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APPENDIX I

Ethical Clearance Certificate

INSTITUTIONAL HUMAN ETHICS COMMITTEE

Avinashilingam
Institute for Home Science and Higher Education for Women
(Deemed to be university under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956) Re-accredited with 'A++' Grade by NAAC.
Recognised by UGC Under Section 12 B
Coimbatore- 641043, Tamil Nadu, India

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Director – Research and Innovation
Professor- Community Medicine,
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Dr. A R Sudamani Ramasamy
Dr. G. Victoria Naomi
Dr. Judith Justin
Dr. Anitha Subash
Dr. K. Sampath Rani

05.01.2023

To
Ms. M. Sathya
Department of Psychology
Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore- 641043

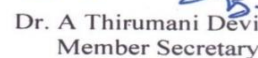
Dear Sathya,

Ref: Your proposal No. IHEC/22-23/PSY-24 entitled "Effectiveness of Reiki and Existential Therapy in Managing Body Pain Intensity and Insomnia among Women'' submitted for approval of IHEC on 19.11.2022.

The Institutional Human Ethics Committee of our University hereby grants approval to your research proposal No.IHEC/22-23/PSY-24 entitled "Effectiveness of Reiki and Existential Therapy in Managing Body Pain Intensity and Insomnia among Women" submitted by you. The Approval number for the same is AUW/IHEC/PSY-22-23/XMT-24.

We wish you all the best in your research endeavours.

Regards



Dr. A Thirumani Devi
Member Secretary

APPENDIX II

Psychological Tests Brief Pain Inventory – Short Form

Date: _____ /_____ /_____ Time: ____________

Name: _______________ _______________ ________

Last First Middle intial

1) Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these everyday kinds of pain today?

1. Yes 2. No

2) On the diagram, shade in the areas where you feel pain. Put an X on the area that hurts the most.

Right Left Left Right

3) Please rate your pain by circling the one number that best describes your pain at its **worst** in the past 24 hours.

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

4) Please rate your pain by circling the one number that best describes your pain at its **least** in the past 24 hours.

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

5) Please rate your pain by circling the one number that best describes your pain on **average**.

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

6) Please rate your pain by circling the one number that tells how much pain you have **right now**.

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

7) What treatments or medications are you receiving for your pain?

____

____

8) In the past 24 hours, how much **relief** have pain treatments or medications provided? Please circle the one percentage that most shows how much relief you have received.

0%	10	20	30	40	50	60	70	80	90	100%
No relief										Complete relief

9) Circle the one number that describes how, during the past 24 hours, pain has **interfered** with your:

A. General activity

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

B. Mood

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

C. Walking ability

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

D. Normal work (includes both work outside the home and housework)

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

E. Relations with other people

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

F. Sleep

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

G. Enjoyment of life

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

BPI Pain Items	BPI Interference Items
Worst pain in last 24 hours	General activity
Least pain in last 24 hours	Mood
Pain on average	Walking ability
Pain right now	Normal work (including housework)
	Relations with other people
	Sleep
	Enjoyment of life

Regensburg Insomnia Scale (RIS): scale for the assessment of psychological symptoms and sleep in insomnia

PLEASE RATE THE FOLLOWING QUESTIONS FOR THE LAST FOUR WEEKS					
AT WHAT TIME DO YOU USUALLY GO TO BED?	**WHEN DO YOU USUALLY GET UP?**				
1. How many minutes do you need to fall asleep?	1–20 min.	21–40 min.	41–60 min.	61–90 min.	91 min. and more
2. How many hours do you sleep during the night?	7 h and more	5–6 h	4 h	2–3 h	0–1 h
How often do the following occurrences happen?	Always	Mostly	Sometimes	Seldom	Never
3. My sleep is disturbed	4	3	2	1	0
4. I wake up too early	4	3	2	1	0
6. I feel that I have not slept all night	4	3	2	1	0
7. I think a lot about my sleep	4	3	2	1	0
8. I am afraid to go to bed because of my disturbed sleep	4	3	2	1	0
9. I feel fit during the day	0	1	2	3	4
10. I take sleeping pills in order to get to sleep	4	3	2	1	0

APPENDIX III

INFORMED CONSENT FORM

I volunteer to participate in a research project conducted by Mrs M. Sathya. I understand the project is designed to gather information for academic purpose only.

I have been given the opportunity to ask questions about the research and my participation.

My participation in this project is voluntary. I understand that I will not be paid for any participation. I may withdraw and discontinue participation at any time and also I will not be questioned on why I have withdrawn.

In the event if I choose to withdraw from the study, all information provided by me will be destroyed and omitted from the final paper.

I understand that the researcher will not identify me by name in any reports using information obtained, and that my confidentiality as a participant in this study will remain secure. All the information and responses will be kept confidential. The researcher will not share the reponses with anyone other than the research supervisor.

I have read and understood the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

I along with the researcher, agree to sign and date this informed consent form

Participant:

______________________ ______________________ ____________________

Name of the participant Signature Date

Researcher:

______________________ ______________________ _______

APPENDIX IV

PLAGIARISM REPORT

Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD)
Re-accredited with 'A++' Grade by NAAC.CGPA 3.65/4, Category I by UGC
Coimbatore – 641 043, Tamil Nadu, India

PLAGIARISM CHECK REPORT (THESIS)

1.	Name of the Research Scholar	M. Sathya
2.	Roll No. and Year of Registration	21PHCPP001, 2021
3.	Department	Psychology
4.	Name of the Research Guide	Dr. S. Gayatridevi
5.	Title of the Thesis / Dissertation	Effectiveness of Reiki and Existential Therapy in Managing Body Pain Intensity and Insomnia Among Women
6.	Similarity Content (%) Identified	**5%**
7.	Software Used	Turnitin
8.	Date of Verification	30-06-2025

Note : The report is excluding 14 Consecutive words, Review of Literature and Quoted Materials.

Checked by :

Information Scientist

Research Scholar

Assistant Librarian

Research Guide

Date: 30-06-2025

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Page count:	79
Word count:	16,916
Character count:	92,508
Submission date:	30-Jun-2025 12:58PM (UTC+0530)
Submission ID:	2511360260

Effectiveness of Reiki and Existential Therapy in Managing Body Pain Intensity and Insomnia among Women

Abstract

Women play a vital role in every culture and are multifaceted. Being a woman is a disguised blessing. They face problems or challenges in their day to day life either socially or physically. Body pain and Insomnia are the remnants of this age of high demand and stress. Reiki and Existential Therapy is an integrated model of noninvasive alternative therapy and psychotherapy that may lessen pain, sleeplessness symptoms, and enhance overall health. A total of 124 participants aged 36-64 are selected by purposive sampling, where 30 participants are in the Reiki intervention group, 31 in the Existential therapy group, 32 in the integrated therapy group and 31 in waitlist control group all randomly assigned. The research design is Preceding, Following, and Monitoring Waitlist Control Group Design (Randomized Control Trial method). A mixed method approach was used for pain and insomnia assessment among the participants. Assessments were done using the Brief Pain Inventory (Cleeland, 1994) and Regensburg Insomnia Scale (RIS) (Croenlein 2013). Intervention to the three experimental groups was given over a period of three months with 18 sessions. Pain and insomnia were reassessed after the intervention, and a follow-up was also done after 3 months with the same tools. The Design Expert Software version 13 for Response Surface Methodology (RSM) for process optimization was used to examine the data, SPSS 29 for repeated measures MANOVA and Atlas ti 25 were used. Results revealed that Reiki and Existential therapy (integrated intervention model) is more successful in lowering women's levels of pain and insomnia. Interventions to overcome pain and insomnia can significantly improve enhance mental health and general well-being of women.

Keywords: *Pain, Insomnia, Middle Adulthood Women, Reiki, Existential Therapy*

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Effectiveness of Reiki and Existential Therapy in Managing Body Pain Intensity and Insomnia among Women

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Effectiveness of Reiki and Existential Therapy in Managing Body Pain Intensity and Insomnia among Women

ORIGINALITY REPORT

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SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

#	Source	%
1	www.srjis.com Internet Source	<1%
2	www.everydayhealth.com Internet Source	<1%
3	Submitted to University of Maryland, Global Campus Student Paper	<1%
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11	E Olorundaisi, T Jamiru, T A Adegbola, O F Ogunbiyi. "Modeling and optimization of operating parameters using RSM for	<1%

APPENDIX V

COURSE CERTIFICATES

USUI RYOHO REIKI
THIS CERTIFIES THAT
M. SATHYA
Has successfully completed the required course of study in
Usui Reiki Level I & Reiki Level II & is therefore certified As
REIKI LEVEL I & II PRACTITIONER
Awarded
10 June 2022
Ali Haider | Reiki Master/Teacher
Usui Reiki

USUI RYOHO REIKI
THIS CERTIFIES THAT
M. SATHYA
Has successfully completed the required course of study in
Usui Reiki Levels I, II & III and is therefore certified as
REIKI MASTER TEACHER
Awarded 10 June 2022
Ali Haider | Reiki Master/Teacher
Usui Reiki

CERTIFICATE OF COMPLETION

Accredited Professional Existential Psychotherapy Diploma

Instructors **Dr Karen E Wells** **MAR 2022**

M. Sathya

APPENDIX VI

DETAILS OF RESEARCH PUBLICATIONS

Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University Estd. u/s3 ofUGCAct1956,Category'A'byMHRD Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

AppendixL2
(Item No 5 of Check List) Details of Research Publications

S. No	Article	Journal	Other Details Vol /No/Page No/ Year	Published in UGC-CARE / Scopus Indexed/ Web of Science
1	**A Structural Equation Model for Hope as a moderator in the relationship between Insomnia and Body Pain Intensity among Working Women**	Journal of the Indian Academy of Applied Psychology	Jan 2024, Vol. 50, No. 1, 275-281	UGC CARE LISTED From January- 2023 to Present
2	**Existential Therapy In Managing Pain and building Resilience among women**	Journal of the Indian Academy of Applied Psychology	957/JIAAP/Vol.51_No.2/July 2025	UGC CARE LISTED From January- 2023 to Present

*Proof of list of Journals from Internet to be attached along with copies of reprints.

Scholar : M. Sathya M. Sathya 22/2/25

Supervisor : Dr. S. Gayatridevi S. Gayatridevi 22/2/25

S. Gayatridevi 22/2/25 22.2.2025

Checked By:

HoD /Dean of Respective School

The scholar Miss. Sathya, M (21PHCPP001) has published/got acceptance from the following journals:
. Journal of the Indian Academy of Applied Psychology- indexed and active in UGC Care list Group I from January 2023 to present.
This may be considered.

22.02.2025

© Journal of the Indian Academy of Applied Psychology
Jan 2024, Vol. 50, No. 1, 275-281

A Structural Equation Model for Hope as a moderator in the relationship between Insomnia and Body Pain Intensity among Working Women

M. Sathya and S. Gayatridevi
Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.

Women face problems or challenges in their day to day life either socially or physically. Midlife, the period of the lifespan between younger and older adulthood, has been described as a period of transition in women's lives. Women identified the most challenging aspects of midlife as changing family relationships, re-balancing work/ personal life, re-discovering self, securing enough resources, and coping with multiple co-occurring stressors. Body pain and Insomnia are the remnants of this age of high demand and stress. This paper attempts to understand the moderating effect of hope in the relationship between insomnia and body pain intensity among Working Women. one hundred and seventeen working women from various fields were selected through random sampling and administered by the Insomnia Scale (Croenlein et al., 2013), Brief Pain Inventory (Cleeland,1994) and the Adult Hope Scale (Snyder et al., 1991). Structural Equation Model indicated that hope moderated the relationship between Insomnia and Body pain issues. The higher the intensity of pain experienced, higher is the level of insomnia, and lower the hope.

Keywords: Insomnia, Brief Pain Inventory, Hope, Working Women

Women are generally known to be multi taskers. They fulfill varied roles with ease, are wonderful mothers, dutiful daughters, caring daughters-in-law, lovely and enthusiastic wives, beautiful sisters, jubilant friends, and brilliant in all that they set their minds to. Many times, they take on varied roles when they work outside their homes. Women found themselves searching for balance in the midst of multiple co-occurring stressors while coping with losses and transitions, for some in a context of limited resources. Nowadays, women have conquered all professions to the board room to rocket engineering. Within these themes the most frequently reported challenges were: multiple co-occurring stressors, divorce/breaking up with a partner, health problems of self, and death of parents.

Women have made their presence felt in all spheres of life and have mostly eliminated the Gender differences in professions. But still, owing to various roles and responsibilities that the working women have, they tend to neglect their own physical and mental health; and well being, instead focus and concentrate on fulfilling the expectations from their various roles, thus paying the price for satisfying everyone else and ignoring themselves. Many of them encounter numerous aches and pains in their bodies, suffer from migraines, body pain, stomach disturbances, leg pain and many such acute and chronic pain related disorders. Many of them are so tired by the end of the day and in so much pain that sleep also eludes them. Many hence suffer from Insomnia and numerous aches and pains. As a result of these issues, their personal and professional lives suffer greatly. They are left wanting in numerous spheres and cause them a great amount of worry and stress. Their mental health and well being hence deteriorates. The whole process becomes a vicious circle thus sucking them into the vortex of stress, anxiety and many other such mental health issues.

Insomnia and Pain

Insomnia has been defined in most researches as, the experience of sleeplessness despite the time and opportunities to fall asleep.

This difficulty can be manifested in the ability to fall asleep or stay asleep. Many times insomnia is considered the inability to sustain non restorative sleep patterns, and this difficulty many times persists despite sufficient opportunities and situations conducive to developing a good sleep. Also it has been considered that insomnia leads to distress and disturbance of day time activities (Roth, 2007). Short term or transient insomnia is a temporary phase of sleeplessness most probably due to stress or any form of trauma. This type of insomnia is temporary and subsides when the stress is relieved.

Many times pain in the body, such as headache, back ache, body pain and many other forms of pain also lead to insomnia. This type of insomnia caused by other factors, such as pain in this case is known as secondary insomnia. The relationship sleep and pain is most likely to be bidirectional, though the interaction effects between the two problems requires further research (Tang, 2008). A chronic painful condition physically, leads to worsening the symptoms of insomnia are the result of many such researchers (Ohayon, 2005). The major forces working to improve the mental health and well being here is seen as the optimism and hope that an individual has. Better optimism and hope levels foster better pain management and improve the quality of sleep. This paper attempts to understand the level of insomnia, body pain intensity and the levels of remaining hope among working women.

A brief review of available literature was conducted to better understand the constructs taken up for study.

Smith (2015) conducted a large study examining the effectiveness of cognitive behavioural therapy as a sole treatment for insomnia related to chronic pain. Results showed that patients in the cognitive behavioural therapy group had significantly greater reductions in wake time after sleep onset. In that group, most patients also reported significant and comparable reduction in pain over six months , with one third of them reporting a 30% reduction in pain severity. Furthermore, diary and polysomnography measurements of sleep improvement predicted decreased pain at each study end point, indicating that better sleep has at least some beneficial effects on pain. Andrew et al. (2019) reported that a variety of pharmacological treatment options are available along with cognitive behavioural therapy as a viable option.

Significant relationships were reported between Total Hope Scale scores and the psychosocial inferences of pain in the Brief Pain Inventory (BPI) and sleep among 225 oncology patients (Utne, Miaskowski, Bjordal, Paul, Jakobsen and Rustoen 2008). Another interesting research on the neural pathways involved in the sensation of pain and its relationship to addiction, depression and anxiety was conducted by Zamponi (2019). This research also helped develop a newer drug therapies to target the pain stimulation and provide relief for pain sufferers along with providing relief for anxiety and depression arising out of the pain.

Schiavon, et al.(2017) identified the scientific literature on the influence of optimism and hope on chronic disease treatment. The studies about optimism had more similar outcomes than the hope studies due to the fact that they focused mainly on cancer and cardiac diseases, while hope studies mentioned a wider range of conditions. It was reported that there are still a small number of articles that relate optimism and hope with chronic disease, that many of the authors have focused on studying mainly heart disease and cancer in comparison with hope, optimism was used in a larger number of studies. Another longitudinal study tested the prospective effects of hope on depression and anxiety among 522 college students. Results indicated that statistically significant negative effect for the agency component of hope on later depression but no unique effect of the pathways component of hope on depression. Likewise, agency showed a statistically significant negative effect on later anxiety, but again pathways had no significant influence on anxiety. In both cases, neither depression nor anxiety demonstrated any longitudinal effects on either the agency or pathways components of hope.

The above review indicates that there is a need to identify the relationship between insomnia, pain intensity and hope among the specific population of working women, who undergo high levels of stress.

Method

- The study on "Insomnia, Body Pain Intensity and Hope among Working Women" was undertaken with the following objectives:
- To identify the levels of pain, insomnia and hope among the participants
- To identify the relationship between insomnia, pain intensity and hope among working women.
- To understand the mediation effect of hope in the relationship between insomnia and pain.

Sample

The sample consisted of 117 working women from various fields who were selected through random sampling and administered by Insomnia Scale (Croenlein et al., 2013), Brief Pain Inventory (Cleeland , 1994) and the Adult Hope Scale (Snyder et al., 1991). The women from age of 22 years to 60 years, who worked in permanent or temporary or contractual posts were included in the sample. Both married and unmarried working women were included. An informed consent was taken from all the participants of the study.

Tools

Insomnia Scale (Croenlein et al., 2013), consisting of 10 items regarding the quantity and quality of sleep.

Brief Pain Inventory (Cleeland , 1994) consisted of 9 items with the 9th item containing 7 sub questions regarding the interference of pain with general life.

Adult Hope Scale (Snyder et al., 1991) had 12 items used to measure the individuals dispositional hope.

The data was collected using Google forms and the results analyzed using the SPSS software version 21.

Hypotheses

The null hypotheses for the study are as follows:

There will be no significant relationship between insomnia, pain and hope among working women

There will be no significant mediation effect of hope in the relationship between pain and insomnia

Results

The distribution of insomnia, pain and hope among working women was analyzed. The results are tabulated below.

Table 1. Distribution of insomnia, pain and hope among working women
N= 117

S. No.	Levels	Insomnia	Pain	Hope
1	Low	19%	15%	48%
2	Moderate	35%	33%	31%
3	High	46%	52%	21%

Table 1 indicates that 19% of the working women face high level of insomnia, 18% moderate level and 46% had high level. Also, it can be seen that 15% of the working women face low pain, 17% face moderate and 27% face high levels of pain. 48% of the working women have low hope, while 31% have moderate and 41% high levels of hope.

Product moment correlation was computed between levels of insomnia, pain and hope among working women.

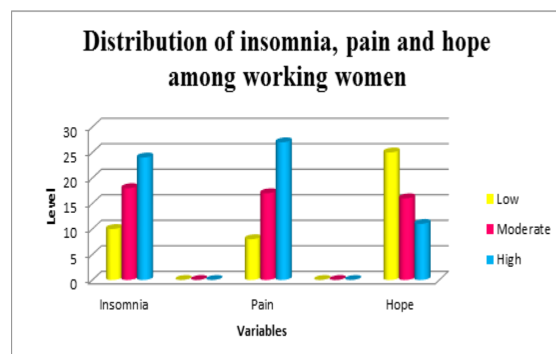

Figure 1. Distribution of insomnia, pain and hope among working women

Table 2. Correlation between insomnia, pain and hope among working women

N=117

Variables		Insomnia	Pain	Hope
Insomnia		1	0.58**	-0.56**
Pain		0.58**	1	-0.79**
Hope		-.056**	-0.79**	1

** = Significant at 0.01 level

Table 2 shows that there was significant positive correlation (r=0.58) between insomnia and pain, which implies that higher the level of insomnia experienced, higher is the pain and vice versa. Also, there was significant negative correlations (r=-0.56, r=-0.79) between hope and insomnia, and hope and pain, indicative of that higher the insomnia and pain, lower the hope and vice versa respectively. Hence the hypothesis, "There will be no significant relationship between insomnia, pain and hope among working women" is rejected.

Mediation Analysis

Next, the Structural Equation Modelling (SEM) for mediation analysis was computed using AMOS Graphics, version 22. The model derived is as follows:

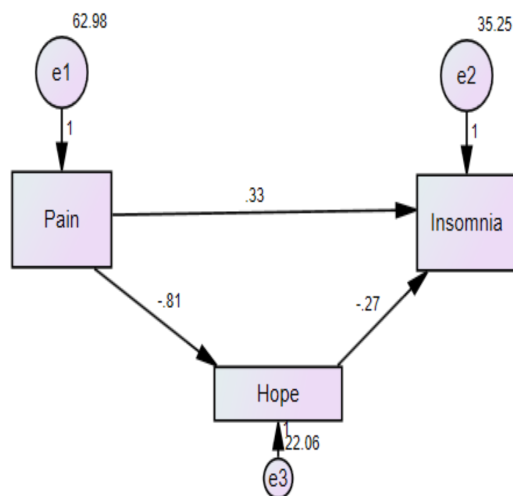

Figure 2.

Structural Equation Model of mediation of hope in the relationship between pain and insomnia.

The above diagram indicates that the relationship between pain and insomnia is 0.33, indicating a positive direct effect. However, when hope is taken as a factor of mediation, there is an indirect negative effect (-0.81 and -0.27 respectively). It can be seen that hope reduces the negative effect and successfully mediates the relationship between pain and insomnia. Hence the hypothesis, "There will be no significant mediation effect of hope in the relationship between pain and insomnia" is rejected.

The model fit indices of the above structural equation model are shown in the table below.

Table 3. Model fit indices of the mediation model

Model Fit Indices	Obtained Values	Suggested values
Normed Chi-Square	2.97	<5
NFI (Normed Fit Index)	0.96	>0.90
RFI (Relative Fit index)	0.94	>0.90
IFI (Incremental Fit Index)	0.98	>0.90
TLI (Tucker-Lewis Index)	0.97	>0.90
CFI (Comparative Fit Index)	0.98	>0.90
SRMR (Standardized Root Mean Squared Residual)	0.06	<0.08
RMSEA (Root Mean Square Error of Approximation)	0.06	<0.08

The above table indicates that the model fit indices are significant. The various fit indices indicate that the model arrived is fit. Also, the model indicates significant regression coefficients.

Table 4. Regression coefficients indicated through mediation analysis

Variables			Estimate
Hope	<---	Pain	-.808
Insomnia	<---	Pain	.350
Insomnia	<---	Hope	-.287

The above table 4 indicates that hope has a negative predictive ability for both pain and insomnia. That is, higher hope levels in a person predicts lower pain and insomnia levels.

Next, the direct and indirect effects of hope were analysed.

Table. 5. A comparison of standardized direct and indirect effects

	Direct Effects		Indirect Effects	
Variables	Pain	Hope	Pain	Hope
Hope	-0.811	0.000	0.000	0.000
Insomnia	0.330	-0.269	0.232	0.000

The above table 5 shows that hope has a direct negative effect on the pain and insomnia levels (-0.811 and -0.269), but when the indirect mediation effects are taken into consideration, hope successfully nullifies the pain (0.000) and reduces the negative effect on insomnia (0.232). The direct and indirect effects analysis further prove the full mediation effects of hope in the relationship between pain and insomnia.

Discussion

The present study attempts to understand the mediation effects of hope in the relationship between pain and insomnia. Hope is a positive psychology construct, that helps mitigate the negative influences of many negative influences such as pain and insomnia. This study effectively establishes that hope mediates the relationship between pain and insomnia. When an individual is in pain, if he/she has high levels of hope, then there is lesser influence of the pain in his/her daily life. Similar findings were reported by Woosley et al (2014), who indicated that hopelessness was a mediating factor in the relationship between insomnia and many other negative factors to mental health. Similarly, Arinson (2023) reports that several preventive factors including hope are necessary intervention factor in pain and insomnia among adolescents. Another similar study reports that pain-related beliefs mediated the relationship between pain intensity and sleep quality among war veterans. This study also mitigates the effect of hope on both pain and sleep quality (Schwartz, 2021). The role of hope as a preventive and protective factor against psychopathology, depression, insomnia, pain catastrophization and many other constructs have revealed that hope as an intervention reduces negative affect significantly (Or, et al., 2012; Chan, Wong and Lee, 2019; Wright, et al., 2011; Wai-Ming Mak, et al, 2021). Thus, the positive effects of hope indicate that hope can be seen as a factor in consideration for treatment of pain and insomnia.

Limitations

The study had the following limitations:

- The sample size used is small. Larger sample can be used for future research.
- Only working women were included. Future research can compare results of working and non-working women.
- Both genders can be included in future studies

Implications for further research

- As there are significant number of working women facing insomnia and pain, as a result of which their hope levels are reduced, the following can be implemented:
- Employers can conduct interventions to improve the mental health of the women employees
- Government can introduce policy-based changes to care for mental health of the citizens
- Interventions focusing on reducing the apprehension of pain as well as focusing on overcoming insomnia need to be developed.

Conclusion

It can be concluded from the above study that

There was a significant positive correlation between insomnia and pain intensity among working women

There was a significant negative correlation between hope and insomnia, and hope and pain intensity among working women

Hope mediates the relationship between pain and insomnia.

It can be concluded that working women face insomnia due to pain that they experience. Interventions to overcome pain and insomnia can significantly improve the hope and happiness

levels and well-being and overall mental health of working women.

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Existential Therapy in Managing Pain and Building Resilience among Women

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Women are subjected to numerous pressures, owing to various responsibilities and varied roles that they fulfill. The COVID pandemic has brought forth a lot of added chores at home and outside. Economic pressures have added to their stress. Mental health of working women has faced huge challenges. Women struggle to meet all expectations of work and at home, during the day and are fatigued at the end of the day. At night, they are extremely tired that sleep too eludes them. Body pain is the result of this age of high demand and stress. This paper attempts to understand the level body pain intensity and the level of resilience among Women. The study aims to explore the relationship between Pain and Resilience among women and to find the usefulness of Existential Therapy on managing pain and building resilience. The research design used for the study is Before –After and Follow up without control group. Fifty-two women were selected using purposive sampling method. Brief Pain Inventory (Cleeland, 1994) and Connor-Davidson Resilience Scale (CD-RISC) by Connor Davidson,2003 was used to measure Pain intensity and Resilience. Existential therapy was given to the participants, and the data were subjected to repeated measures of MANOVA. The results showed that practicing Existential therapy had a significant positive impact on Pain and Resilience.

Keywords: Pain, Resilience, Existential therapy, Women.

Middle age is a crucial period for women as they are generally known to be multitaskers. They fulfill varied roles with ease, are wonderful mothers, dutiful daughters, caring daughters-in-law, lovely and enthusiastic wives, beautiful sisters, jubilant friends, and brilliant in all that they set their minds to. Many times, they take on varied roles when they work outside their homes. Nowadays, women have conquered all professions to the board room to rocket engineering. Women have made their presence felt in all spheres of life and have mostly eliminated the gender differences in professions (Thomas,2018). But still, owing to various roles and responsibilities that the women have, they tend to neglect their own physical and mental health; and well-being, instead focus and concentrate on fulfilling the expectations from their various roles, thus paying the price for satisfying everyone else and ignoring themselves. Many of them encounter numerous aches and pains in their bodies, suffer from migraines, body pain, stomach disturbances, leg pain and many such acute and chronic pain related disorders. As a result of these issues, their personal and professional lives suffer greatly. They are left wanting in numerous spheres and cause them a great amount of worry and stress (Bard, 2023)

Pain

Pain conditions affecting women have a significant global impact. Yet, there is still a lack of awareness/recognition of pain issues affecting women. Chronic pain affects a higher proportion of women than men around the world; however women are less likely to receive treatment. Research has shown that

women generally experience more recurrent pain, more severe pain and longer lasting pain than men. (Pollack,2006). International Association on the study of pain reports that everyday millions of women around the world suffer from chronic pain but many remain untreated. Several reasons may explain why barriers to treatment still exist. Psychosocial factors, such as gender roles, pain coping strategies and mood may influence how pain is perceived and communicated (Fikree,2004).

Need for the study

Pain can be severe enough to alter an individual's daily activities and overall well-being, and these are all caused by changes in lifestyle factors and hormonal fluctuations. And resilience is an important factor for women, individuals who possess a healthy sense of resilience are better able to overcome challenges and attempt to adapt to changes in their development. To achieve a healthy and balanced mental state, existential therapy is a form of relaxation that focuses on the present meaningfulness and cultivates a positive attitude. This study mainly helps us to investigate the effect of existential psychotherapy in coping with pain and in building resilience among women.

Objectives

- To find the relationship between pain and resilience among women.
- To study the usefulness of existential therapy on pain and resilience among women.

Hypotheses

- There will be significant relationship between pain and resilience among women.
- There will be significant difference in the before, after and follow up phases in pain and resilience through Existential therapy among women.

Method

Sample

Eighty women in the age range of 35-64 years were selected for the study. The purposive sampling method was used to select 52 participants for the study.

Tools

Brief Pain Inventory (Cleeland, 1994) consisted of 9 items, with the 9th item containing seven sub-questions regarding the interference of pain with general life.

The Connor-Davidson Resilience Scale (CD-RISC) The Connor-Davidson Resilience Scale (Bobeset al., 2001-2008) was used to assess Resilience. This original scale was designed by Connor Davidson (2003). The reliability coefficient of this version of the CD-RISC has internal consistency alpha values acceptable for the total questionnaire items (a=0.751), and an acceptable Guttman split-half coefficient (a=0.703).

Psychological Intervention Existential therapy

The overall purpose of existential therapy is to allow clients to explore their lived experience honestly, openly, and comprehensively. The participants were asked to identify the existential crisis that is the most painful experience for them to date, which led to feelings of hopelessness or anxiety. Then, the authentic and creative thoughts of the participants were analysed, and they were trained to take responsibility for their lives and relationships. The next step is to help them understand their values, beliefs, and attitudes.

The techniques of existential therapy were given to all the participants, and they underwent14 sessions for twice a week. Each session consisted of 45 minutes. The subjects were reassessed after intervention, and follow up which was done after one month. The research design used in this research was before, after and follow up without control group design. The variables pain and resilience were assessed before and after the psychological intervention, existential therapy. A follow up assessment was done after a month.

Results

The data was collected and analyzed using SPSS software version 21. Initially, the socio-demographic distribution of the sample and distribution with respect to pain and resilience were analyzed. The results of the distribution analysis are presented below.

Table 1. Socio demographic Distribution of the Participants

S. No	Demographic Details	Number	Percent
1	Rural	23	44
	Urban	29	56
2	Employed	21	40
	Unemployed	31	60
3	35- 45	14	27
	46- 55	17	33
	56- 64	21	40

The socio-demographic analysis reveals that 44 percent of the participants are from rural areas and 56 percent of the participants are from urban areas, while 40 percent of the participants are employed and 60 percent of the participants are not unemployed. The age of the participants is 40 percent belong to the late middle age group, 33 percent from middle adulthood, and 27 percent are from the early middle age group. The same data is shown figuratively below.

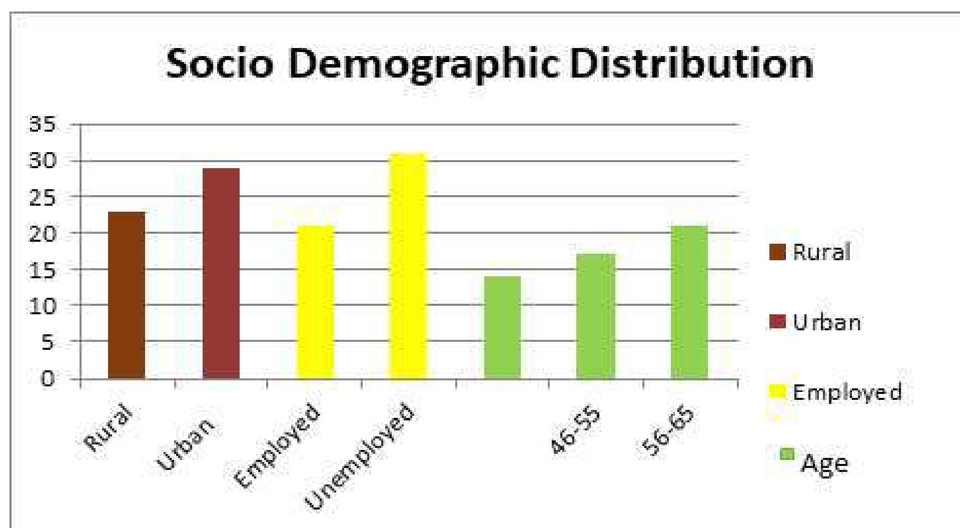

Figure 1. Sociodemographic Distribution of the Participants

The table 2 indicates that 31 percent of the participants had moderate pain levels, while 69 percent had high pain levels. Also, 96 percent of the participants had low resilience and only 4 percent of the participants had moderate resilience. It is remarkable to note that in the before intervention stages, there are no participants with either low pain levels or high resilience levels. The same data is shown figuratively below.

Table 2. Distribution of Pain and Resilience (N=52)

S. No	Levels	Pain		Resilience	
		N	Percent	N	Percent
1	Low	0	0	50	96
3	Moderate	16	31	2	4
4	High	36	69	0	0

Figure 2. Distribution of Pain and Resilience

Pearson's Product Moment Correlation was computed to understand the relationship between pain and resilience among women.

Table 3. Correlation between Pain and Resilience among Women N=52

Variables	Stress	Happiness
Pain	1	-0.31**
Resilience	-0.31**	1

** = Correlation is significant at the 0.01 level

Table 2 indicates that there is a significant negative correlation between pain and resilience levels among women. As the pain intensity increases, the resilience levels reduce and vice versa. Hence, the hypothesis, "There will be a significant relationship between pain and resilience among women," is accepted.

The independent variable for the research is the existential therapy intervention with only one group of participants. The pain and resilience (the dependent variables) levels were measured three times, namely, prior to the intervention, henceforth called before intervention scores, after the intervention, and a follow-up assessment was done one month after the intervention. As there were three-time scores for two dependent variables, it was decided to use Repeated MANOVA to statistically compute the results.

A MANOVA of repeated measures was computed for the three-time scores before, after, and follow-up phases. The results are presented below.

Table 4. Means and Standard Deviations of the participants in the Before, During, and After Phases of Intervention for Pain and Resilience (N=52)

Dependent Variable	Time of Measurement	Participants	
		M	SD
Pain	Before Intervention	152.83	20.25
	After Intervention	79.15	30.08
	Follow-up	81.00	22.11
Resilience	Before Intervention	33.02	10.87
	After Intervention	74.17	10.48
	Follow-up	72.46	13.73

The above table 4 indicates that average pain was significantly lower in the after-intervention phase (M = 79.15, SD = 30.08) than the before intervention phase (M = 152.83, SD = 20.25), and which was lower than the follow up phase (M = 81.00, SD = 22.11) for the participants. Average resilience was significantly higher in the after-intervention phase (M = 74.17, SD = 10.48) than the before-intervention phase (M = 33.02, SD = 10.87), and was higher than the follow-up phase (M = 72.46, SD = 13.73) for the participants.

As Table 5 indicates, the test of sphericity is not significant, ÷2=6.86, p = 0.08 for pain

and ÷2=3.75, p = 0.15 for resilience. The rule of thumb indicates that one should reject the null hypothesis if $p < 0.05$. Hence, the sphericity (homogeneity) seems to be met.

Table 5. Test of Sphericity for Pain and Resilience (N=52)

Variable	Mauchly's W	Chi-Square	df	Sig.
Pain	0.87	6.86	2	0.08
Resilience	0.93	3.75	2	0.15

Table 6. Multivariate Analysis of Variance for Pain and Resilience

Measure	Wilk's Lambda value	F(df)	p	η^2
Time (3-time measures)	0.15	81.30 (4,202)	0.000	0.43

The above table 6shows a significant difference between the 3-time measures, that is, the before, after and followup measures of the dependent variables namely, pain and resilience; where F (4,202) is 81.30, which is significant at the 0.01 level, and the partial eta square value ç^{2}is 0.43, showing a moderate effect size. It can be interpreted that there is a significant difference in the levels of pain and resilience between the three phases of measurement, that is, between the before, after, and the follow-up phases of the existential therapy intervention. Hence, this intervention is beneficial in reducing the pain levels and increasing the resilience levels among the participants.

Table 7. Univariate Analysis of Variance for Pain and Resilience among the participants

Measure	Sum of Squares	F(df)	p	η^2
Pain	183564.12	250.75 (2, 102)	0.000	0.83
Resilience	56372.58	213.26 (2, 102)	0.000	0.81

The above table 7indicates a significant effect of F (2, 102) = 250.75, p= 0.001 for pain and F (2, 102) = 213.26, p = 0.001 for resilience, were both statistically significant and the ç^2 (partial eta square) = 0.83 and 0.81 respectively, showing strong effect size. The post hoc values for paired comparisons were computed.

Table 8. Pairwise comparisons for Before, After and Follow-up Phases for the Participants on Pain and Resilience

(I) Time	(J) Time	Mean Difference (I-J)		Std. Error	
		Pain	Resilience	Pain	Resilience
Before Intervention	After Intervention	73.67*	-41.15*	4.28	2.28
	Follow-up	71.83*	-39.44*	3.78	2.49
After Intervention	Before Intervention	-73.67*	41.15*	4.28	2.28
	Follow-up	-1.85	1.71	3.10	1.96
Follow-up	Before Intervention	-71.83	39.44	3.78	2.49
	After Intervention	1.85	-1.71	3.10	1.96

Post hoc paired comparisons were performed to understand the effect of the existential therapy intervention in the before, after, and follow-up phases of pain. Table 6 above shows a significant mean difference between the before and after phases (M=73.67, SE=4.28). Also, there is a significant mean difference in the before and follow-up phases (M= 71.83, SE=3.78). The above table shows a significant mean difference in the after and before phases (M=-73.67, SE=4.28). Also, there is a significant mean difference in the after and follow-up phases (M= -1.85, SE=1.71). The

above table also shows a significant mean difference in the follow-up and the before phases (M=-71.83, SE=3.78). Also, there is a significant mean difference in the follow-up and after-intervention phases (M=1.85, SE=3.10).

Also, there is a significant mean difference in the after and follow-up phases (M=1.71, SE=1.96). The above table also shows a significant mean difference in the follow-up and the before phases (M=39.44, SE=2.49). Also, there is a significant mean difference in the follow-up and after intervention phases (M= -1.71, SE=1.96). The profile plots for the significant difference are shown below.

Figure 3. Profile plots of Pain in the Before, After, and Follow-up Phases for the Participants

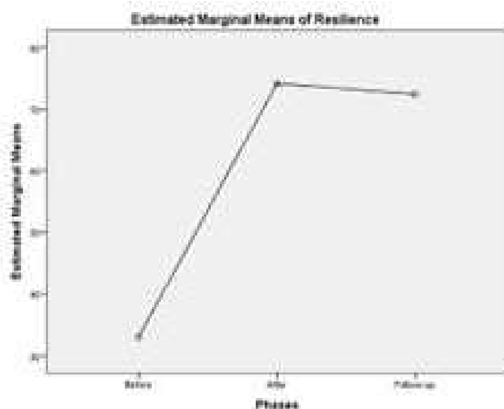

Figure 4. Profile plots of Resilience in the Before, After, and Follow-up Phases for the Participants

The two-way multivariate analysis of variance conducted for pain and resilience scores of the before, after, and follow-up phases shows that the existential therapy intervention is beneficial in reducing the pain and improving the resilience levels of women. Hence, the hypothesis, "There will be a significant difference in the before, after, and follow-up phases of pain among women," is accepted. Also, the hypothesis, "There will be a significant difference in the before, after, and follow-up phases of resilience among women," is accepted.

Discussion

The above study shows that existential therapy is highly useful in reducing the pain levels of women. It can also be seen that this therapeutic technique is highly useful in building resilience among the women participants. Similar findings were reported by Farco (2021) in an in-depth study on the nature of pain. This study emphasized the need for more holistic approaches to managing pain intensity. In another study by Siler, Borneman, and Ferrell (2019), it was reported that the pain and suffering of cancer patients need to be understood from the viewpoint of existential distress, while treatment is much more useful. Another interesting study by von Blanckenburg and Leppin (2018) on the psychological interventions used extensively in palliative care indicated that existential therapy can be used to manage pain and its intensive experiences. Similar findings were reported by Mema et al. (2021).

Hence, it can be interpreted and understood that existential therapy is highly helpful in reducing pain and building resilience.

Recommendations and suggestions for future research

- Other psychological issues can be adopted for future studies.

- Future researchers may focus on the need for the development of programs to ensure better management of pain and resilience among women.

Limitations of the study

- Better results can be obtained if other age groups and cross-cultural participants were included.
- A comparative study can be done on pain among rural and urban communities.

Conclusions

There is a significant negative correlation between pain and resilience. There is a significant difference in the levels of Pain and Resilience in the Before, after, and follow-up phases of the Existential therapy intervention. Existential therapy is beneficial in reducing the levels of pain and in improving resilience among women.

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