, attributing externally, and justification/rationalization. Regret coping shows significant relationships with personal negligence and willful ignorance, which shows that accepting carelessness help individuals to deal with the mistakes or regret caused by that carelessness. Individuals' religious inclination and social comparison tendency, in general, also helps in regret coping.

Regret learning is a step further from regret coping, that is, individuals need to cope-up with their regrets first to turn those regrets into learning lessons. However, maladaptive coping does not lead to regret learning; it is only adaptive coping that contributes to regret learning. Results suggest that social comparison, as well as regret attribution style, contribute significantly to regret learning. More importantly, it is also found that learning from regret is not limited to self rather it could be for others as well.

Regrets experiences significantly contribute to satisfaction with life as well as in general happiness of individuals. While satisfaction with life shows the significant contribution of regret attribution style and regret learning, happiness shows an important role of overall life regrets in it.

## **Conclusion**

Regret is an integral part of our life, and that no matter how careful and thoughtful are our decisions, they may turn out to be wrong. The thoughts and feelings associated with regrets become more worrisome in old age, as people in this age have time to reflect and evaluate their entire life, but can hardly change anything or correct any mistake. The present work highlight an extensive overview of the theoretical and empirical account of regret experiences in old age. Based on the results of the two studies, it could be hence concluded that Indian older adults do share many sources of life regrets with their western counterparts such as education, career, health, parenting, finance, etc. Furthermore, these regrets are not evenly distributed across both genders. People show more regret for their inaction than action, especially in their old age. Both willful ignorance and personal negligence play a significant role in health regret. In contrast to many previous works, in the present work, health regret is found as one of the biggest sources of regret. It is also found that though in old age people can not change much, they use various methods to deal with their regrets and cope-up with them. The research also shows that one's regret can also turn into a source of learning for self as well as others. Although the present work provides an extensive understanding of the regret experiences of Indian older adults, however, more work is required to address the issues the present study could not able to investigate and also to overcome the limitations (discussed in the next section) of the present research.



## **Limitations and Future Direction**

The present work includes two studies to establish a comprehensive understanding of regret experiences in old age and shows some fascinating results. Despite that, there are a few limitations of the present study, which are discussed below and could be helpful in designing/planning future research.

- The data of the research were collected only from one Indian state (Bihar); therefore, the generalization of results for all Indian older adults could be problematic. It is possible, that the results based on the sample of Bihar may not give a complete and perfect picture of all Indians. Future studies should attempt to include participants from more Indian states to get a better and representative sample of the Indian population.
- The work only included retired government employees as research participants. It is probable that the nature of the participants' jobs/occupations may influence their regret experiences. For example, a working woman may have different regret experiences than a woman who is a homemaker, similarly, the regret experiences of an uneducated person might be different from an educated person. The researchers, in future studies, may include participants from diverse professional groups, such as farmers, business people, homemakers, unemployed people, and so forth.
- The present research includes participants from urban settings only and completely ignores the rural Indian context. It could be argued to get a complete picture of the Indian culture, it would have been better to collect data from both urban and rural contexts, especially when more than half the Indian population lives in villages. It is likely that the villagers may have quite a different

experience of regret from their urban counterparts, since their way of living, priorities of life, preferences, and even dreams and desires vary.

- Though the work adopted pluralistic methodology, however, many questions could have been addressed or confirmed better by experimental methods, such as regret process, regret feeling, etc. Future work needs to conduct experiments on older adults to get some causal understanding of regret experiences. Moreover, the work adopted non-experimental methods for investigation. Hence, the causal explanations made in the work, such as regrets influence individuals' wellbeing, cannot be confidently determined and needs caution in generalization.
- The work is entirely based on self-reported methods both in the narrative and the survey study. Though self-reported methods have their own advantage, however, they suffer severely from recall bias and socially desirable responses.
- The present work addresses entire life experiences of regret through the lenses of older adults, but the regretful events which occurred at a young or middle age could not be taken into consideration. Though, the older adults provided the account of regrets of their early age, however, this might be only what they remember or recall. It could be argued that the regret may change over time, that is the regret that a young adult hold may not sustain in his/her middle age, similarly, the regret he/she hold in middle age may change in his/her old age. Therefore, a longitudinal study could be a better option in gaining some deeper insights in this regard.
- The present work also focuses on coping methods for regret. The work shows various strategies of regret coping adopted by older adults. However, it only remained focused on global regret coping. That is, the present work does not explore the role of action and inaction regrets in regret coping. People may use

different methods to deal with their action regrets and probably use different strategies to cope-up with their inactions regrets. Moreover, it is also possible that people deploy different strategies for different kinds of regrets, such as financial regret may require different ways than parenting or marriage regrets. The future work may focus more on coping and explore in relation to various kinds of regret.

- The research could not properly explore the impact of regret on individuals, given the scope of the present thesis. That is, how these regrets change/shape individuals, their way of living, thinking, decision-making, personality, or even their selves. More studies are required to understand the impact of regret incidents in humans' lives.

### **Implications**

The present research is an attempt to understand the regret experiences of Indian older adults. The research contributes significantly to the existing knowledge about regret, especially regret in old age. Besides, this research also has several practical implications. The first and most important implication comes from the results of regret coping. The findings show many coping strategies for dealing with regrets, which can be useful for people who cannot come out from their regrets. The present work also shows that when and what factors influence turning regret into a learning experience. This could be helpful not only for the concerned person but for others as well in getting some positive insights out of regrets. The study also shows the contribution of personal negligence and willful ignorance in regret experiences, especially in health regrets. As we can see that one of the biggest regrets in old age is related to health, therefore, the findings of the present work could be as a reference in creating awareness to make young and middle adults avoid such mistakes and hence save from future regrets. The results also suggest that in old age, irrespective of

gender, people regret more from their inactions than actions. Hence people need to be encouraged to take action, follow their dream and desires otherwise, in the last phase of their lives, would long for such desires and would think that it would have been better if they 'would have done' it in life. The research also shows an important role of regret attribution in regret experiences, therefore, by changing/modifying attribution styles we can make people deal with their regret more effectively. Finally, the study suggests that regret negatively affects individuals' well-being. Therefore, one possible implication of this study could be increasing the well-being of older adults by helping them in reducing their regret feelings and regret involvement and increasing adaptive coping and learning from their regrets.

## References

- Allport, G. W., & Ross, J. M. (1967). Personal religious orientation and prejudice. *Journal of Personality and Social Psychology*, 5(4), 432-443.  
<https://doi.org/10.1037/h0021212>
- Badsiwal, R. (2015). Family in urban settings: changes and continuity. *ZENITH International Journal of Multidisciplinary Research*, 5(4), 70-80.
- Bauer, I., Wrosch, C., & Jobin, J. (2008). I'm better off than most other people: the role of social comparisons for coping with regret in young adulthood and old age. *Psychology and Aging*, 23(4), 800-811. <https://doi.org/10.1037/a0014180>
- Becerra Pérez, M. M., Menear, M., Brehaut, J. C., & Légaré, F. (2016). Extent and predictors of decision regret about health care decisions: A systematic review. *Medical Decision Making*, 36(6), 777-790.  
<https://doi.org/10.1177/0272989X16636113>
- Beike, D. R., Markman, K. D., & Karadogan, F. (2009). What we regret most are lost opportunities: A theory of regret intensity. *Personality and Social Psychology Bulletin*, 35(3), 385-397. <https://doi.org/10.1177/0146167208328329>
- Bell, D. E. (1983). Risk premiums for decision regret. *Management Science*, 29(10), 1156-1166. <https://doi.org/10.1287/mnsc.29.10.1156>
- Benthin, A., Slovic, P., Moran, P., Severson, H., Mertz, C. K., & Gerrard, M. (1995). Adolescent health-threatening and health-enhancing behaviors: A study of word association and imagery. *Journal of Adolescent Health*, 17(3), 143-152.  
[https://doi.org/10.1016/1054-139X\(95\)00111-5](https://doi.org/10.1016/1054-139X(95)00111-5)
- Blix, B. H., Hamran, T., & Normann, H. K. (2015). Roads not taken: A narrative positioning analysis of older adults' stories about missed opportunities.

*Journal of Aging Studies*, 35, 169-177.

<https://doi.org/10.1016/j.jaging.2015.08.009>

Boswell, G. H., Kahana, E., & Dilworth-Anderson, P. (2006). Spirituality and healthy lifestyle behaviors: Stress counter-balancing effects on the well-being of older adults. *Journal of Religion and Health*, 45(4), 587-602.

<https://doi.org/10.1007/s10943-006-9060-7>

Brehaut, J. C., O'Connor, A. M., Wood, T. J., Hack, T. F., Siminoff, L., Gordon, E., & Feldman-Stewart, D. (2003). Validation of a decision regret scale. *Medical Decision Making*, 23(4), 281-292. <https://doi.org/10.1177/0272989X03256005>

Brehm, J. W. (1966). *A theory of psychological reactance*. Academic Press.

Butler, R. N. (1963). The life review: An interpretation of reminiscence in the aged. *Psychiatry, Interpretation and Biological Processes*, 26(1), 65-76.

<https://doi.org/10.1080/00332747.1963.11023339>

Calhoun, C. (1989). Responsibility and reproach. *Ethics*, 99(2), 389-406.

<https://doi.org/10.1093/acprof:oso/9780199328796.003.0008>

Carr, A. (2011). *Positive psychology: The science of happiness and human strengths*. Routledge.

Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behavior*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139174794>

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56(2), 267-283. <https://doi.org/10.1037/0022-3514.56.2.267>

Chapman, G. B., & Coups, E. J. (2006). Emotions and preventive health behavior: worry, regret, and influenza vaccination. *Health Psychology*, 25(1), 82-90.

<https://doi.org/10.1037/0278-6133.25.1.82>

- Choi, N. G., & Jun, J. (2009). Life regrets and pride among low-income older adults: relationships with depressive symptoms, current life stressors and coping resources. *Aging and Mental Health, 13*(2), 213-225.  
<https://doi.org/10.1080/13607860802342235>
- Clark, J. A., Wray, N. P., & Ashton, C. M. (2001). Living with treatment decisions: regrets and quality of life among men treated for metastatic prostate cancer. *Journal of Clinical Oncology, 19*(1), 72-80.  
<https://doi.org/10.1200/JCO.2001.19.1.72>
- Connolly, T., & Zeelenberg, M. (2002). Regret in decision making. *Current Directions in Psychological Science, 11*(6), 212-216.  
<https://doi.org/10.1111/1467-8721.00203>
- Connolly, T., Ordóñez, L. D., & Coughlan, R. (1997). Regret and responsibility in the evaluation of decision outcomes. *Organizational Behavior and Human Decision Processes, 70*(1), 73-85. <https://doi.org/10.1006/obhd.1997.2695>
- Cross, S. E., & Madson, L. (1997). Elaboration of models of the self: Reply to Baumeister and Sommer (1997) and Martin and Ruble (1997). *Psychological Bulletin, 122*(1), 51-55. <https://doi.org/10.1037/0033-2909.122.1.51>
- Das Gupta, S., Mukherjee, S., Singh, S., Pande, R., & Basu, S. (2008). *Knot ready: Documenting initiatives to delay early marriage*. International Center for Research on Women (ICRW).
- Davidai, S., & Gilovich, T. (2018). The ideal road not taken: The self-discrepancies involved in people's most enduring regrets. *Emotion, 18*(3), 439-452.  
<https://doi.org/10.1037/emo0000326>
- Deering, J. H. (1886). *The law of negligence*. Bancroft-Whitney Co.

- DeGenova, M. K. (1992). If you had your life to live over again: What would you do differently? *The International Journal of Aging and Human Development*, 34(2), 135-143. <https://doi.org/10.2190/KTFT-59PA-C5K1-WTLJ>
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75. [https://doi.org/10.1207/s15327752jpa4901\\_13](https://doi.org/10.1207/s15327752jpa4901_13)
- Diener, E., & Fujita, F. (1995). Resources, personal strivings, and subjective well-being: a nomothetic and idiographic approach. *Journal of Personality and Social Psychology*, 68(5), 926-935. <https://doi.org/10.1037/0022-3514.68.5.926>
- El Achhab, Y., El Ammari, A., El Kazdough, H., Najdi, A., Berraho, M., Tachfouti, N., Lamri, D., El Fakir, S., & Nejjari, C. (2016). Health risk behaviors amongst school adolescents: Protocol for a mixed-methods study. *BMC Public Health*, 16(1), 1-6. <https://doi.org/10.1186/s12889-016-3873-4>
- Erikson, E. H. (1982). The life cycle completed: A review. *Ageing and Society*, 4(3), 375-377. <https://doi.org/10.1017/S0144686X00010965>
- Feeney, A., Gardiner, D. R., Johnston, K., Jones, E., & McEvoy, R. J. (2005). Is regret for inaction relatively self-enhancing?. *Applied Cognitive Psychology*, 19(6), 761-777. <https://doi.org/10.1002/acp.1113>
- Fels, M. (2015). On the value of information: Why people reject medical tests. *Journal of Behavioural and Experimental Economics*, 56(C), 1-12. <https://doi.org/10.1016/j.socec.2015.02.006>
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117-140. <https://doi.org/10.1177/001872675400700202>



- Fontaine, J. R., Scherer, K. R., Roesch, E. B., & Ellsworth, P. C. (2007). The world of emotions is not two-dimensional. *Psychological Science, 18*(12), 1050-1057.  
<https://doi.org/10.1111/j.1467-9280.2007.02024.x>
- Frost, R. O., & Shows, D. L. (1993). The nature and measurement of compulsive indecisiveness. *Behaviour Research and Therapy, 31*(7), 683-692.  
[https://doi.org/10.1016/0005-7967\(93\)90121-A](https://doi.org/10.1016/0005-7967(93)90121-A)
- Gao, H. M., Zhang, Y., Xu, Y., & Wang, F. (2013). The underlying development process of regret: Influencing factors, after effects and prospects (in Chinese). *Psychological Exploration, 33*(2), 110-117.  
<http://www.cnki.net/KCMS/detail/>
- Gibbons, F. X., & Buunk, B. P. (1999). Individual differences in social comparison: development of a scale of social comparison orientation. *Journal of Personality and Social Psychology, 76*(1), 129-142.  
<https://doi.org/10.1037/0022-3514.76.1.129>
- Gigerenzer, G., & Garcia-Retamero, R. (2017). Cassandra's regret: The psychology of not wanting to know. *Psychological Review, 124*(2), 179-196.  
<http://dx.doi.org/10.1037/rev0000055>
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Harvard University Press.
- Gilovich, T., & Medvec, V. H. (1994). The temporal pattern to the experience of regret. *Journal of Personality and Social Psychology, 67*(3), 357-365.  
<https://doi.org/10.1037/0022-3514.67.3.357>
- Gilovich, T., & Medvec, V. H. (1995a). The experience of regret: What, when, and why. *Psychological Review, 102*(2), 379-395.  
<https://doi.org/10.1037/0033-295X.102.2.379>

- Gilovich, T., & Medvec, V. H. (1995b). Some counterfactual determinants of satisfaction and regret. In N. J. Roese & J. M. Olson (Eds.), *What might have been: The social psychology of counterfactual thinking* (pp. 259-282). Psychology Press.
- Gilovich, T., Medvec, V. H., & Chen, S. (1995). Commission, omission, and dissonance reduction: Coping with regret in the “Monty Hall” problem. *Personality and Social Psychology Bulletin*, *21*(2), 182-190. <https://doi.org/10.1177/0146167295212008>
- Gilovich, T., Medvec, V. H., & Kahneman, D. (1998). Varieties of regret: A debate and partial resolution. *Psychological Review*, *105*(3), 602-605. <https://doi.org/10.1037/0033-295X.105.3.602>
- Gilovich, T., Wang, R. F., Regan, D., & Nishina, S. (2003). Regrets of Action and Inaction Across Cultures. *Journal of Cross-Cultural Psychology*, *34*(1), 61-71. <https://doi.org/10.1177/0022022102239155>
- Ginsberg, M. L. (1986). Counterfactuals. *Artificial Intelligence*, *30*(1), 35-79. [https://doi.org/10.1016/0004-3702\(86\)90067-6](https://doi.org/10.1016/0004-3702(86)90067-6)
- Goldberg, D., & Williams, P. (1988). A user’s guide to the General Health Questionnaire. NFER-Nelson
- Gross, M., & McGoey, L. (Eds.). (2015). *Routledge international handbook of ignorance studies*. Routledge.
- Grossman, Z., & van der Weele, J. J. (2017). Self-image and willful ignorance in social decisions. *Journal of the European Economic Association*, *15*(1), 173-217. <https://doi.org/10.1093/jeea/jvw001>

- Guttentag, R., & Ferrell, J. (2004). Reality compared with its alternatives: Age differences in judgments of regret and relief. *Developmental Psychology*, 40(5), 764-775. <https://doi.org/10.1037/0012-1649.40.5.764>
- Hale, W. B. (1896). *Handbook on the Law of Torts* (Vol. 16). West Publishing Company.
- Harvard Men's Health Watch (2010). Mars vs. Venus: The gender gap in health. *Harvard Health Publishing*.  
[https://www.health.harvard.edu/newsletter\\_article/mars-vs-venus-the-gender-gap-in-health](https://www.health.harvard.edu/newsletter_article/mars-vs-venus-the-gender-gap-in-health)
- Hattiangadi, N., Medvec, V. H., & Gilovich, T. (1995). Failing to act: regrets of Terman's geniuses. *International Journal of Aging and Human Development*, 40(3), 175-185. <https://doi.org/10.2190/4U4E-N77B-PKJ2-CJXM>
- Haveman-Nies, A., De Groot, L. C., & Van Staveren, W. A. (2003). Dietary quality, lifestyle factors and healthy ageing in Europe: the SENECA study. *Age and Ageing*, 32(4), 427-434. <https://doi.org/10.1093/ageing/32.4.427>
- Heckhausen, J., & Brim, O. G. (1997). Perceived problems for self and others: Selfprotection by social downgrading throughout adulthood, *Psychology and Aging*, 12(4), 610–619. <https://doi.org/10.1037/0882-7974.12.4.610>
- Heckhausen, J., Wrosch, C., & Schulz, R. (2010). A motivational theory of life-span development. *Psychological Review*, 117(1), 32-60.  
<https://doi.org/10.1037/a0017668>
- Heffernan, M. (2011). *Willful blindness: Why we ignore the obvious at our peril*. Doubleday Canada.

- Hertwig, R., & Engel, C. (2016). Homo Ignorans: Deliberately choosing not to know. *Perspectives on Psychological Science*, *11*(3), 359-372.  
<https://doi.org/10.1177/1745691616635594>
- Hofstadter, D. R. (1985). *Metamagical themas: Questing for the essence of mind and pattern*. Basic Books.
- House, J. S., Kahn, R. L., McLeod, J. D., & Williams, D. (1985). Measures and concepts of social support. In S. Cohen, & S. L. Syme (Eds.), *Social support and health* (pp. 83–108). Academic Press.
- Howell, J. L., Crosier, B. S., & Shepperd, J. A. (2014). Does lacking threat-management resources increase information avoidance? A multi-sample, multi-method investigation. *Journal of Research in Personality*, *50*, 102-109.  
<https://doi.org/10.1016/j.jrp.2014.03.003>
- Huang, W. H., & Tseng, L. J. (2007). How multiple reference points influence managers' post-decisional regret. *Social Behavior and Personality: An International Journal*, *35*(4), 487-498.  
<https://doi.org/10.2224/sbp.2007.35.4.487>
- Hur, T., Roese, N. J., & Namkoong, J. E. (2009). Regrets in the East and West: Role of intrapersonal versus interpersonal norms. *Asian Journal of Social Psychology*, *12*(2), 151-156. <https://doi.org/10.1111/j.1467-839X.2009.01275.x>
- Hurrelmann, K., & Richter, M. (2006). Risk behaviour in adolescence: The relationship between developmental and health problems. *Journal of Public Health*, *14*(1), 20-28. <https://doi.org/10.1007/s10389-005-0005-5>
- Iyer, A. (2014). *The great Indian obsession: The untold story of India's engineers*. Notion Press.

- Jackson, C. A., Henderson, M., Frank, J. W., & Haw, S. J. (2012). An overview of prevention of multiple risk behaviour in adolescence and young adulthood. *Journal of Public Health, 34*(suppl\_1), i31-i40. <https://doi.org/10.1093/pubmed/fdr113>
- Johnson-Laird, P. N., & Byrne, R. M. J. (1991). *Deduction. Essays in cognitive psychology*. Lawrence Erlbaum Associates.
- Jokisaari, M. (2003). Regret appraisals, age, and subjective well-being. *Journal of Research in Personality, 37*(6), 487-503. [https://doi.org/10.1016/S0092-6566\(03\)00033-3](https://doi.org/10.1016/S0092-6566(03)00033-3)
- Jokisaari, M. (2004). Regrets and subjective well-being: A life-course approach. *Journal of Adult Development, 11*(4), 281-288. <https://doi.org/10.1023/B:JADE.0000044531.11605.d5>
- Kahneman, D. (1995). *Varieties of counterfactual thinking*. In N. J. Roese & J. M. Olson (Eds.), *What might have been: The social psychology of counterfactual thinking* (pp. 375–396). Psychology Press.
- Kahneman, D., & Miller, D. T. (1986). Norm theory: Comparing reality to its alternatives. *Psychological Review, 93*(2), 136-153. <https://doi.org/10.1037/0033-295X.93.2.136>
- Kahneman, D., & Tversky, A. (1982). The psychology of preferences. *Scientific American, 246*(1), 160-173. <https://doi.org/10.1038/scientificamerican0182-160>
- Kelsey, D., & Schepanski, A. (1991). Regret and disappointment in taxpayer reporting decisions: An experimental study. *Journal of Behavioral Decision Making, 4*(1), 33-53. <https://doi.org/10.1002/bdm.3960040104>

- Kinnier, R. T., & Metha, A. T. (1989). Regrets and priorities at three stages of life. *Counselling and Values*, 33(3), 182-193. <https://doi.org/10.1002/j.2161-007X.1989.tb00761.x>
- Komiya, A., Miyamoto, Y., Watabe, M., & Kusumi, T. (2011). Cultural grounding of regret: Regret in self and interpersonal contexts. *Cognition & Emotion*, 25(6), 1121-1130. <https://doi.org/10.1080/02699931.2010.516962>
- Kovacs, M., Goldston, D., Obrosky, D. S., & Iyengar, S. (1992). Prevalence and predictors of pervasive noncompliance with medical treatment among youths with insulin-dependent diabetes mellitus. *Journal of the American Academy of Child & Adolescent Psychiatry*, 31(6), 1112-1119. <https://doi.org/10.1097/00004583-199211000-00020>
- Kramarow, E. A., Lentzner, H. R., Saydah, S. H., Weeks, J. D., & Rooks, R. N. (1999). *Health, United States, 1999; with health and aging chartbook*. National Centre for Health Statistics.
- Kuhnle, C., & Sinclair, M. (2011). Decision mode as an antecedent of flow, motivational interference, and regret. *Learning and Individual Differences*, 21(2), 239-243. <https://doi.org/10.1016/j.lindif.2010.11.024>
- Landman, J. (1987a). Regret: A theoretical and conceptual analysis. *Journal for the Theory of Social Behaviour*, 17(2), 135-160. <https://doi.org/10.1111/j.1468-5914.1987>
- Landman, J. (1987b). Regret and elation following action and inaction: Affective response to positive versus negative outcomes. *Personality and Social Psychology Bulletin*, 13(4), 534-536.
- Landman, J. (1993). *Regret: The persistence of the possible*. Oxford University Press. <https://doi.org/10.1002/bdm.3960080308>

- Landman, J., & Manis, J. D. (1992). What might have been: Counterfactual thought concerning personal decisions. *British Journal of Psychology*, 83(4), 473-477. <https://doi.org/10.1111/j.2044-8295.1992.tb02453.x>
- Landman, J., Vandewater, E. A., Stewart, A. J., & Malley, J. E. (1995). Missed opportunities: Psychological ramifications of counterfactual thought in midlife women. *Journal of Adult Development*, 2(2), 87-97. <https://doi.org/10.1007/BF02251257>
- Lang, F. R., & Carstensen, L. L. (2002). Time counts: Future time perspective, goals, and social relationships. *Psychology and Aging*, 17(1), 125-139. <https://doi.org/10.1037/0882-7974.17.1.125>
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.
- Lecci, L., Okun, M. A., & Karoly, P. (1994). Life regrets and current goals as predictors of psychological adjustment. *Journal of Personality and Social Psychology*, 66(4), 731-741. <https://doi.org/10.1037/0022-3514.66.4.731>
- Leder, S., Florack, A., & Keller, J. (2015). Self-regulation and protective health behaviour: How regulatory focus and anticipated regret are related to vaccination decisions, *Psychology & Health*, 30(2), 165-188. <https://doi.org/10.1080/08870446.2014.954574>
- Levinson, D. J., & Levinson, J. D. (1996). *The seasons of a woman's life*. Ballantine Books.
- Lloyd, A., Haraldsdottir, E., Kendall, M., Murray, S. A., & McCormack, B. (2020). Stories from people living with frailty. *Ageing & Society*, 40(12), 2732-2753. <https://doi.org/10.1017/S0144686X19000825>

- Loef, M., & Walach, H. (2012). The combined effects of healthy lifestyle behaviors on all-cause mortality: A systematic review and meta-analysis. *Preventive Medicine, 55*(3), 163-170. <https://doi.org/10.1016/j.ypmed.2012.06.017>
- Loomes, G., & Sugden, R. (1982). Regret theory: An alternative theory of rational choice under uncertainty. *The Economic Journal, 92*(368), 805-824. <https://www.jstor.org/stable/2232669>
- Loomes, G., & Sugden, R. (1984). The importance of what might have been. In O. Hagen, & F. Wenstøp (Eds.), *Progress in utility and risk theory* (Vol. 42) (pp. 219-235). Springer. [https://doi.org/10.1007/978-94-009-6351-1\\_7](https://doi.org/10.1007/978-94-009-6351-1_7)
- Loomes, G., & Sugden, R. (1987). Testing for regret and disappointment in choice under uncertainty. *The Economic Journal, 97*(suppl\_1), 118-129. <https://www.jstor.org/stable/pdf/3038234>.
- Loprinzi, P. D. (2015). Health-enhancing multi behavior and medical multimorbidity. *Mayo Clinic Proceedings, 90*(5), 624-632. <http://dx.doi.org/10.1016/j.mayocp.2015.02.006>
- Luce, R. D., & Raiffa, H. (1957). *Games and decisions: Introduction and critical survey*. Wiley.
- Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research, 46*(2), 137-155. <https://doi.org/10.1023/A:1006824100041>
- Markman, K. D., McMullen, M. N., & Elizaga, R. A. (2008). Counterfactual thinking, persistence, and performance: A test of the reflection and evaluation model. *Journal of Experimental Social Psychology, 44*(2), 421-428. <https://doi.org/10.1016/j.jesp.2007.01.001>



- McAuley, E., Duncan, T. E., & Russell, D. W. (1992). Measuring causal attributions: The revised causal dimension scale (CDSII). *Personality and Social Psychology Bulletin*, 18(5), 566-573.  
<https://doi.org/10.1177/0146167292185006>
- Melnyk, D., & Shepperd, J. A. (2012). Avoiding risk information about breast cancer. *Annals of Behavioral Medicine*, 44(2), 216-224.  
<https://doi.org/10.1007/s12160-012-9382-5>
- Millstein, S. G., Irwin, C. E., Adler, N. E., Cohn, L. D., Kegeles, S. M., & Dolcini, M. M. (1992). Health-risk behaviors and health concerns among young adolescents. *Pediatrics*, 89(3), 422-428.  
<https://pediatrics.aappublications.org/content/89/3/422>
- Moffatt, S., & Heaven, B. (2017). Planning for uncertainty: Narratives on retirement transition experiences. *Ageing & Society*, 37(5), 879-898.  
<https://doi.org/10.1017/S0144686X15001476>
- Morris, M. W., & Moore, P. C. (2000). The lessons we (don't) learn: Counterfactual thinking and organizational accountability after a close call. *Administrative Science Quarterly*, 45(4), 737-765. <https://doi.org/10.2307/2667018>
- Morrison, M., & Roese, N. J. (2011). Regrets of the typical American: Findings from a nationally representative sample. *Social Psychological and Personality Science*, 2(6), 576-583. <https://doi.org/10.1177/1948550611401756>
- Naar-King, S., Parsons, J. T., Murphy, D. A., Chen, X., Harris, D. R., & Belzer, M. E. (2009). Improving health outcomes for youth living with the human immunodeficiency virus: a multisite randomized trial of a motivational intervention targeting multiple risk behaviors. *Archives of Pediatrics &*

*Adolescent Medicine*, 163(12), 1092-1098.

<https://doi.org/10.1001/archpediatrics.2009.212>

Newall, N. E., Chipperfield, J. G., Daniels, L. M., Hladkyj, S., & Perry, R. P. (2009).

Regret in later life: Exploring relationships between regret frequency, secondary interpretive control beliefs, and health in older individuals. *The International Journal of Aging & Human Development*, 68(4), 261-288.

<https://doi.org/10.2190/AG.68.4.a>

Ng, G. C., Mohamed, S., Sulaiman, A. H., & Zainal, N. Z. (2017). Anxiety and depression in cancer patients: The association with religiosity and religious coping. *Journal of Religion and Health*, 56(2), 575-590.

<https://doi.org/10.1007/s10943-016-0267-y>

Owen, D. G. (2007). The five elements of negligence. *Hofstra Law Review*, 35(4), 1-

16. <http://scholarlycommons.law.hofstra.edu/hlr/vol35/iss4/1>

Parker, D., Stradling, S. G., & Manstead, A. S. (1996). Modifying beliefs and attitudes to exceeding the speed limit: an intervention study based on the theory of planned behavior. *Journal of Applied Social Psychology*, 26(1), 1-

19. <https://doi.org/10.1111/j.1559-1816.1996.tb01835.x>

Patrick, V. M., Lancellotti, M., & De Mello, G. (2009). Coping with non-purchase:

Managing the stress of inaction regret. *Journal of Consumer Psychology*,

19(3), 463-472. <https://doi.org/10.1016/j.jcps.2009.04.006>

Peltzer, K., Pengpid, S., Yung, T. K., Aounallah-Skhiri, H., & Rehman, R. (2016).

Comparison of health risk behavior, awareness, and health benefit beliefs of health science and non-health science students: An international study. *Nursing & Health Sciences*, 18(2), 180-187.

<https://doi.org/10.1111/nhs.12242>

- Persoskie, A., Ferrer, R. A., & Klein, W. M. (2014). Association of cancer worry and perceived risk with doctor avoidance: an analysis of information avoidance in a nationally representative US sample. *Journal of Behavioral Medicine*, 37(5), 977-987. <https://doi.org/10.1007/s10865-013-9537-2>
- Righetti, F., & Visserman, M. (2018). I gave too much: Low self-esteem and the regret of sacrifices. *Social Psychological and Personality Science*, 9(4), 453-460. <https://doi.org/10.1177/1948550617707019>
- Roese, N. J. (1994). The functional basis of counterfactual thinking. *Journal of Personality and Social Psychology*, 66(5), 805-818. <https://doi.org/10.1037/0022-3514.66.5.805>
- Roese, N. J. (1997). Counterfactual thinking. *Psychological Bulletin*, 121(1), 133-148. <http://dx.doi.org/10.1037/0033-2909.121.1.133>
- Roese, N. J. (2005). *If only: How to turn regret into opportunity*. Broadway Books.
- Roese, N. J., & Olson, J. M. (1995). Counterfactual thinking: A critical overview. In N. J. Roese & J. M. Olson (Eds.), *What might have been: The social psychology of counterfactual thinking* (pp. 1-55). Psychology Press.
- Roese, N. J., & Summerville, A. (2005). What we regret most... and why. *Personality and Social Psychology Bulletin*, 31(9), 1273-1285. <https://doi.org/10.1177/0146167205274693>
- Roese, N. J., Hur, T., & Pennington, G. L. (1999). Counterfactual thinking and regulatory focus: Implications for action versus inaction and sufficiency versus necessity. *Journal of Personality and Social Psychology*, 77(6), 1109-1120. <https://doi.org/10.1037/0022-3514.77.6.1109>
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.

- Rye, M. S., Cahoon, M. B., Ali, R. S., & Daftary, T. (2008). Development and validation of the counterfactual thinking for negative events scale. *Journal of Personality Assessment*, 90(3), 261-269.  
<https://doi.org/10.1080/00223890701884996>
- Saffrey, C., Summerville, A. & Roese, N. J. (2008). Praise for regret: People value regret above other negative emotions. *Motivation and Emotion*, 32(1), 46-54.  
<https://doi.org/10.1007/s11031-008-9082-4>
- Santra, S., & Giri, V. N. (2017). Impact of career regret on career outcomes of information technology (IT) professionals in India. *ASBBS Proceedings*, 24(1), 481-489.
- Savage, L. J. (1951). The theory of statistical decision. *Journal of the American Statistical Association*, 46(253), 55-67. <https://doi.org/10.2307/2280094>
- Scheier, M. F., Weintraub, J. K., & Carver, C. S. (1986). Coping with stress: Divergent strategies of optimists and pessimists. *Journal of Personality and Social Psychology*, 51(6), 1257-1264. <https://doi.org/10.1037/0022-3514.51.6.1257>
- Scherer, K. R., & Wallbott, H. G. (1994). Evidence for universality and cultural variation of differential emotion response patterning. *Journal of Personality and Social Psychology*, 66(2), 310-328. <https://doi.org/10.1037/0022-3514.66.2.310>
- Schulz, R., & Heckhausen, J. (1996). A life span model of successful aging. *American Psychologist*, 51(7), 702-714. <https://doi.org/10.1037/0003-066X.51.7.702>
- Schwarzer, R. (1999). Self-regulatory processes in the adoption and maintenance of health behaviors. *Journal of Health Psychology*, 4(2), 115-127.  
<https://doi.org/10.1177/135910539900400208>

- Schwarzer, R., & Renner, B. (2000). Social-cognitive predictors of health behavior: Action self-efficacy and coping self-efficacy. *Health Psychology, 19*(5), 487-495. <http://dx.doi.org/10.1037/0278-6133.19.5.487>
- Shepperd, J. A., & Howell, J. L. (2015). Responding to psychological threats with deliberate ignorance: Causes and remedies. In P. J. Carroll, R. M. Arkin, & A. L. Wichman (Eds.), *Handbook of personal security* (pp. 257-274). Psychology Press.
- Simonson, I. (1992). The influence of anticipating regret and responsibility on purchase decisions. *Journal of Consumer Research, 19*(1), 105-118. <https://doi.org/10.1086/209290>
- Singh, A. (2018). Sterilization regret among married women in India: Trends, patterns and correlates. *International Perspectives on Sexual and Reproductive Health, 44*(4), 167-176. <https://www.jstor.org/stable/10.1363/44e7218>
- Smerecnik, C. M. R., & Ruiter, R. A. C. (2010). Fear appeals in HIV prevention: The role of anticipated regret. *Psychology, Health & Medicine, 15*(5), 550-559. <https://doi.org/10.1080/13548506.2010.498888>
- Snyder, C. R., Ford, C. E., & Harris, R. N. (1987). The effects of theoretical perspective on the analysis of coping with negative life events. In C. R. Snyder, & C. E. Ford (Eds.), *Coping with negative life events: Clinical and social psychological perspectives* (pp.3-13). Plenum.
- Staudinger, U. M. (2001). Life reflection: A social–cognitive analysis of life review. *Review of General Psychology, 5*(2), 148-160. <https://doi.org/10.1037/1089-2680.5.2.148>
- Stigler, G. J. (1961). The economics of information. *Journal of Political Economy, 69*(3), 213-225. <https://doi.org/10.1086/258464>

- Strough, J., & Parker, A. M. (2014). Getting older isn't all that bad: Better decisions and coping when facing "sunk costs". *Psychology and Aging, 29*(3), 642-647. <https://doi.org/10.1037/a0036308>
- Strough, J., Berg, C. A., & Sansone, C. (1996). Goals for solving everyday problems across the life span: Age and gender differences in the salience of interpersonal concerns. *Developmental Psychology, 32*(6), 1106-1115. <https://doi.org/10.1037/0012-1649.32.6.1106>
- Sweeny, K., Melnyk, D., Miller, W., & Shepperd, J. A. (2010). Information avoidance: Who, what, when, and why. *Review of General Psychology, 14*(4), 340-353. <https://doi.org/10.1037/a0021288>
- Teigen, K. H. (1998). Hazards mean luck: Counterfactual thinking in reports of dangerous situations and careless behavior. *Scandinavian Journal of Psychology, 39*(4), 235-248. <https://doi.org/10.1111/1467-9450.00083>
- Tzini, K., & Jain, K. (2018). Unethical behavior under relative performance evaluation: Evidence and remedy. *Human Resource Management, 57*(6), 1399-1413. <https://doi.org/10.1002/hrm.21913>
- Ueichi, H., & Kusumi, T. (2004). Change in feelings of regret over time: Relation to decision-making style, behavior, and coping methods. *Japanese Journal of Psychology, 74*(6), 487-495. <https://doi.org/10.4992/jjpsy.74.487>
- Ungar, S. (2008). Ignorance as an under-identified social problem 1. *The British Journal of Sociology, 59*(2), 301-326. <https://doi.org/10.1111/j.1468-4446.2008.00195.x>
- Uskul, A. K., Keller, J., & Oyserman, D. (2008). Regulatory fit and health behavior. *Psychology & Health, 23*(3), 327-346. <https://doi.org/10.1080/14768320701360385>

- Van Dijk, E., & Zeelenberg, M. (2005). On the psychology of 'if only': Regret and the comparison between factual and counterfactual outcomes. *Organizational Behavior and Human Decision Processes*, 97(2), 152-160.  
<https://doi.org/10.1016/j.obhdp.2005.04.001>
- Van Harreveld, F., Van Der Pligt, J., & Nordgren, L. (2008). The relativity of bad decisions: Social comparison as a means to alleviate regret. *British Journal of Social Psychology*, 47(1), 105-117.  
<https://doi.org/10.1348/014466607X260134>
- Van Putten, M., Zeelenberg, M., & Van Dijk, E. (2009). Dealing with missed opportunities: Action vs. state orientation moderates inaction inertia. *Journal of Experimental Social Psychology*, 45(4), 808-815.  
<https://doi.org/10.1016/j.jesp.2009.05.011>
- Västfjäll, D., Peters E., Bjälkebring P. (2011). The experience and regulation of regret across the adult life span. In I. Nyklíček, A. Vingerhoets, & M. Zeelenberg (Eds.) *Emotion regulation and well-being* (pp. 165-180), Springer.
- von Bothmer, M. I., & Fridlund, B. (2005). Gender differences in health habits and in motivation for a healthy lifestyle among Swedish university students. *Nursing & Health Sciences*, 7(2), 107-118.  
<https://doi.org/10.1111/j.14422018.2005.00227.x>
- Wagenaar, W. A. (1992). Risk taking and accident causation. In J. F. Yates (Ed.), *Wiley series in human performance and cognition. Risk-taking behavior* (p. 257–281). John Wiley & Sons.
- Weinstein, N. D., Brewer, N. T., Chapman, G. B., Gibbons, F. X., Gerrard, M., & McCaul, K. D., (2007). Meta-analysis of the relationship between risk

- perception and health behavior: The example of vaccination. *Health Psychology, 26*(2), 136-145. <https://doi.org/10.1037/0278-6133.26.2.136>
- Wells, G. L., & Gavanski, I. (1989). Mental simulation of causality. *Journal of Personality and Social Psychology, 56*(2), 161-169.  
<https://doi.org/10.1037/0022-3514.56.2.161>
- White, J. B., Langer, E. J., Yariv, L., & Welch, J. C. (2006). Frequent social comparisons and destructive emotions and behaviors: The dark side of social comparisons. *Journal of Adult Development, 13*(1), 36-44.  
<https://doi.org/10.1007/s10804-006-9005-0>
- Williams, J. C. (1991). Gender wars: Selfless women in the republic of choice. *New York University Law Review, 66*, 1559-1634.  
[http://repository.uchastings.edu/faculty\\_scholarship/825](http://repository.uchastings.edu/faculty_scholarship/825)
- Wills, T. A. (1981). Downward comparison principles in social psychology. *Psychological Bulletin, 90*(2), 245-271. <https://doi.org/10.1037/0033-2909.90.2.245>
- Wong, P. T., & Watt, L. M. (1991). What types of reminiscence are associated with successful aging? *Psychology and Aging, 6*(2), 272-279.  
<https://doi.org/10.1037/0882-7974.6.2.272>
- Wrosch, C., & Heckhausen, J. (2002). Perceived control of life regrets: Good for young and bad for old adults. *Psychology and Aging, 17*(2), 340-350  
<https://doi.org/10.1037/0882-7974.17.2.340>
- Wrosch, C., Bauer, I., & Scheier, M. F. (2005). Regret and quality of life across the adult life span: the influence of disengagement and available future goals. *Psychology and Aging, 20*(4), 657-670.  
<https://doi.org/10.1037/0882-7974.20.4.657>



- Wrosch, C., Bauer, I., Miller, G. E., & Lupien, S. (2007). Regret intensity, diurnal cortisol secretion, and physical health in older individuals: Evidence for directional effects and protective factors. *Psychology and Aging, 22*(2), 319-330. <https://doi.org/10.1037/0882-7974.22.2.319>
- Wrosch, C., Heckhausen, J., & Lachman, M. E. (2000). Primary and secondary control strategies for managing health and financial stress across adulthood. *Psychology and Aging, 15*(3), 387-399. <https://doi.org/10.1037/0882-7974.15.3.387>
- Wrosch, C., Scheier, M. F., Miller, G. E., Schulz, R., & Carver, C. S. (2003). Adaptive self-regulation of unattainable goals: Goal disengagement, goal reengagement, and subjective well-being. *Personality and Social Psychology Bulletin, 29*(12), 1494-1508. <https://doi.org/10.1177/0146167203256921>
- Zeelenberg, M. (1998). Emotional reactions to the outcomes of decisions: The role of counterfactual thought in the experience of regret and disappointment. *Organizational Behavior and Human Decision Processes, 75*(2), 117-141. <https://doi.org/10.1006/obhd.1998.2784>
- Zeelenberg, M. (1999). The use of crying over spilled milk: A note on the rationality and functionality of regret. *Philosophical Psychology, 12*(3), 325-340. <https://doi.org/10.1080/095150899105800>
- Zeelenberg, M., & Breugelmans, S. M. (2008). The role of interpersonal harm in distinguishing regret from guilt. *Emotion, 8*(5), 589-596. <https://doi.org/10.1037/a0012894>
- Zeelenberg, M., & Pieters, R. (1999). Comparing service delivery to what might have been: Behavioral responses to regret and disappointment. *Journal of Service Research, 2*(1), 86-97. <https://doi.org/10.1177/109467059921007>

- Zeelenberg, M., & Pieters, R. (2007). A theory of regret regulation 1.0. *Journal of Consumer Psychology, 17*(1), 3-18.  
[https://doi.org/10.1207/s15327663jcp1701\\_3](https://doi.org/10.1207/s15327663jcp1701_3)
- Zeelenberg, M., Beattie, J., Van der Pligt, J., & De Vries, N. K. (1996). Consequences of regret aversion: Effects of expected feedback on risky decision making. *Organizational Behavior and Human Decision Processes, 65*(2), 148-158.  
<https://doi.org/10.1006/obhd.1996.0013>
- Zeelenberg, M., Inman, J. J., & Pieters, R. G. M. (2001). What we do when decisions go awry: Behavioral consequences of experienced regret. In E. U. Weber, J. Baron, & G. Loomes (Eds.), *Cambridge series on judgement and decision making. Conflict and trade-offs in decision making* (pp. 136-155). Cambridge University Press.
- Zeelenberg, M., Van den Bos, K., Van Dijk, E., & Pieters, R. (2002). The inaction effect in the psychology of regret. *Journal of Personality and Social Psychology, 82*(3), 314-324. <https://doi.org/10.1037/0022-3514.82.3.314>
- Zeelenberg, M., Van Dijk, W. W., Manstead, A. S., & van der Pligt, J. (2000). On bad decisions and disconfirmed expectancies: The psychology of regret and disappointment. *Cognition & Emotion, 14*(4), 521-541.  
<https://doi.org/10.1080/026999300402781>
- Zeelenberg, M., Van Dijk, W. W., Van der Pligt, J., Manstead, A. S., Van Empelen, P., & Reinderman, D. (1998). Emotional reactions to the outcomes of decisions: The role of counterfactual thought in the experience of regret and disappointment. *Organizational Behavior and Human Decision Processes, 75*(2), 117-141. <https://doi.org/10.1006/obhd.1998.2784>

Zhang, J. W., & Chen, S. (2016). Self-compassion promotes personal improvement from regret experiences via acceptance. *Personality and Social Psychology Bulletin*, 42(2), 244-258. <https://doi.org/10.1177/0146167215623271>

Ziarnowski, K. L., Brewer, N. T., & Weber, B. (2009). Present choices, future outcomes: Anticipated regret and HPV vaccination. *Preventive Medicine*, 48(5), 411-414. <https://doi.org/10.1016/j.ypmed.2008.10.006>

## Appendix

### Information and Consent Form

**Introduction of the survey:** Dear Participant, I am Rhicha Raman Jha, pursuing Ph.D. from Sikkim University, Gangtok. The title of my Ph.D. Research is “Impact of willful ignorance and personal negligence based regret among elderly”. I am collecting data from the retired employees of Bihar state. The aim of my study is to know why and when do people have regret? What are the major reasons for life regrets? What are the roles personal negligence and willful ignorance play in regret feelings? What are the causes of health related regret? How do people cope up with the negative feeling of regrets? In this survey, we are looking for the answer to these questions. The survey includes the questions related to causes of major life regret, the experiences of regret, the intensity of regret, ignorance and negligence, health regret, regret coping, etc. The survey will be used purely for academic purposes and the information provided by the participants will be kept confidential. I, therefore, request you to kindly participate in the survey and help me in my study. Before you give your consent, I would request you to kindly read your rights as a participant.

**Participant rights:** As a participant of this study, you have the right to

- Take time to decide whether or not to be in the research study, and to make that decision without any pressure from the researcher.
- Refuse to be in the study at all, or to stop participating at any time after you begin the study.
- Not answer any question, which you don't want to answer or not comfortable with.
- Know what the study is trying to find out and what you will be asked to do if you are participating in the study.
- Know who will have access to information collected about you and how your confidentiality will be protected.
- Know the results of the study, if interested.
- Receive a copy of the consent form that you will sign, if requires.
- Ask any questions you may have regarding the study from the researcher if needed.

**Would you like to participate in the survey?**                      **Yes**                      **No**

**Signature**

**Date:**

## सर्वेक्षण परिचय एवं सहमती पत्र

**सर्वेक्षण परिचय:** आदरणीय प्रतिभागी, मैं ऋचा रमण झा, सिक्किम यूनिवर्सिटी, गंगटोक में शोध (पीएचडी) की छात्रा हूँ। मेरे शोध का शीर्षक “स्वेक्षित अज्ञान एवं व्यक्तिगत लापरवाही के कारण होने वाले पछतावों (अफसोसों/ खेदों) का बुजुर्गों पर प्रभाव” है। मैं अपने शोध के लिए बिहार राज्य के सेवानिवृत्त सरकारी कर्मचारियों से जानकारीयां (डाटा) एकत्र कर रही हूँ। मेरे अध्ययन का उद्देश्य पछतावों के अनुभवों, उनके कारण और प्रभाव, और उनसे उत्पन्न नकारात्मक भावनाओं का सामना कैसे करते हैं, आदी, समझाना है। इस सर्वेक्षण में जीवन के प्रमुख पछतावों के कारण, पछतावों की तीव्रता, स्वास्थ्य सम्बंधित पछतावों, अज्ञानता एवं लापरवाही के चलते हुये पछतावों, और इन पछतावों का सामना किस प्रकार से लिया जाता है से संबंधित प्रश्न शामिल किये गए हैं। इस सर्वेक्षण का उपयोग केवल शैक्षणिक उद्देश्य के लिए किया जायेगा और प्रतिभागियों द्वारा दी गई गयी जानकारी पूर्णतः गुप्त रखी जाएंगी। अतः मेरा आपसे निवेदन है की कृपया मेरे अध्ययन में अपना योगदान दे कर मेरी सहायता करें। अपनी सहमती देने के पूर्व मेरा आपसे अनुरोध है की कृपया एक शोध प्रतिभागी के रूप में अपने अधिकार को जान लें।

**प्रतिभागी के अधिकार:** शोध प्रतिभागी के रूप में आपके अधिकार हैं कि-

- इस अनुसंधान में आपको अपनी भागीदारी देनी चाहिए या नहीं इसपर विचार करने अथवा निर्णय लेने के लिए उचित समय लेना और बिना किसी तरह के (शोधकर्ता) दबाव के अपनी स्वेच्छा से अपनी भागीदारी देना।
- इस अध्ययन में आप पूरी तरह से भाग ना लें, या फिर एक बार सर्वेक्षण शुरु करने के बाद भी आप किसी भी वक्त अपनी भागीदारी खत्म कर सकते हैं।
- अगर आप किसी प्रश्न के उत्तर देने में असहजता महसूस कर रहे हों अथवा आप जवाब देना ही नहीं चाहते हैं तो उन सवालों को छोड़कर आगे बढ़ने के लिए आप पूर्ण रूप से स्वतंत्र हैं।
- आप यह जान सके कि शोधकर्ता आपसे क्या जानना चाहता है और इस शोध का उद्देश्य क्या है।
- आप यह जान सके कि आपके द्वारा दी गयी जानकारीयां कौन एकत्रित करेगा और उसकी गोपनीयता कैसे सुरक्षित रहेगी।
- आप शोध के परिणाम की जानकारी माँग सकते हैं, यदि आप उन्हें जानने में रुचि रखते हैं।
- यदि आवश्यक हो तो आप जिस सहमती पत्र पर हस्ताक्षर करेंगे उसकी एक प्रति भी प्राप्त कर सकते हैं।
- यदि आवश्यक हो तो, शोधकर्ता से अध्ययन के सम्बन्ध में कोई भी प्रश्न पूछ सकते हैं।

क्या आप इस सर्वेक्षण में भाग लेना चाहेंगे?

हाँ

ना

हस्ताक्षर

दिनांक

## Part A (खण्ड अ)

1. Look over your whole life and if you could live it again, what are the three aspects of your life that you would like to change. Give your answer by selecting the three aspects from the given list.

(अपने पूरे जीवन को सोचें और अगर आप इसे फिर से जी सकने का मौका पाते हैं तो, अपने जीवन के ऐसे तीन पहलुओं को जिसे आप बदलना चाहते हैं उनको निम्नलिखित दिए गए जीवन पहलुओं में से चुनें)

Education (शिक्षा)	Career (व्यवसाय/नौकरी)
Marriage related (विवाह संबंधी)	Family (परिवार)
Spirituality (आध्यात्मिकता)	Friendship (दोस्ती)
Health (स्वास्थ्य)	Community (समुदाय)
Finance (वित्त)	Self (स्वयं)
Parenting (परवरिश)	Leisure (फुर्सत)

2. Think about the biggest regrets of your entire life and indicate how much each regret made you feel each of the following emotions by checking the appropriate option on the three point scale given below-

(पूरे जीवन के अपने सबसे बड़े अफसोसों के बारे में सोचें और इंगित करें कि विकल्प में दी गई प्रत्येक भावनाओं को आप कितना महसूस करते हैं, नीचे दी गई तीन बिन्दु मापनी का प्रयोग करते हुए)

Emotions (भावनाएं)	Not at all (बिल्कुल नहीं)	Somewhat (कुछ हद तक)	A great Deal (बहुत हद तक)
Guilty (दोषी)	1	2	3
Disgusted (घृणा)	1	2	3
Embarrassed (शर्मिंदा)	1	2	3
Dreamy (काल्पनिक)	1	2	3
Nostalgic (उदासीन)	1	2	3
Wistful (उदास)	1	2	3
Empty (खाली)	1	2	3
Miserable (दुखी)	1	2	3
Unfulfilled (अधूरा)	1	2	3

3. When you look back on your experiences in life and think of those things that you regret, what would you say you regret more (जब आप अपने जीवन के अनुभवों को पीछे मुड़ के देखते हैं और उन चीजों के बारे में सोचते हैं, जिन पर आपको पछतावा है, तो आप क्या कहेंगे आपको अधिक पछतावा है),

(please select one option for each question, कृपया हर एक प्रश्न के लिए एक विकल्प चुने)

Q. 1 प्र. 1	Those things that you did but wish you hadn't (वो चीजें जो आपने की लेकिन आप सोचते हैं कि काश वो मैंने नहीं की होतीं)	Those things that you didn't do but wish you had (या वे चीजें जो आपने नहीं की, लेकिन आप सोचते हैं की काश ये मैंने की होतीं)
Q. 2 प्र. 2	Those things that you wanted to do but you could not (वो चीजें जो आप करना चाहते थे लेकिन आप नहीं कर पाए)	Those things that others (your family members, friends, etc.) wanted you to do but you could not. (वो चीजें जो दूसरे (आपके परिवार के लोग, दोस्त, आदि) आपसे चाहते थे लेकिन आप नहीं कर पाए।)

4. The following given two statements indicate our counterfactual thinking for the consequences of taken decisions. Please mark anyone statement as per your experiences.

(नीचे दिए गए दोनों वाक्य हमारी प्रतितथ्यात्मक सोच को दर्शाती है जो हम किसी निर्णय के परिणाम के बाद सोचते हैं। कृपया दोनों कथनों में से एक को अपने अनुभव के आधार पर चुनें।)

- A. While thinking about the outcome of any decision I generally believe that things could have been worse. (किसी भी निर्णय के परिणाम के बारे में सोचते समय मैं आमतौर पर मानता हूँ कि चीजें इससे भी बदतर हो सकती थीं)
- B. While thinking about the outcome of any decision I generally believe that things could have been better. (किसी भी निर्णय के परिणाम के बारे में सोचते समय मैं आमतौर पर मानता हूँ कि चीजें इससे बेहतर हो सकती थीं।)

5. Think about the major regrets of your life and reasons/causes behind those. The items below concern your impressions or opinions of those causes. Circle any one number for each of the following questions.

(हम सभी अपने जीवन में गलतियां करते हैं और बाद में हम अपनी गलतियों या गलत फैसलों पर पछताते हैं। अपने जीवन के महत्वपूर्ण गलत फैसलों या अफसोसों और उनके कारणों के बारे में सोचें। नीचे दिए गए प्रश्न उन कारणों के बारे में आपकी राय/धारणा से संबंधित हैं।

निम्नलिखित प्रत्येक प्रश्न के लिए किसी एक संख्या को चुने।)

Most of the reasons were (ज्यादातर कारण ऐसे थे जो)

Reflect aspects of yourself (आपके पहलुओ को दर्शाते हैं)	9 8 7 6 5 4 3 2 1	Reflect aspect of the situation (परिस्थितियों के पहलुओ को दर्शाते हैं)
Manageable by you (आपके नियंत्रण में थे)	9 8 7 6 5 4 3 2 1	Not manageable by you (आपके नियंत्रण में नहीं थे)
Permanent (स्थायी थे)	9 8 7 6 5 4 3 2 1	Temporary (अस्थायी थे)
You could regulate (आप नियंत्रित कर सकते थे)	9 8 7 6 5 4 3 2 1	You could not regulate (आप नियंत्रित नहीं कर सकते थे)
Over which others had control (दूसरों का नियंत्रण था)	9 8 7 6 5 4 3 2 1	Over which others had no control (दूसरों का कोई नियंत्रण नहीं था)
Onside of you (आपकी पहुँच में थे)	9 8 7 6 5 4 3 2 1	Outside of you (आपकी पहुँच से परे थे)
Stable over time (समय के साथ स्थिर थे)	9 8 7 6 5 4 3 2 1	Variable over time (समय के साथ अस्थिर थे)
Under the power of other people (दूसरों के वश में थे)	9 8 7 6 5 4 3 2 1	Not under the power of other people (दूसरों के वश में नहीं थे)
Something about you (आपसे जुड़े थे)	9 8 7 6 5 4 3 2 1	Something about others (दूसरों से जुड़े थे)
Over which you had power (आपके वश में थे)	9 8 7 6 5 4 3 2 1	Over which you had no power (आपका कोई वश नहीं था)
Unchangeable (अपरिवर्तनीय थे)	9 8 7 6 5 4 3 2 1	Changeable (परिवर्तनीय थे)
Other people could regulate (अन्य लोग नियंत्रित कर सकते थे)	9 8 7 6 5 4 3 2 1	Other people could no regulate (अन्य लोग नियंत्रित नहीं कर सकते थे)



6. In general, when do you have regret?

(सामान्यतः आप को पछतावा/अफ़सोस कब होता है?)

Please give your response in the five-point scale given below (अपने जबाब नीचे दी गई पांच बिन्दु मापनी पर दे)

Strongly Disagree (पूर्णतः असहमत)	Disagree (असहमत)	Neutral (उदासीन)	Agree (सहमत)	Strongly Agree (पूर्णतः सहमत)
1	2	3	4	5

1. When my decision does not meet my expectations. जब मेरे निर्णय मेरी उम्मीदों पर खरे नहीं उतरते	1	2	3	4	5
2. When my decision does not meet others expectations. जब मेरे निर्णय दूसरों की उम्मीदों पर खरे नहीं उतरते	1	2	3	4	5
3. When the others decision does not meet my expectations and I feel responsible for their wrong decisions. जब दूसरों का निर्णय मेरी उम्मीदों पर खरे नहीं उतरते, और उन गलत निर्णयों के लिए आप खुद को दोसी मानते हैं	1	2	3	4	5
4. When the outcomes of others decisions are better than the outcomes my decisions. जब दूसरों के निर्णयों के परिणाम मेरे निर्णयों के परिणामों से बेहतर होते हैं	1	2	3	4	5
5. When the real outcome of my decision is below the expected outcome. जब मेरे निर्णयों के वास्तविक परिणाम मेरे अपेक्षित परिणामों से कम आते हैं	1	2	3	4	5
6. When my life before my decision was better than after the decision. जब निर्णय से पहले मेरा जीवन, निर्णय के बाद मेरे जीवन से बेहतर था	1	2	3	4	5

7. When I look at my present health condition, I regret that when I was young...

(जब मैं अपनी वर्तमान स्वास्थ्य स्थिति को देखता हूँ, तो मुझे अफ़सोस होता है कि जब मैं युवावस्था में था तो...)

Please give your response in the five-point scale given below (अपने जबाब नीचे दी गई पांच बिन्दु मापनी पर दे)

Strongly Disagree (पूर्णतः असहमत)	Disagree (असहमत)	Neutral (उदासीन)	Agree (सहमत)	Strongly Agree (पूर्णतः सहमत)
1	2	3	4	5

1. I should have taken healthy food more such as, green vegetables, fruits, etc. (मुझे स्वास्थ्यवर्धक भोजन और ज्यादा लेने चाहिए थे, जैसे, हरी सब्जियाँ, फल, इत्यादि)	1	2	3	4	5
2. I should have maintained a balance between my work and my health. (मुझे अपने काम और अपनी सेहत के बीच संतुलन बनाए रखना चाहिए था)	1	2	3	4	5
3. I should have involved myself more in physical activities, e.g. sports, outing, etc. (मुझे खुद को शारीरिक गतिविधियों में और अधिक शामिल करना चाहिए था, जैसे की खेल, सैर आदि।)	1	2	3	4	5
4. I should have taken proper rest and sleep. (मुझे उचित आराम और नींद लेनी चाहिए थी।)	1	2	3	4	5
5. I should have maintained a regular routine. (मुझे एक नियमित दिनचर्या बनाए रखनी चाहिए थी।)	1	2	3	4	5
6. I should not have excessively relied on outside food. (मुझे बाहर के खाने पर ज्यादा निर्भर नहीं रहना चाहिए था।)	1	2	3	4	5
7. I should not have taken too much work stress. (मुझे काम का बहुत ज्यादा तनाव नहीं लेना चाहिए था।)	1	2	3	4	5
8. I should not have developed late night working habits. (मुझे देर रात तक काम करने की आदत नहीं डालनी चाहिए थी।)	1	2	3	4	5
9. I should not have indulged in betel leaves, tobacco or smoking. (मुझे पान, तंबाकू या धूम्रपान का सेवन नहीं करना चाहिए था।)	1	2	3	4	5
10. I should not have developed unhealthy diet habits. (मुझे हानिकारक खान-पान की आदत नहीं डालनी चाहिए थी।)	1	2	3	4	5
11. I should have taken regular medical checkup. (मुझे नियमित मेडिकल चेकअप लेना चाहिए था।)	1	2	3	4	5
12. I should not have neglected the symptoms of even minor diseases. (मुझे मामूली बीमारीयों के लक्षणों की भी उपेक्षा नहीं करनी चाहिए थी)	1	2	3	4	5
13. I should not have worried about money when it came to visiting doctors or medical checkups. (जब भी डॉक्टरों से सलाह लेने या जाँच कराने की बात थी तो मुझे उस समय पैसे की चिंता नहीं करनी चाहिए थी)	1	2	3	4	5
14. I should have taken medication only with the consultation of doctors. (मुझे डॉक्टरों के परामर्श के बाद ही दवाएं लेनी चाहिए थी)	1	2	3	4	5
15. I should not have skipped my appointments with doctors. (मुझे डॉक्टरों के साथ अपनी अपॉइंटमेंट को कभी छोड़ना नहीं चाहिए था।)	1	2	3	4	5

8. Sometimes even when I could have known something important easily, but I avoided to know that, because (कुछ चीजे जिन्हें मैं आसानी से जान सकता था, कभी-कभी मैं उन्हें जानने से बचने की कोशिश करता था, क्योंकि)

Please give your response in the five point scale given below (अपने जबाव नीचे दी गई पांच बिन्दु मापनी पर दे)

Strongly Disagree (पूर्णतः असहमत)	Disagree (असहमत)	Neutral (उदासीन)	Agree (सहमत)	Strongly Agree (पूर्णतः सहमत)
1	2	3	4	5

1. I didn't want to know the truth because it might have disturbed me. (मैं सच्चाई नहीं जानना चाहता था क्योंकि वो मुझे व्यथित कर सकती थी।)	1	2	3	4	5
2. I thought, I would not be able to handle the truth. (मुझे लगा था कि मैं सच का सामना नहीं पाऊंगा)	1	2	3	4	5
3. I believed that there should be some surprises in the life that's why I don't want to know everything. (मुझे लगता था कि जीवन में कुछ अप्रत्याशित होना चाहिए, इसलिए मैं सब कुछ नहीं जानना चाहता था।)	1	2	3	4	5
4. Knowing everything kills the excitement from the life. (सब कुछ जानने से जीवन से उत्सुकता ही खत्म हो जाती है)	1	2	3	4	5
5. Sometime, knowing less gives us advantage over others. (कभी-कभी, कम जानने से हम दुसरो से ज्यादा फायदे में रहते हैं।)	1	2	3	4	5
6. I thought that information was not worthy to be noted. (मुझे लगा कि वो सूचना ध्यान देने योग्य नहीं थी।)	1	2	3	4	5
7. The first option was satisfactory for me and knowing other possibility was useless. (पहला विकल्प मेरे लिए संतोषजनक था इसीलिए अन्य संभावनाओं को जानना मेरे लिए बेकार था।)	1	2	3	4	5
8. I was satisfied with what I knew and knowing more was not required. (मैं जो कुछ जानता था उससे संतुष्ट था और अधिक जानने की आवश्यकता मैंने महसूस नहीं की थी।)	1	2	3	4	5
9. I thought that was not adding anything in my existing knowledge. (मुझे लगा कि वो सूचना मेरे मौजूदा ज्ञान में कुछ भी नया नहीं जोड़ रही थी।)	1	2	3	4	5
10. I did not realize that information could be important for me. (मैंने महसूस नहीं किया था कि वह सूचना मेरे लिए महत्वपूर्ण हो सकती थी।)	1	2	3	4	5

9. Even when I knew the possible adverse consequences of something, I sometimes neglected the information related to those, because... (यहां तक कि जब मुझे कुछ चीजों के संभावित दुष्परिणाम पता थे, तब भी मैंने कभी-कभी उनसे जुड़ी जानकारियों की उपेक्षा की, क्योंकि...)

Please give your response in the five point scale given below (अपने जबाब नीचे दी गई पांच बिन्दु मापनी पर दे)

1. The information was costly (in terms of money, time, energy, resources) to apply. (उस जानकारी को उपयोग करना महंगा था (पैसा, समय, ऊर्जा, संसाधन के रूप में))	1	2	3	4	5
2. The alternatives were easier to follow. (अन्य विकल्पों को प्रयोग में लाना आसान था।)	1	2	3	4	5
3. The information was perceived not so important at that time to be considered. (जानकारी उस समय इतनी महत्वपूर्ण नहीं लगी थी कि ध्यान दी जाये।)	1	2	3	4	5
4. The probability was very less that ignoring the information will cause any damage. (संभावनाएं बहुत कम थी कि जानकारी को अनदेखा करने से कोई नुकसान होगा।)	1	2	3	4	5
5. I was hopeful that nothing bad will happen even if I don't pay attention on that information. (मुझे आशा थी कि अगर उस जानकारी पर ध्यान नहीं भी दिया जाय तो भी कुछ बुरा नहीं होगा।)	1	2	3	4	5
6. I was hopeful that the neglect of information would not create any problem in my case. (मुझे उम्मीद थी कि जानकारी की उपेक्षा करना, मेरे मामले में कोई समस्या पैदा नहीं करेगा।)	1	2	3	4	5
7. That was challenging my previous beliefs or knowledge. (वह मेरी पिछली मान्यताओं या ज्ञान को चुनौती दे रहा था।)	1	2	3	4	5
8. My habits made it difficult to apply new information. (मेरी आदतों ने नई जानकारी को उपयोग करना मुश्किल कर दिया था।)	1	2	3	4	5
9. Even if the information was used, I don't think the outcome would be very different. (अगर जानकारी का उपयोग किया भी जाता, तो भी मुझे नहीं लगता था कि परिणाम बहुत अलग होता।)	1	2	3	4	5
10. I was hopeless that even applying the information could do any better. (मैं आशाहीन था कि सूचना/जानकारी का प्रयोग करने से भी कोई बेहतर परिणाम निकल सकता है।)	1	2	3	4	5

10. The following questions are about how people handle/cope-up with the negative feelings of regrets. Please think about your regrets and how you handle those regrets and rate how much you agree with each statement given below. (निम्नलिखित प्रश्न पछतावों से उत्पन्न नकारात्मक भावनाओं का सामना कैसे करते हैं, के बारे में हैं। कृपया अपने पछतावों के बारे में एवं आपने कैसे उनका सामना किया के बारे में सोचें और इंगित करें की आप दिए गए कथन से कितना सहमत हैं।)

**Whenever I think of my bad decisions (जब भी मैं अपने बुरे फैसलों के बारे में सोचता हूँ):**

Strongly Disagree (पूर्णतः असहमत)	Disagree (असहमत)	Neutral (उदासीन)	Agree (सहमत)	Strongly Agree (पूर्णतः सहमत)
1	2	3	4	5

1. I look into the bright sides of my wrong decisions. (मैं अपने गलत निर्णयों के उज्ज्वल पक्षों पर ध्यान देता हूँ।)	1	2	3	4	5
2. I believe that life will give me a second chance to rectify my mistakes (मुझे विश्वास है कि जिन्दगी मुझे मेरी गलतियों को सुधारने का दूसरा मौका देगी।)	1	2	3	4	5
3. I explain myself that everything happens, has a reason behind it. (मैं खुद को समझाता हूँ कि जीवन में जो कुछ भी घटना घटती है, उसके पीछे कोई न कोई वजह होती है।)	1	2	3	4	5
4. I think about other things to distract myself. (मैं अपना ध्यान हटाने के लिए अन्य चीजों के बारे में सोचता हूँ।)	1	2	3	4	5
5. I suppress my thoughts of regret. (मैं अफसोस से संबंधित अपने विचारों को दबा देता हूँ।)	1	2	3	4	5
6. I avoid conversation regarding my past mistakes. (मैं अपनी पिछली गलतियों के बारे में बातचीत करने से बचता हूँ।)	1	2	3	4	5
7. I try to keep myself busy in work to forget my mistakes. (मैं अपनी गलतियों को भुलाने के लिए खुद को काम में व्यस्त रखने की कोशिश करता हूँ।)	1	2	3	4	5
8. I remind myself that things could have been worse than the present. (मैं खुद को याद दिलाता हूँ कि चीजें वर्तमान से भी बदतर हो सकती थीं।)	1	2	3	4	5
9. I make myself understand that I am still at much better position than many others. (मैं खुद को समझता हूँ कि मैं अभी भी कई अन्य लोगों की तुलना में बहुत बेहतर स्थिति में हूँ।)	1	2	3	4	5

10. I think even if I would have done something else, the outcome would be more or less same since it was in my destination. (मुझे लगता है कि अगर मैंने कुछ और भी किया होता तो भी नतीजा वही होता क्योंकि मेरी किस्मत में वही था।)	1	2	3	4	5
11. I believe, that was not totally my fault, and others were responsible too. (मेरा मानना है कि, वह पूरी तरह से मेरी गलती नहीं थी, अन्य लोग भी जिम्मेदार थे।)	1	2	3	4	5
12. I believe that others might have done the same. (मेरा मानना है कि उस स्थिति में दूसरों ने भी यही किया होता।)	1	2	3	4	5
13. I explain myself that I only had control on decisions but not on the outcomes. (मैं खुद को समझाता हूँ कि मेरा केवल फैसलों पर नियंत्रण था, न कि उससे जुड़े परिणामों पर।)	1	2	3	4	5
14. I explain myself that I did the best in that situation. (मैं खुद को समझाता हूँ कि मैंने उस स्थिति में में सर्वश्रेष्ठ किया था।)	1	2	3	4	5
15. I explain myself that I took the right decision, but somehow things did not turn out the way I expected. (मैं खुद को समझाता हूँ कि मैंने सही फैसला लिया, लेकिन चीजें उस तरह से नहीं हुईं जिसकी मुझे उम्मीद थी।)	1	2	3	4	5
16. I believe that my decision was very thoughtful and rational. (मेरा मानना है कि मेरा निर्णय बहुत सोचा-समझा और तर्कसंगत था।)	1	2	3	4	5
17. I seek support of my family members, who help me to come out from regret. (मैं परिवार के सदस्यों की सहायता लेता हूँ जो मुझे अफसोस से बाहर आने में मदद करता है।)	1	2	3	4	5
18. I share my mistakes with my well-wishers and get some encouragement from them. (मैं अपनी गलतियों को अपने शुभचिंतकों के साथ साझा करता हूँ और उनसे कुछ प्रोत्साहन प्राप्त करता हूँ।)	1	2	3	4	5
19. I focus myself on the lessons of preachings given in religious books and magazines. (मैं धार्मिक पुस्तकों और पत्रिकाओं में दिए गए उपदेशों के पाठों पर ध्यान केंद्रित करता हूँ।)	1	2	3	4	5
20. I sit alone and try to read religious books to help me to come out from the negative feeling/thought of regret. (मैं अकेला बैठ कर धार्मिक किताबें पढ़ने की कोशिश करता हूँ ताकि मुझे इन नकारात्मक भावनाओं या विचारों से बाहर आने में मदद मिल सके)	1	2	3	4	5

11. The following questions are related to what we learn from our regret and the act after regret. Please mark on given option as per your opinion. (निम्नलिखित प्रश्न अफसोसों से हम क्या सीख पाते हैं एवं अफसोस के बाद हम क्या कदम लेते हैं, से संबंधित है। कृपया प्रत्येक प्रश्न को पढ़ें एवं अपने अनुभव के आधार पर दिए गए विकल्पों में से एक को चुने।)

	1	2	3	4	5
1. I tried to change my behaviour following regrets. अफसोसों के बाद मैंने अपने स्वभाव को बदलने की कोशिश की।					
2. I tried to fix or correct the situations. मैंने परिस्थितियों को ठीक/सुधारने की कोशिश की।					
3. I tried to undo my behaviour that led to those regrets. मैंने अपने स्वभाव को जिनके कारण मुझे अफसोस हुए को बदलने की कोशिश की।					

12. On a scale of 1 to 10, with 10 being people who have full control over their life, and 1 being the people who have the least control over their life, how would you rate the amount of control you have over your life overall.

(दस बिंदु मापनी पर, जहाँ 10 समाज के उन लोगों को दर्शाता है जिनका अपने जीवन पर पूरा नियंत्रण है एवं 1 समाज के उन लोगों को दर्शाता है जिनका अपने जीवन पर कोई नियंत्रण नहीं है, आपका अपने जीवन पर कितना नियंत्रण है, आपका क्या मूल्यांकन है?)

1-----2-----3-----4-----5-----6-----7-----8-----9-----10  
 No control at all Full control  
 एकदम भी नियंत्रण नहीं पूरा नियंत्रण

13. On a scale of 1 to 10, with 10 being people who believe that their life is full of regrets, and 1 being the people who believe that they do not have any regret in their life, how would you rate the amount of regret you have in your life overall.

(दस बिंदु मापनी पर, जहाँ 10 समाज के उन लोगों को दर्शाता है जिनका जीवन पूरी तरह से अफसोसों/पछतावों से भरा है, एवं 1 समाज के उन लोगों को दर्शाता है जिनको जीवन में कोई पछतावा नहीं है, आपका अपने जीवन के अफसोसों/पछतावों का क्या मूल्यांकन है?)

1-----2-----3-----4-----5-----6-----7-----8-----9-----10  
 No regret at all Full of regrets  
 कोई भी अफसोस/पछतावा नहीं अफसोसों/पछतावों से भरा

## **Part B (खण्ड ब)**

Part B of the questionnaire contained standardized scales, which due to copyrights concern, cannot be given here. However, the name of the scale along with their authors are mentioned below.

1. General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988)
2. Indecisiveness Scale (Frost & Show, 1993)
3. Social Comparison Orientation Scale (Gibbons & Buunk, 1999)
4. Satisfaction with Life Scale (Diener et al., 1985)
5. General Self-Esteem Scale (Rosenberg, 1965)
6. Religious Orientation Scale (Allport & Ross, 1967): only nine items of the intrinsic religiosity scale.
7. Subjective Happiness Scale (Lyubomirsky & Lepper, 1999)



