Hope as a bridge: Navigating Illness Perception and Maintaining Dignity among Client with Schizophrenia

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Abstract

Background: Schizophrenia, a prevalent severe mental disorder, significantly impacts individuals' lives and imposes a substantial burden on their families and society. Negative illness perceptions can further diminish self-worth and dignity, complicating recovery and overall well-being. While prior studies have established a link between hope and positive outcomes, a deeper understanding of the underlying mechanisms and their implications for psychosocial interventions remains elusive. By investigating how hope can serve as a bridge between illness perception and the maintenance of dignity, this study aims to enhance our understanding of these dynamics, ultimately informing targeted interventions that promote hope, enhance illness perception, and dignity perception for clients with schizophrenia. **Objective:** This study explores the role of hope as a bridge between illness perception and dignity among clients with schizophrenia. **Materials and Method**: A descriptive correlational design was used on a sample of convenient 130 participants who met the inclusion criteria. Four tools were used for data collection (Socio-demographic and clinical data questionnaire, Dispositional Hope Scale (DHS, Patient's Dignity Inventory (PDI), and Illness Perception Scale for Schizophrenia (IPQ-S). **Results:** The correlational analysis reveals significant negative correlations between hope and illness perception dimensions. Conversely, positive correlations exist between the Patient Dignity Inventory and several IPQ-S dimensions, such as timeline cyclical, consequences, and emotional representations. Regression analysis identifies these dimensions as predictors of dignity-related distress, with higher hope linked to lower dignity distress levels. Mediation analysis shows that Dispositional Hope Scale (DHS) mediates the relationship between certain IPQ-S dimensions and dignity distress, specifically affecting the timeline cyclical, illness coherence, and emotional representations dimension. **Conclusion& recommendations:** The findings suggest that hope, illness perception, and dignity are interconnected and significantly influence the well-being of individuals with schizophrenia. To improve patient outcomes, mental health nurses should integrate interventions that foster hope, challenge negative illness perceptions, and dignity distress. Additionally, holistic patient care models should be implemented to address both psychological and emotional needs, and future research should delve deeper into the relationship between hope, illness perception, and other clinical variables in schizophrenia.

Keywords: Hope, Illness perception, Dignity, Schizophrenia.

Introduction:

Schizophrenia is a prevalent and chronic psychotic disorder that affects approximately 24 million individuals globally, representing a significant portion of patients in psychiatric facilities in Egypt (**Manea et al., 2020; Shanko et al., 2023**). Recent research highlights the variability in the progression of the illness, indicating that while some patients may experience stable symptoms, others may encounter cognitive impairments (**Llorca et al., 2023; Rosen et al., 2024).** Despite the challenges posed by cognitive deficits associated with schizophrenia, which can lead to negative illness perceptions such as hopelessness and social withdrawal **(Aghevli et al., 2003)**, it is crucial to recognize that these conditions do not diminish an individual's inherent dignity. Dignity theory posits that dignity is crucial for mental health care, advocating for respect and recognition of individuals as valued members of society, particularly those with mental disorders **(Saxena S& Hanna F., 2015).** Moreover, ethical principles in psychiatry underscore the necessity of recognizing individual worthwhile navigating

complex decision-making scenarios in mental health contexts **(Beck NS& Ballon JS., 2020).**

Dignity encompasses respect for autonomy and the freedom to make personal choices, extending beyond mere protection from discrimination and stigma **(WHO, 2015).** In mental health contexts, dignity is intricately linked to recovery, allowing individuals to find new meaning and purpose in life despite their illness **(Anthony, 1990**). Effective therapy must prioritize respect for a patient's dignity **(Lindwall et al., 2012)** as it promotes social connections and reduces stigma, which supports recovery **(Ruggeri et al., 2017).** Research indicates that dignity is a critical aspect of care quality evaluation by patients (**Schroeder et al., 2006),** with dignity and autonomy being essential components of personalized patient care strategies aimed at achieving positive outcomes **(Social Care Institute for Excellence, 2015)**. A person-centered approach in mental health emphasizes addressing individual needs and rights, which can mitigate the psychological burdens associated with chronic illnesses like schizophrenia **(Bramesfeld et al., 2007; Robison et al., 2018)**. Both hope and dignity contribute to this approach, enhancing engagement and outcomes in mental health treatment **(APA, 2010).**

Schizophrenia is not merely a medical diagnosis but a profound personal experience. **Watson et al. (2006)** discuss how individuals often navigate the personal and social ramifications of psychosis, frequently attributing their symptoms to stress or life challenges rather than recognizing them as an illness. This perspective may arise from denial, limited understanding, or the nature of their symptoms. Illness perception—encompassing perceived causes, controllability, consequences, and emotional representations—plays a crucial role in shaping behaviors and treatment outcomes **(Broadbent et al., 2006; Leventhal et al., 1984; Moss-Morris et al., 2002).** Studies have consistently demonstrated the association between illness perception and quality of life in various conditions, including schizophrenia **(Zhang et al., 2023; Watari et al., 2021).** Additionally, a strong sense of coherence and meaningfulness is associated with psychosocial well-being in this population **(Guermazi, 2022).** However, negative illness perceptions can adversely affect self-worth and autonomy. **Wasten et al. (2006)** found that negative illness perceptions correlate with lower self-esteem among individuals with schizophrenia; when individuals perceive their illness as uncontrollable or severely consequential, it can foster feelings of worthlessness.

Hope is fundamental for recovery, fostering resilience and positive expectations about the future, which enhances psychological well-being **(Harrison et al., 2022).** The importance of hope in mental health, particularly for individuals with schizophrenia, is well-established. However, many patients report feelings of hopelessness due to various factors including treatment challenges, social stigma, marital difficulties, low social support, and economic hardships. This hopelessness correlates with treatment non-adherence and increased suicide risk. Conversely, hope fosters a positive outlook and empowers individuals to pursue their goals **(Eizenberg et al., 2013).** Research indicates that hope enhances coping mechanisms critical for managing chronic illnesses **(Kavak & Yilmaz, 2018).**

Hope not only motivates treatment engagement but also contributes to recovery by reducing depression and anxiety while improving overall well-being and quality of life **(Vrbova et al., 2017).** Studies have shown that higher levels of hope are associated with better social functioning and symptom reduction **(Oles et al., 2015; Siril et al., 2023).** Furthermore, individuals with higher levels of hope tend to have more favorable illness perceptions, which in turn can lead to improved quality of life **(Zhang et al., 2023).** Understanding the interplay between illness perception, dignity, and hope can significantly enhance therapeutic strategies in mental health nursing. By addressing these emotional and psychological dimensions, treatment plans can be tailored to improve outcomes for those affected by schizophrenia. Thus, this study aims to assess the mediating role of hope in navigating illness perception and decreasing dignity distress among clients with schizophrenia

Research Question:

- What is the nature of the association between hope, illness perception, and dignity among clients suffering from schizophrenia?

- To what extent does hope mediate the relationship between illness perception and dignity among clients with schizophrenia**?**

Subjects and Methods:

Research design:

A descriptive correlational design was utilized in this study.

Research setting:

This study was conducted in two settings: the inpatient psychiatric department of Tanta University Hospital and the Psychiatry, Neurology, and Neurosurgery Center in Tanta. The hospital has a capacity of 26 beds, divided equally between male and female patients. The Psychiatry, Neurology, and Neurosurgery Center consists of two floors designated for male psychiatric patients with a total capacity of 30 beds, one floor for female psychiatric patients with a capacity of 20 beds, two floors for child psychiatry, and one floor for substance use treatment. Both facilities are affiliated with the Ministry of Higher Education and Scientific Research.

Subjects:

The study included a convenient sample of 130 patients with schizophrenia. The sample size was calculated using the Epi-Info statistical software package. Based on a total population of 350 patients within six months, a 95% confidence level, and a margin of error of 5%, the software estimated a minimum sample size of 124 individuals. Consequently, 130 patients were enrolled in the study. Participants were selected according to the following criteria:

Inclusion criteria:

- Diagnosed as schizophrenic by the word psychiatrist as mentioned in the patients' charts.
- Age ≥ 18 years old.

Exclusion criteria:

- Acute stage of illness
- Organic brain disorders, mental retardation, substance use disorder and other psychiatric comorbidity

Tools of the study:

Four tools were used to collect data for this study

Tool I: Sociodemographic and clinical data questionnaire:

The researchers developed a tool to gather socio-demographic information about the study participants, including age, gender, marital status, education level, occupation, place of residence, income, and living arrangements. Additionally, the tool assessed clinical characteristics such as the age of illness onset, number of previous psychiatric hospitalizations, and mode of admission.

Tool II: Dispositional Hope Scale (DHS):

The Dispositional Hope Scale (DHS), developed by Snyder et al. (1991), is a 12-item measure divided into three subscales: Agency, Pathway, and Fillers. The Agency subscale (4 items) assesses patients' perceived ability to achieve their goals successfully. The Pathway subscale (items 1, 4, 6, and 8) measures patients' cognitive appraisal of their ability to generate strategies for reaching their goals. The Fillers subscale (4 items) includes negative statements unrelated to hope.

All items are rated on a 4-point Likert scale ranging from 0 (definitely false) to 3 (definitely true). The total score of all items is summed to determine the level of hope. A total score of 0-11 indicates low hope, 12-24 indicates moderate hope, and 25-36 indicates high hope.

Tool III. Patient's Dignity Inventory (PDI):

The Patient Dignity Inventory (PDI), developed by Chochinov et al. (2008), is a 25-item measure designed to assess dignity-related distress in individuals with psychiatric disorders. The PDI has demonstrated reliability and strong internal consistency, with a Cronbach's alpha coefficient of 0.93 (Chochinov et al., 2008; Huang et al., 2021; Salarvand et al., 2023). Each item is rated on a 5-point Likert scale, ranging from 1 (not a problem) to 5 (an overwhelming problem), yielding total scores between 25 and 125. Higher scores indicate greater perceived challenges to the patient's dignity

Tool IV: Illness Perception Scale for Schizophrenia (IPQ-S):

Illness Perception Scale for Schizophrenia (IPQ-S), developed by Moss-Morris et al. (2002), is a critical instrument designed to evaluate the beliefs and emotions of individuals diagnosed with schizophrenia regarding their condition. This scale encompasses multiple dimensions of illness perception:

- Timeline Acute/Chronic (6 items): Assesses beliefs about the chronic and relapsing nature of the illness.
- Timeline Cyclical (4 items): Evaluates perceptions of the illness's cyclical patterns.
- Consequences (11 items): Measures perceived impacts on life, including work and relationships.
- Personal Control (4 items): Measures perceived control over the illness.
- Treatment Control (5 items): Assesses beliefs regarding treatment efficacy.
- Illness Coherence (5 items): Evaluates understanding of the illness.
- Emotional Representations (9 items): Measures emotional responses such as sadness and anger.

Scoring: Each item on the IPQ-S is rated on a five-point Likert scale, ranging from "strongly disagree" to "strongly agree". Certain items (1,4,6 for timeline subscale / 2,11 for consequences subscale/ 3,4 for personal control subscale /1,5 for treatment control subscale / 6 in illness coherence and 4 for emotional representation) are reverse-scored to ensure accurate interpretation

Interpretation: Higher scores on the **timeline** subscales indicate a perception of a chronic and cyclical illness course. A high score on the **consequences** subscale suggests a significant negative impact on various aspects of life. Higher scores on the **personal control** and **treatment control** subscales denote a greater sense of control over the illness and belief in the effectiveness of treatment. A high score on the **illness coherence** subscale indicates a lack of understanding or coherence regarding the illness. Finally, a high score on the **emotional representation** subscale suggests a strong negative emotional response to the condition. Recent studies affirm the IPQ-S's reliability and validity in assessing illness perceptions among schizophrenia patients **(Moss-Morris et al., 2002; Broadbent et al., 2006).**

Method

- An official letter was obtained from the dean of faculty of nursing to the director of psychiatry hospital to obtain permission for data collection.
- The study tools were translated into Arabic and then back-translated to ensure accuracy. A panel of five experts in the psychiatric field reviewed the validity of the translated tools.
- A pilot study was conducted on 10% of potential participants to assess the clarity, applicability, and potential challenges of the study tools. Necessary modifications were made based on the pilot study findings.
- The reliability of the Dispositional Hope Scale (DHS), Patient's Dignity Inventory (PDI), and Illness Perception Scale for Schizophrenia (IPQ-S) was assessed using Cronbach's Alpha and found to be reliable (0.80, 0.91, and 0.85, respectively).
- During the actual study, each patient who met the inclusion criteria was contacted on an individual basis and interviewed in privacy by the researchers. An interview for a duration of 10-20 minutes was done to establish rapport and initiate relationship with clients. This was followed with another one or two interview sessions to explain the purpose of the study, getting the informed consent and completing the study tools. Each interview lasted between 30 to 45 minutes. Data collection was completed over a period of 3 months started from the end of June to the end of September.

Ethical consideration:

The study was approved by the ethics committee affiliated with the Faculty of Nursing, Tanta University (code number 492-6-2024). Informed consent was obtained from participants after explaining the study's objectives. Patient privacy and confidentiality were assured, and participants were informed that the collected data would be used solely for research purposes. The right of participants to refuse participation in the study was respected.

Results

Statistical analysis of the data

Data were analyzed using IBM SPSS Statistics version 23.0 and AMOS 23.0 software. Pearson correlation coefficients were calculated to examine relationships between normally distributed quantitative variables. Regression analysis was conducted to identify the most significant predictors of patient dignity. Path analysis using AMOS 23.0 was performed to assess

the direct and indirect effects of illness perception on patient dignity, mediated by the Dispositional Hope Scale. Statistical significance was determined at a 5% level.

Table 1 shows the sociodemographic and clinical data of the individuals diagnosed with schizophrenia in the study group. The large sector of participants (38.6%) belonged to the adult category, between the ages of 18 and under 30 years with a mean age of 35. 7 ± 10.3 years. An even distribution of genders was observed with an inclination, towards females (50. 7 % female and 49.3 % male). The largest portion of patients (41.4%) reported being single. It was found that multiple educational levels were represented; 43.1% having completed secondary education and 6.9% being illiterate. Urban living was common for participants (63%), and a large number (around 70%) mentioned their income not enough. Many individuals (65.4%) were not working. Clinically, the onset of schizophrenia in current sample occurred primarily before the age of 25 years represent (40.8%), emphasizing its early onset nature. Hospital admissions for treatment were frequent, with (36.2%) having been admitted for 3-4 times, indicative of the disorder's chronic and recurrent course, and the vast majority of participants (90%) were admitted involuntarily.

Table 2 presents the mean scores and standard deviations for Dispositional Hope Scale (DHS) for the studied patients with schizophrenia. More than half of the patients (60%) showed low levels of hope while a notable portion (40%) displayed moderate levels of hope; none fell into the high hope category with an average DHS score of (**11.3±5.6**) indicating low hope levels overall. Likewise, both agency and pathway subcategories had mean scores of (58±36, 55±25 respectively) hinting that these patients typically reported low to moderate levels of perceived agency and pathway subscale.

Table 3 presents the mean scores for distress related to dignity using Patients Dignity Inventory (PDI) among the studied patients with schizophrenia. The total PDI scores for the subjects ranged from (52.0 - 103.0), with a mean score of (**83.9±13.6)**. This suggests that patients experience a moderate to high level of dignity-related distress.

Table 4 presents the results of Illness Perception Scale for the studied patients with Schizophrenia (IPQ-S). As the tool is assessing various dimensions of illness perception among patients diagnosed with schizophrenia, **Timeline Acute/Chronic Dimension**, showed mean score of (18.2 ± 1.5), indicates that patients perceived their illness as having both acute and chronic characteristics, reflecting a moderate understanding of its duration. **Timeline Cyclical Dimension,** showed a mean score of (13.2 ± 3.6), and the score range (6.0 - 20.0), suggesting that participants' perceptions of the cyclical dimension of their illness are more variable, with some perceiving it as highly cyclical and others perceiving it as less so. **Consequences Dimension with** showed mean score of (37.5 ± 5.5), suggesting that patients perceive their illness as having a considerable impact on their lives

Personal Control Dimension suggests a moderate level of perceived personal control (mean: 11.1 ± 2.2), indicating that patients feel somewhat empowered in managing their mental health condition. **In Treatment Control Dimension,** the mean score of (15.1 ± 2.3) reflects a moderate belief in the effectiveness of treatment options available to manage their condition. As for **Illness Coherence Dimension**, the mean score of (15.2 ± 2.6), indicating moderate understanding of the illness. Finally, **Emotional Representations Dimension,** showed a mean score of (30.8 ± 5.3), indicating strong negative emotional responses to their mental health problems.

Table 5 showing correlation coefficients between hope, dignity, and illness perception dimensions among studied participants with schizophrenia. The correlation analysis table reveals significant negative correlation between dignity related distress and hope ($r = -0.898$, $p<0.001$*), suggesting that higher dignity distress is associated with lower hope levels.

Analysis of the correlation between hope and illness perception dimensions reveals significant negative correlations across several dimensions. Notably, the timeline acute/chronic dimension exhibits a correlation of $r = -0.534$ ($p < 0.001$), while the timeline cyclical dimension shows a stronger negative correlation of $r = -0.766$ ($p < 0.001$). Additionally, the consequences dimension correlates negatively with overall hope ($r = -0.853$, $p < 0.001$).

Emotional representation demonstrates a negative correlation with overall hope ($r = -0.833$). Conversely, the dimensions of personal control and

treatment control exhibit positive correlations with hope, with values of ($r = 0.751$ and $r = 0.828$, respectively, $p < 0.001$). This indicates that individuals who perceive greater control over their illness and treatment are likely to experience higher levels of hope.

The table also revealed significant positive correlations between patient dignity inventory and several IPQ-S dimensions, including timeline cyclical dimension ($r = 0.854$, $p<0.001$*), consequences dimension ($r = 0.901$, $p<0.001$*), and emotional representations dimension ($r = 0.912$, $p<0.001$*), highlighting the impact of these factors on individuals' perceptions of their worth and value.

Table 6 presents a linear regression analysis that identifies factors influencing dignity distress in clients with schizophrenia. The results indicate that several dimensions of the Illness Perception Scale for Schizophrenia (IPQ-S) serve as significant predictors of dignity distress. Notably, timeline cyclical dimension ($B = 0.483$, $p < 0.001$), consequences dimension ($B = 0.349$, $p = 0.003$), illness coherence dimension ($B = 0.773$, $p = 0.001$), and emotional representations dimension ($B = 0.612$, $p < 0.001$) are positively associated with dignity distress. These findings suggest that recognizing cyclical patterns in illness, acknowledging illness consequences, possessing a less coherent understanding of mental health issues, and experiencing negative emotions exacerbate dignity distress.

In contrast, Treatment Control Dimension is negatively associated with dignity distress ($B = -0.918$, $p = 0.003$), indicating that perceived control over treatment can mitigate feelings of dignity distress. Dispositional Hope Scale was also identified as a significant predictor of dignity distress ($B = -0.379$, $p < 0.001$), suggesting that higher levels of hope are associated with lower levels of dignity-related distress among individuals with schizophrenia

Table 7, and figure (1) path analysis illustrate the direct, indirect, and total effects of illness perception on dignity, mediated by Dispositional Hope Scale (DHS) among patients with schizophrenia. Consequences Dimension was found to have a significant negative direct effect on the DHS ($\beta = -0.494$, $p < 0.001$), suggesting that greater awareness of illness consequences is associated with lower levels of hope. In contrast, Personal Control Dimension demonstrated a strong positive direct effect on the DHS ($\beta = 0.704$, $p < 0.001$), indicating that perceived personal control enhances hope. Furthermore, DHS was found to have a significant negative direct effect on dignity distress ($\beta = -0.379$, $p < 0.001$), suggesting that higher levels of hope are associated with lower levels of dignity distress.

The analysis also revealed significant indirect effects of several IPQ-S dimensions on dignity distress through DHS. For instance, timeline cyclical dimension has an indirect effect of (0.096 $p <0.001$*), illness coherence dimension has an indirect effect of (0.148, $p <0.001$*). Also, emotional representations dimension has strong positive indirect effect of (0.104, $p < 0.001$), suggesting that their impact on dignity distress is partially mediated by hope. Collectively, the mediation analysis indicate that DHS partially mediates the relationship between several IPQ-S dimensions and dignity distress. The model fit was assessed using the Comparative Fit Index (CFI), Incremental Fit Index (IFI), and Root Mean Square Error of Approximation (RMSEA). The CFI and IFI values were 0.908 and 0.950, respectively, indicating a good fit. The RMSEA value was 0.105, which is generally considered acceptable. The chi-square statistic (χ^2) was 9.530 with a p-value less than 0.001, suggesting that the model adequately represents the relationships between the variables.

Table (1): Distribution of the study subjects according to their sociodemographic and clinical data (n= 130).

sociodemographic and clinical data	No	%
Age		
18- <30	50	38.5
30 – 39	37	28.5
40 – 49	28	21.5
≥50	15	11.5
Mean± SD	**35.5±10.1**	
Gender		
Male	64	49.2
Female	66	50.8
Marital status		
Single	54	41.5
Married	45	34.6
Divorced	28	21.5
Widowed	3	2.3
Level of education		
Illiterate	9	6.9
Read and write	45	34.6
Secondary	56	43.1
University	20	15.4
Residence		
Rural	47	36.2
Urban	83	63.8
Income		
Enough	38	29.2
Not enough	92	70.8
Occupation		
Yes	45	34.6
No	85	65.4
Onset of disease		
<25	53	40.8
25-<30	40	30.8
30-<35	28	21.5
>35	9	6.9
Mean± SD	**26.5±5.1**	
Previous hospital admission		
<3	35	26.9
3-<6	47	36.2
6->9	41	31.5
9-<12	5	3.8
>15	2	1.5
Mean± SD	**4.7±2.7**	
Mode of admission		
Voluntary	13	10.0
Involuntary	117	90.0

Table (2): Distribution of the study subjects according to their Mean score, and levels of Dispositional Hope Scale

	Total score		Mean percent score	
	Min- Max.	**Mean± SD**	**Min- Max.**	**Mean± SD**
Tool II: Dispositional Hope Scale				
Agency subscale	1.0 – 12	5.8±3.6	8.3-100.0	48.5±30.0
Pathway subscale	1.0-11.0	5.5±2.5	8.3-91.7	46.0±21.2
Overall Dispositional Hope Scale	**3.0 – 22.0**	**11.3±5.6**	**12.5-91.7**	**47.3±23.2**
Level	No.		%	
Low level of hope	78		60.0	
Moderate level of hope	52		40.0	
High level of hope	0		0.0	

Table (3): Distribution of the study subjects according to their Mean score of *Patient's Dignity Inventory (PDI)*

	Total score		Mean percent score	
	Min- Max.	**Mean± SD**	**Min- Max.**	**Mean± SD**
Tool III patient's dignity inventory	**52.0-103.0**	**83.9±13.6**	**27.0-78.0**	**58.9±13.6**

Table (4): Distribution of the study subjects according to their Mean score of Illness perception Scale for Schizophrenia (IPQ-S)

	Total score		Mean percent score	
	Min- Max.	**Mean± SD**	**Min- Max.**	**Mean± SD**
Tool IV: Illness perception Scale for Schizophrenia (IPQ-S)				
Timeline acute /chronic dimension	15.0-23.0	18.2±1.5	37.5-70.8	50.8±6.2
Timeline cyclical dimension	6.0-20.0	13.2±3.6	12.5-100.0	57.7±22.3
Consequences dimension	22.0-45.0	37.5±5.5	25.0-77.3	60.3±12.5
Personal control dimension	7.0-16.0	11.1±2.2	18.8-75.0	44.3±14.0
Treatment control dimension	9.0-21.0	15.1±2.3	20.0-80.0	50.3±11.6
Illness coherence dimension	7.0-22.0	15.2±2.6	10.0-85.0	51.0±13.1
Emotional representations dimension	19.0-39.0	30.8±5.3	27.8-83.3	60.5±14.6

Table (5): Correlation coefficients between hope, dignity related distress, and illness perception dimensions among clients with schizophrenia

		Agency subscale	Pathway subscale	**Overall Hope**	**Dignity**	Timeline acute /chronic	Timeline cyclical	Consequences	Personal control	Illness coherence	Treatment control	Emotional representations
Agency subscale	r											
	p											
Pathway subscale	r	0.635*										
	p	<0.001*										
Overall Hope	r	0.936*	0.867*									
	p	<0.001*	<0.001*									
Dignity inventory	r	-0.809*	-0.824*	-0.898*								
	p	<0.001*	<0.001*	<0.001*								
Timeline acute /chronic	r	-0.412*	-0.587*	-0.534*	0.643*							
	p	<0.001*	<0.001*	<0.001*	<0.001*							
Timeline cyclical	r	-0.711*	-0.674*	-0.766*	0.854*	0.455*						
	p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*						
Consequences	r	-0.756*	-0.799*	-0.853*	0.901*	0.628*	0.717*					
	p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*					
Personal control	r	0.728*	0.616*	0.751*	-0.770*	-0.501*	-0.671*	-0.641*				
	p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*				
Illness coherence	r	-0.668*	-0.698*	-0.750*	0.821*	0.557*	0.719*	0.811*	-0.697*			
	p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*			
Treatment control	r	0.740*	0.768*	0.828*	-0.932*	-0.664*	-0.809*	-0.852*	0.748*	-0.829*		
	p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*		
Emotional representations	r	-0.743*	-0.775*	-0.833*	0.912*	0.602*	0.756*	0.872*	-0.673*	0.795*	-0.877*	
	p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	

Table (6): Linear Regression Analysis identifies factors influencing dignity distress among clients with schizophrenia.

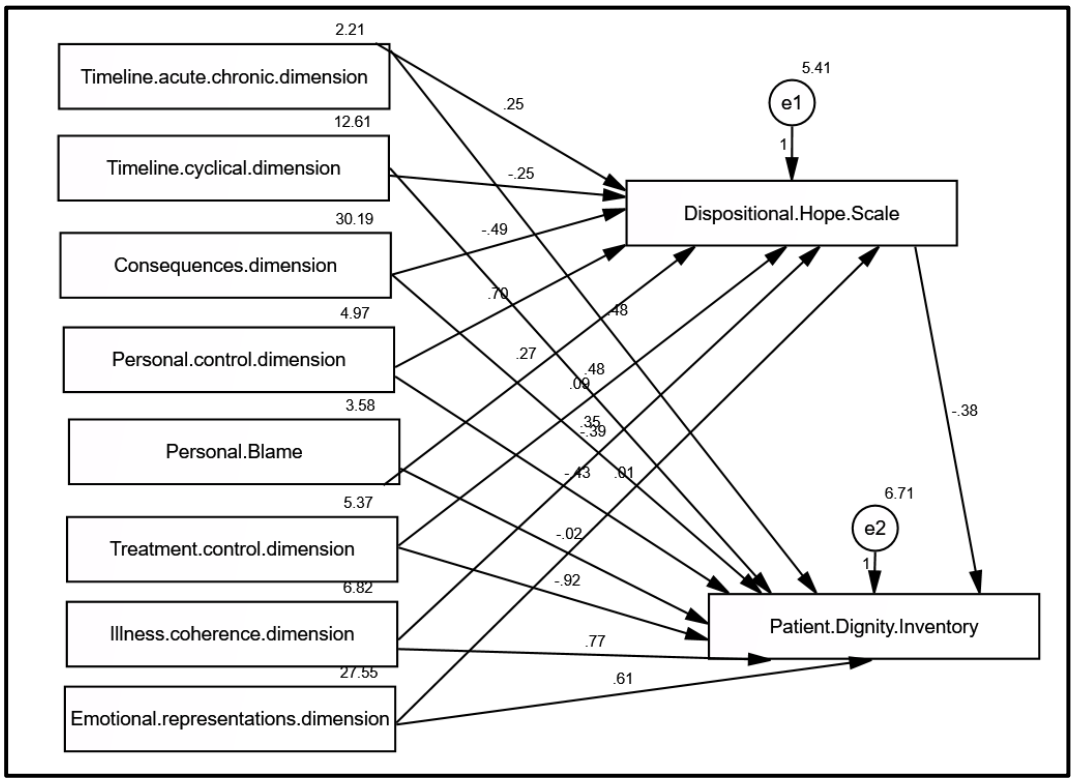
	B	Beta	t	p	95% CI	
					LL	UL
Tool IV: Illness perception Scale for Schizophrenia (IPQ-S)						
Timeline acute /chronic dimension	0.480	0.053	2.163*	0.033*	0.041	0.919
Timeline cyclical dimension	0.483	0.127	3.634*	<0.001*	0.220	0.746
Consequences dimension	0.349	0.142	3.031*	0.003*	0.121	0.576
Personal control dimension	-0.431	-0.071	-2.373*	0.019*	-0.790	-0.071
Treatment control dimension	-0.918	-0.157	-3.054*	0.003*	-1.513	-0.323
Illness coherence dimension	0.773	0.149	3.416*	0.001*	0.325	1.222
Emotional representations dimension	0.612	0.237	5.684*	<0.001*	0.399	0.825
Dispositional Hope Scale	-0.379	-0.156	-3.729*	<0.001*	-0.580	-0.178
R^2=0.963, adjusted R^2= 0.961, F=350.600*,p<0.001*						

F,p: f and p values for the model
R^2: Coefficient of determination
B: Unstandardized Coefficients
Beta: Standardized Coefficients
t: t-test of significance
LL: Lower limit UL: Upper Limit
*: Statistically significant at $p \leq 0.05$

Table (5): Direct, indirect and total effect of illness perception on dignity related distress mediating by hope

Variable 1	Variable 2	Direct effect	Indirect effect	C.R	p-value
Dispositional Hope Scale	Timeline acute chronic dimension	0.250		1.308	0.191
Dispositional Hope Scale	Timeline cyclical dimension	-0.254		-2.253*	0.024*
Dispositional Hope Scale	Consequences dimension	-0.494		-5.516*	<0.001*
Dispositional Hope Scale	Personal control dimension	0.704		4.872*	<0.001*
Dispositional Hope Scale	Treatment control dimension	0.090		0.345	0.730
Dispositional Hope Scale	Illness coherence dimension	-0.392		-2.029*	0.043*
Dispositional Hope Scale	Emotional representations dimension	0.010		0.111	0.912
Patient Dignity Inventory	Dispositional Hope Scale	-0.379		-3.866*	<0.001*
Patient Dignity Inventory	Timeline acute chronic dimension	0.480	0.095	2.243*	0.025*
Patient Dignity Inventory	Timeline cyclical dimension	0.483	0.096	3.768*	<0.001*
Patient Dignity Inventory	Consequences dimension	0.349	0.187	3.142*	0.002*
Patient Dignity Inventory	Personal control dimension	-0.431	-0.267	-2.461*	0.014*
Patient Dignity Inventory	Treatment control dimension	-0.918	-0.034	-3.167*	0.002*
Patient Dignity Inventory	Illness coherence dimension	0.773	0.148	3.542*	<0.001*
Patient Dignity Inventory	Emotional representations dimension	0.612	0.104	5.893*	<0.001*

Figure (1): Path analysis to detect the direct and indirect effect of illness perception on dignity related distress mediating by hope.



The structural equation model demonstrated a good fit to the data, as indicated by the following fit indices: CFI = 0.908, IFI = 0.950, and RMSEA = 0.105. The model's chi-square statistic of 9.530 was significant at $p < 0.001$,

Discussion

Schizophrenia, a chronic and severe mental disorder, significantly impacts individuals' lives and their perceptions of illness. Negative illness perceptions can lead to hopelessness and diminished dignity, which further complicate recovery **(Aghevli et al., 2003).** Research indicates that maintaining dignity in mental health care is essential for recovery, allowing individuals to reclaim autonomy and find meaning in their experiences **(WHO, 2015; Ruggeri et al., 2017).** Dignity can play a crucial role in influencing individuals' motivation, self-esteem, and overall quality of life. Understanding how hope influences illness perceptions is vital, as hope is recognized as a central element in the recovery process **(Menninger, 1959; Bonney & Stickley, 2008).** Given the pivotal role of hope in navigating the challenges associated with chronic illness, particularly mental health conditions, this study aims to investigate the intricate relationship between hope, illness perception, and dignity among clients with schizophrenia. By exploring these connections, this research contributes to a growing body of knowledge that can inform the development of effective interventions to support individuals with schizophrenia in their journey toward a more dignified and fulfilling life.

The current study found that most patients with schizophrenia exhibited low overall levels of hope, alongside low to moderate levels of perceived agency and pathways which align with earlier research showing that individuals with schizophrenia have lower hope levels compared to healthy controls **(Schrank et al., 2008).** These study's findings of low hope levels may be attributed to previous research indicating that factors such as the duration of illness, treatment history, and socioeconomic status significantly

impact hope levels in this population. Chronic illness and repeated hospitalizations often lead to demoralization and a loss of hope **(Öztürk & Altun, 2021).** This is particularly relevant to the current study, as many participants experienced early onset of illness and frequent hospital admissions. Socioeconomic disadvantage also appears to contribute to diminished hope, as many participants reported struggling with their economic status, being unemployed at the time of the study, and residing in urban areas. These socioeconomic challenges can exacerbate feelings of hopelessness and limit access to resources that could facilitate recovery **(Hozack, N. E., 2020).**

Regarding Patient Dignity, the moderate to high levels of dignity-related distress reported by patients with schizophrenia in this study may stem from several factors. The stigma associated with schizophrenia often leads to feelings of shame, embarrassment, and diminished self-worth **(Corrigan et al., 2012).** Experiences of involuntary hospitalization can further erode autonomy and control, contributing to feelings of indignity, particularly as many participants were admitted involuntarily (Appasani, 2016). Similar findings regarding dignity-related distress have been reported in other studies, highlighting the pervasive impact of stigma and institutionalization on individuals with schizophrenia **(Rogers et al., 2021).**

Illness Perception Scale for Schizophrenia (IPQ-S) revealed moderate scores on the Acute/Chronic and Cyclical dimensions, indicating a mixed understanding of illness duration and recurrence. These findings align with previous research emphasizing the complex nature of schizophrenia's course, often characterized by fluctuating symptoms and varying perceptions among patients **(Häfner, 2019).**

Current findings also suggest that individuals with schizophrenia perceive their illness as having a significant impact on their lives as showed by consequence dimension of illness perception. This perception aligns with the substantial burden imposed by schizophrenia on both patients and their families **(Sullivan et al., 2006).** The stigma associated with the illness contributes to negative self-perceptions and social isolation, further exacerbating its perceived consequences **(Hjorth, 2017).** Previous studies have similarly reported a diminished quality of life among individuals with schizophrenia, attributable to both clinical symptoms and social factors **(Rotondi et al., 2013; Liu et al., 2022).** While improvements in treatment can mitigate these perceived consequences, access to effective care remains a significant barrier **(WHO, 2021).**

Consistent with prior research, the present study found that individuals with schizophrenia exhibit strong negative emotional responses as shown by emotional representation dimension of illness perception. This finding is likely attributable to the inherent challenges faced by this population, including stigma, social isolation, and the chronic nature of the illness (**González et al., 2021).** Research has shown that negative emotional responses are often exacerbated by the perception of one's illness as uncontrollable or unpredictable **(Kozloff et al., 2016).**

The correlation analysis indicates a significant negative relationship between dignity-related distress and hope in individuals with schizophrenia. This aligns with findings that dignity distress adversely relates to self-worth, leading to feelings of shame and worthlessness, which can further erode self-esteem and foster hopelessness **(Appasani, 2016; Chochinov et al., 2024).** Previous research supports this notion, demonstrating that dignity distress negatively impacts psychological well-being (**Bovero et al., 2018**). Moreover, linear regression analysis reveals that higher hope levels predict lower dignity-related distress, emphasizing the need to cultivate hope to enhance dignity perceptions (**Snyder et al., 2020).**

The correlation analysis also indicates significant negative associations between hope and various dimensions of illness perception among individuals with schizophrenia. This in lines with previous research indicates that hope significantly influences illness perception among clients with schizophrenia, enhancing their psychological well-being. It fosters a proactive mindset, enabling individuals to set goals and identify pathways to achieve them, which can mitigate symptoms of depression and anxiety **(Bryant, 2024; Cheavens et al., 2020).** This

cognitive restructuring allows patients to perceive their condition more positively, promoting resilience and improving treatment outcomes **(Steffen et al., 2020).** Thus, integrating hope-based interventions in therapeutic settings can be crucial for enhancing the quality of life in individuals with schizophrenia **(Hallas et al., 2011).**

Specifically in illness perception, those who understand their illness as chronic or cyclical, as well as those perceiving severe consequences, report lower levels of hope. Research demonstrates that individuals who perceive their illness as more severe or associated with greater negative consequences tend to experience diminished hope **(Mahmoud et al., 2021; Siril et al., 2022).** The chronic nature of schizophrenia is particularly detrimental to hope, aligning with findings from **Martinez et al. (2023),** which suggest that hopelessness is prevalent among individuals facing chronic mental health challenges, adversely affecting recovery processes. Conversely, fostering a sense of personal and treatment control can enhance hope levels. Individuals who believe they have agency in managing their illness are more likely to maintain higher levels of hope **(Mahmoud et al., 2021).**

The significant positive correlations between patients` scores on Dignity Inventory and several dimensions of the Illness Perception Scale (IPQ-S) indicate that individuals with schizophrenia who perceive their illness as more cyclical, severe, and emotionally distressing are more likely to experience dignity distress. This aligns with recent research demonstrating a strong association between negative emotional responses to illness and dignity-related distress **(Chochinov et al., 2020).** For example, **Bovero and Chochinov (2021)** found that patients who perceived their illness as having severe consequences reported lower dignity and higher distress levels, reinforcing the notion that negative perceptions can undermine dignity. Furthermore**, Saracino et al. (2021)** discuss how perceptions of illness severity and cyclical nature contribute to feelings of shame and stigma among individuals with schizophrenia.

The linear regression analysis further supports the relationship between illness perception and dignity distress. Specifically, Timeline Cyclical, Consequences, Illness Coherence, and Emotional Representations dimensions of Illness Perception for Schizophrenia (IPQ-S) were found to be significant predictors of dignity distress. This suggests that recognizing cyclical patterns in illness, acknowledging illness consequences, having a less coherent understanding of mental health issues, and experiencing negative emotions exacerbate feelings of dignity distress. These findings are consistent with studies emphasizing the interconnectedness of illness perception and dignity in mental health contexts. **Siril et al. (2022)** found that patients who perceived their illness as severe or cyclical reported lower levels of dignity, further supporting the idea that negative illness perceptions contribute to dignity-related distress. Additionally, **Bovero et al. (2019)** highlighted how demoralization and negative emotional responses to illness can lead to increased feelings of worthlessness and diminished dignity.

In contrast, Treatment Control dimension was negatively associated with dignity distress, indicating that perceived control over treatment can mitigate feelings of dignity-related distress. This is supported by research demonstrating that patients who believe they have agency over their treatment experience higher levels of dignity and lower levels of distress **(Mahmoud et al., 2021).** Collectively, these studies emphasize the significant direct influence of illness perception dimensions on dignity and self-worth among individuals with schizophrenia

Moreover, the indirect effects of Timeline Cyclical Dimension, Illness Coherence Dimension, and Emotional Representations Dimension on dignity distress through the DHS is established through the path analysis. This suggests that the impact of these IPQ-S dimensions on dignity distress is partially mediated by hope. Individuals with negative illness perceptions - such as viewing their illness as cyclical or lacking coherence- often report lower levels of hope, which subsequently increases feelings of dignity distress **(Chochinov et al., 2011).** This aligns with findings that suggest a strong sense of hope can buffer against the psychological impacts of illness **(Seiler et al., 2024).**

Research indicates that enhancing hope through interventions like Dignity Therapy can improve patients' coping mechanisms and overall dignity (**Bovero et al., 2023).** Thus, fostering hope may mitigate the adverse effects of negative illness perceptions, promoting better psychological well-being and dignity at the end of life **(Chochinov, 2008).** Overall, these results underscore the importance of addressing both illness perceptions and hope in therapeutic interventions to improve dignity and well-being among individuals with schizophrenia.

Conclusion

The current results highlight the complex interplay between illness perceptions, hope, and the experience of dignity related distress in individuals with schizophrenia. The correlational analysis reveals significant negative correlations between hope and illness perception dimensions. Conversely, positive correlations exist between the Patient Dignity Inventory and several IPQ-S dimensions, such as timeline cyclical, consequences, and emotional representations. However, higher levels of hope correlate with reduced dignity-related distress.

Regression analysis revealed that these negative perceptions, particularly Cyclical patterns in illness, acknowledging illness consequences, and less coherent understanding of mental health issues, can undermine an individual's sense of dignity. Moreover, Dispositional Hope Scale (DHS) serves as a significant mediator between various IPQ-S dimensions and dignity distress. Specifically, it mediates the effects of Timeline Cyclical, Illness Coherence, and Emotional Representations dimensions on dignity distress, suggesting that both direct and indirect pathways contribute to the relationship between illness perceptions and dignity distress.

Recommendations

Based on these conclusions, several recommendations can be suggested:

1. Development of interventions specifically aimed at fostering hope in individuals with schizophrenia such as goal-setting, positive visualization, and resilience training may be beneficial, and incorporate it within existing treatment programs
2. Tailoring interventions that focus on altering negative illness perceptions such as the chronicity and severity of the illness among individuals with schizophrenia is valuable. This could involve cognitive-behavioral approaches that challenge maladaptive beliefs about the illness.
3. Education programs should be designed for patients and their families about the nature of schizophrenia, emphasizing aspects that can foster a more coherent understanding of the illness.
4. Incorporating holistic patient care models that address both psychological and emotional dimensions of care, ensuring that mental health professionals are trained to recognize and support the importance of hope in maintaining dignity for those with schizophrenia.
5. **Future Researches are** needed to explore the relationship between hope and other clinical variables in schizophrenia, such as symptom severity, quality of life, and treatment outcomes. Additionally, investigating the effectiveness of hope-focused interventions for this population would be valuable.

These recommendations can pave the way for the development of more comprehensive and effective treatment approaches that improve the well-being, dignity, and quality of life for individuals living with schizophrenia.

Limitations

This study may have limitations regarding generalizability due to the small sample size, which is a result of infrequent attendance on included settings. Additionally, the cross-sectional design prevents the establishment of causal relationships between the variables. The reliance on self-report measures may introduce biases, and cultural factors could affect the findings. Finally, the results may not be directly applicable to other mental health conditions. Addressing these limitations in future research could improve the external validity and generalizability of the study, establish causal links, and provide a more comprehensive understanding of the factors affecting the well-being of individuals with schizophrenia.

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