

A Cross-Sectional Study on Coping Mechanisms and Pain Disability among Persons with Hemophilia

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ABSTRACT

All individuals are blessed with certain abilities to cope with difficult situations. The important question, however, is what types of coping behavior contribute to favorable outcomes. The aim of the research was to study coping skills (approach and avoidance), and pain disability among persons with hemophilia. A total of 50 PWH participated in the study and were divided into 2 age groups (19-24) and (25-30). The data was collected from all over India. Hemophilia A and B, both were included in the sample along with all three severity types (mild, moderate & severe). Standardized scales such as The Brief Cope (Charles S. Carver.,1997) and Pain Disability Questionnaire (Anagnostis C, Gatchel, R J. & Mayer, Tom G 2004) were used. The obtained results were tabulated, and correlation and independent t-test was used to compare the means of two age groups. The correlation of pain disability was found to be positive and significantly related to approach coping ($r = .08$) and avoidance coping ($r = 0.10$). There was not a significant difference in approach coping between the (19-24) age group ($M = 36.96$, $SD = 7.18$) and (25-30) age group ($M = 37.36$, $SD = 6.54$); $t(48) = -0.22$. This paper highlights the dire need to equip psychosocial assessment and counseling to complete the comprehensive care of hemophilia. To comprehend the PWH coping dynamics, it's critical to identify the current support network.

Keywords: Hemophilia, Avoidance Coping, Approach Coping, Pain disability

Persons with hemophilia are a rare population but their experiences are like a common man. It can be helpful to know how a patient handled past situations in order to predict how they could handle future circumstances. (Alabek, Mohan & Raia, 2015). This paper highlights the dire need to equip psychosocial assessment and counseling to complete the comprehensive care of hemophilia. Instead, we can adopt the "Biopsychosocial" paradigm before a PWH, is treated with factors at hospitals to make the management robust. To comprehend the PWH coping dynamics, it's critical to identify the current support network.

Pain is an established indicator of impairment, and patients with severe hemophilia frequently report pain brought on by hemophilic arthropathy. However, a thorough investigation into how these patients' pain affects their ability to function has not yet been

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done (Van Genderen et al. 2006). Congenital hemophilia A and B are characterized by spontaneous bleeding into joints and muscles. In chronic diseases, age and the pain duration of the disease go hand in hand (Bolton-Maggs & Pasi, 2003). PWH is a person with pain and it may be acute or chronic. In order to decrease the burden that pain imposes on people with hemophilia, effective pain management is crucial. They may also benefit from non-pharmacological treatments, which include active coping mechanisms.; rest, ice, compression, and elevation (Auerswald, 2016).

Barry & Elander (2002) studied the methods used by hemophiliacs to cope with pain. Patients completed the hemophilia-adapted CSQ and the beliefs about pain control questionnaire (BPCQ). Two key factors—"negative thoughts about pain" and "coping attempts"—and a third, "passive adherence," were identified by principal components analysis. Negative attitudes about pain were linked to the notion that pain was managed by random events, whereas passive adherence was associated with frequent hospital visits and increased use of painkillers.

Context of Hemophilia in India

An outstanding contribution to the growth of hemophilia care in this nation was made by the collective efforts of patients organized national NGO- Hemophilia Federation of India, which is still active today (Ghosh, 2019). According to the Annual Global Survey 2021, the patients diagnosed with hemophilia in India are 25,384. Out of which patients with Hemophilia-A are 21,350 and patients reported with Hemophili- B are 3,475. Most PWH in India are in the age group of 19-44.

The disease's effects extend beyond the patient since the chronic nature of the illness results in the functional limitation of PWH, which directly and indirectly affects parents and caregivers psychologically. This brings to light the need to study the mental health of caregivers in the hemophilia community as well as to design a program to boost their coping skills along with easing the significant pain of their lives.

Statement of the problem

To understand the type of coping strategy used by hemophiliacs and study whether there is a difference among age groups on coping approach, coping avoidance, and pain disability among persons with hemophilia.

METHODOLOGY

Objective

On the basis of the Review of the Literature, the following objectives have been formulated,

1. To study coping skills and pain disability in persons with hemophilia.
2. To compare differences between the two age groups of persons with hemophilia on coping and pain disability.
3. To study inter-correlation among coping strategy Viz. approach coping, avoidance coping, and pain disability among persons with hemophilia.

Hypotheses

Based on the review of the literature, the following hypotheses have been proposed:

H₀: It is expected that there will be no difference between the two age groups (19-24 years) and (25-30 years) on coping mechanisms and pain disability among persons with hemophilia

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H₁: It is expected that there will be a positive relationship between avoidance coping and pain disability among persons with hemophilia.

H₂: It is expected that there will be a negative relationship between approach coping and pain disability among persons with hemophilia.

Measuring tools

The following standardized tools were used:

1. The Brief Cope (Charles S. Carver.,1997)
2. Pain Disability Questionnaire (Anagnostis C, Gatchel, R J. & Mayer, Tom G 2004)

Procedure

The study considered persons with hemophilia for all the severity types (mild, moderate, and severe). Participants selected for the present study were diagnosed with hemophilia-A and hemophilia-B. The testing schedule was conducted personally. The minimum educational qualification for the selection of participants was matriculation. Any participant having a history of substance/ alcohol dependence was excluded. The testing schedule was started by first asking the participants to fill in the general information and then proceeding to respond to the tests one after the other until all tests and all questions have been responded to. The questionnaire was prepared along with the consent form and demographic details. Data was collected from all over India. A total of 54 PWH participated in the study but 4 of them were screened out due to incomplete data forms. 50 patients were selected and divided into two age groups (19-24) and (25-30). Each group consisted of 25 subjects.

RESULTS

The obtained results were tabulated and a correlation matrix was prepared. Based on the nature of the data, an independent *t*-test was used to compare the means of two age groups (19-24 years) and (25-30 years) among persons with hemophilia. The total sample mean came out to be 18.10. The standard deviation of the total sample was 8.30.

Table 1- shows the correlation matrix of approach coping, avoidance coping, and pain disability

	Approach coping	Avoidance coping	Pain disability
Approach coping	1	0.10	.08
Avoidance coping		1	0.22
Pain disability			1

The Correlation values are significant at the 0.05 and 0.01 level

The correlation matrix defines the association between the variables under study. It can be observed from the table that the correlation of pain disability was found to be positive and significantly related to approach coping ($r = .08$) and avoidance coping ($r = 0.10$).

Table 2- shows the Mean, SD and t-test value of the two groups of hemophilia on approach coping.

Approach coping.	N	Mean	SD	t- value
Age group 19-24	25	36.96	7.18	-0.22
Age group 25-30	25	37.36	6.54	

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Table 3 – shows the Mean, SD, and t-test values of the two groups of hemophilia on avoidance coping.

Avoidance coping	N	Mean	SD	t- value
Age group 19-24	25	26.21	5.62	0.51
Age group 25-30	25	34.43	37.60	

DISCUSSION

The purpose of the current study was to analyze the use of coping strategies and study whether there is a difference among age groups on coping approach, coping avoidance, and pain disability among persons with hemophilia. HERO Research Project (2014) which emphasizes psychological attributes in hemophiliacs has also identified “coping with adolescent patients” as one of the five major themes in their qualitative study. This explains the selection of studying coping mechanisms in hemophiliacs as a dependent variable in our research.

A two-sample t-test was performed to compare PWH on avoidance coping between (19-24) age group and (25-30) age group. There was not a significant difference in avoidance coping between (19-24) age group (M = 26.21, SD =5.62) and (25-30) age group (M = 34.43, SD =37.60); $t(48) = 0.51$. A two-sample t-test was performed to compare PWH on approach coping between (19-24) age group and (25-30) age group. There was not a significant difference in approach coping between (19-24) age group (M = 36.96, SD =7.18) and (25-30) age group (M = 37.36, SD = 6.54); $t(48) = -0.22$. Hence the null hypothesis stands true. A study aligning with our aim was done by Santavirta et al. (2001). They studied Coping Strategies, Pain, and Disability in patients with hemophilia and related Disorders. They divided 3 homogeneous groups of 224 patients. Results portrayed that in all pain groups, distraction was the most commonly used coping strategy. A significant interaction effect of the pain factor and age on PWB ($p = 0.04$) was found.

As expected, a positive relationship was found between avoidance coping and pain disability among persons with hemophilia ($r=0.10$) but contrary to our hypothesis, a positive relationship was found between approach coping and pain disability among persons with hemophilia ($r= .08$). Geisser and colleagues (1994) suggest that catastrophizing mediates the relationship between depression and the evaluative and affective aspects of pain, but not the sensory aspect. The coping strategy found in hemophilia was similar in both age groups. This is particularly relevant in light of the attention being given to psychosocial factors among the healthcare of hemophiliacs.

CONCLUSION

To better understand the intricate interaction of factors influencing pain perception and psychosocial management in the hemophilia community, more in-depth research is required across the age spectrum.

Implications and Limitations

It is recommended that multidisciplinary comprehensive care teams shall comprise a psychosocial expert who can conduct a thorough assessment of mental health status and contribute to an integrated disease management strategy. In the near future, we can have an individualized approach to pain management accompanied by a tailor-made program of physiotherapy for better treatment outcomes. The study can also include older hemophiliacs to generalize the results and to better understand the coping mechanisms of PWH.

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Conflict of Interest

The author(s) declared no conflict of interest.

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