International Journal of Applied Behavioral Sciences **2023; Vol. 10, No.1:20-7**
DOI: 10.22037/ijabs.v10i1.32902 **Online ISSN: 2423-5253**

Original Article

Review of Lifespan Diagnosis in Patients with Substance-induced Psychosis Admitted to Psychiatric Wards of Imam Hussein Hospital

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Received: 21 Jan 2023; Revised: 19 Feb 2023; Accepted: 1 Mar 2023

Abstract

Background and Aim: Diagnostic certainty is difficult in the early stages of psychotic disorders, and it becomes more complicated if at the same time alcohol or drugs get consumed. There is a bilateral association between substance use and psychotic symptoms. Thus, this study was aimed to evaluate the lifespan diagnosis in patients with substance-induced psychosis admitted to psychiatric wards of Imam Hussein Hospital in Tehran 2015.

Materials and Methods: This cross-sectional study was conducted on 90 patients diagnosed with substance-induced psychosis in the psychiatric wards of Imam Hussein Hospital in 2015 in Tehran. The data were analyzed through frequency descriptive statistics and charts and by logistic regression using SPSS23 software.

Results: In patients with substance-induced psychosis, the results showed that bipolar disorder with psychotic symptoms was the most common disorder (48.9%), followed by schizoaffective (36.7%) disorder, schizophrenia (22.2%), personality disorders (16.6%) (Antisocial, 5.5%; borderline personality disorder (BPD), 11.1%), adult attention-deficit/hyperactivity disorder (ADHD) (3.3%), obsessive-compulsive disorder (OCD) (4.4%), and post-traumatic stress disorder (PTSD) (1.1%). Logistic regression results showed that the patients' age and family history of psychotic disorders could significantly predict the transition to the spectrum of primary psychotic disorders.

Conclusion: In psychotic patients or those with primary psychosis, the simultaneous consumption of several substances may indicate a further aggravation of the disease and accelerate the transition of their diagnosis. The evolution of the diagnosis of substance-induced psychosis into primary schizophrenia should be considered in the treatment and administration of the drugs.

Keywords: Substance-induced psychosis, Primary psychotic, Lifespan diagnosis, Iran

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Please cite this article as: Samimi Ardestani M, Safari S, Sadr S, Hosseinzadeh M. Review of Lifespan Diagnosis in Patients with Substance-induced Psychosis Admitted to Psychiatric Wards of Imam Hussein Hospital. Int. J. Appl. Behav. Sci. 2023;10(1):20-7.

Introduction

Cancer is a life-threatening disease (1). Brest Cancer (BC) is the most common malignancy and the second leading cause of death in women worldwide (2). Breast cancer includes more than 1 in 10 cases of cancer diagnosis (3). Breast cancer is the leading cause of cancer death in women with more than two million cases per year (4). It is estimated that half a million people die each year due to cancer (5). For this reason, in the last decade, several studies have been conducted to reduce the problems of these patients (2). In this regard, the need to study the pathological dimensions of cancer is felt more than ever (6).

Acute and chronic pain in cancer patients, especially breast cancer, is an important and unstable problem in these patients that negatively affects the functional status and quality of their life (7, 8). Persistent pain is usually common following breast cancer treatment. Also, patients receiving radiation therapy (RT) for the treatment of breast cancer often report pain (9). The experience of post-mastectomy pain syndrome (PMPS) and chronic post-surgery pain (CPSP) are unpleasant experiences in these patients that make their psychological and social life a significant challenge (8, 10). The incidence of persistent pain after breast cancer surgery is reported to be 7.21%, which is worthy of clinical attention (11). In comprehensive pain management (CPM), non-pharmacological therapies such as complementary and alternative medicine (CAM), procedural and psychosocial interventions are widely accepted and popular, all of them are used clinically to improve the quality of life of patients (7).

Adverse childhood experiences are associated with a wide range of lifelong mental and physical health problems (12). People who have experienced childhood adversities such as child abuse and neglect, family conflicts, and low socioeconomic status are more at risk for illness and premature death than others (12). New findings show that social environments early in life can alter DNA methylation, and this domain has paved the way for the emergence of social epigenetics (13). A systematic review study by Grummitt et al (14) showed that adverse childhood experiences is a major and preventable cause of death in the United States.

On the other hand, the concept of attachment plays an important role in the mental health of cancer patients (15). The attachment system is activated in times of stress as a life-threatening illness. In this sense, cancer causes patients to return to their first attachment experiences by losing control and revealing psychological distress (1). Anxiety and avoidance attachments are considered as a known risk factors for psychological problems in patients with chronic diseases such as cancer (16). With the increasing prevalence of depression, anxiety and adoption disorders in cancer patients, research has turned to intrapersonal factors leading to psychological distress, one of which is the perception of social support, which is a key factor in coping with stress in breast cancer patients (17). Women with breast cancer seem to rely on others, including their husbands, to meet their emotional, functional, and informational needs, and this reflects the role of social support (17). Social, informational support and social isolation are significant indicators in cancer patients that deserve clinical attention (18).

Social support plays an important role in improving health outcomes and is one of the vital aspects in cancer patients (19). In this regard, the perception of social support is affected by patients' attachment styles and affects their response to feelings of dependence (15). A significant relationship has been observed between attachment style and social support in cancer patients (20). For example, the findings of the study by Kelly et al (21) show that insecure attachment style of cancer patients predicts lower perceived support in these patients. In another finding, the results of the study by (1) indicated that secure attachment style in cancer patients predicts stress resilience and perceived social support in them.

In this regard, research findings show that chronic stress exposure causes breast cancer treatment to have adverse consequences (22). Basically, the experience of adverse childhood experiences has been suggested as a risk factor for a wide range of psychiatric disorders. In addition, hypothalamic-pituitary-adrenal axis dysfunction has been reported in patients with cancer. Experience of adverse childhood experiences has also

been reported in patients with chronic pain seeking routine treatment (23).

It is assumed that indicators of adverse childhood experiences and attachment styles are related to pain and this relationship can be adjusted by the index of social support. Despite the research background on the relationship between these indices, the study of multiple relationships between the mentioned variables in the form of a structural equation modeling has not been considered to date. The aim of this study was to investigate the role of childhood trauma and attachment style in predicting pain perception in women with breast cancer with respect to the mediating role of perceived social support in these patients.

Methods

The present study was a cross-sectional study (24) that was conducted in the form of a structural equation modeling with the ethics code of IR.IAU.NAJAFABAD.REC.1400.041. In this regard, during the period from July to September 2021, 360 participants diagnosed with non-metastatic cancers who referred to three chemotherapy centers in Tehran were selected using purposive sampling method and entered the research process after obtaining informed consent and fulfillment of hypothetical criteria. Inclusion criteria were including: 1) age range of 18-45 years; 2) Diagnosis of non-metastatic breast cancers in stages 3 and 4 based on ICD-10 (code: C79.81); 3) a score higher than 41 on the Childhood Trauma Scale; 4) ability to read and write; 5) Living in Tehran with a standard deviation of 30 square kilometers. Exclusion criteria were including: 1) performing any unilateral or bilateral mastectomy; 2) Receiving any psychological intervention in the last 6 months, 3) Receiving any palliative care with opioid drugs. Participants completed four indicators of adverse childhood experiences, attachment style, pain, and perceived social support over a period of time. Data were analyzed using SPSS and Amos software version 25.

Materials

Demographic Checklist

This checklist was used by the researcher to collect personal information such as age, marital status and the time elapsed since the diagnosis of cancer.

Childhood Trauma Questionnaire-Short Form (CTQ-AF)

Childhood Trauma Questionnaire (CTQ) was used to evaluate adverse childhood experiences. This tool contains of 28 items and 5 Likert pint scales. This tool asks respondents to report five types of childhood violence, including: Physical Abuse, Sexual Abuse, Emotional Abuse, Physical Neglect, and Emotional Neglect. CTQ presents the total score of the adversity in the range of 25-125 and the score of each subscale is in the range of 5 to 25. The internal reliability of this scale in the Iranian sample is reported to be 0.90 (25). The validity of this scale was estimated as optimal in this sample ($\alpha = 0.83$).

Scale of Attachment Styles

This questionnaire has 15 items, which five items of the questionnaire are related to safe attachment style, 5 items related to insecure / avoidant attachment style, and 5 items related to insecure / ambivalent attachment style. The internal reliability of this scale has been reported as acceptable in the study of Giannini et al. (26)

The Short-form McGill Pain Questionnaire (SFMPQ)

This questionnaire has 20 items and is designed to assess a person's perception of pain in its multiple dimensions (sensory pain perception, emotional pain perception, pain assessment perception, and various pains). The validity and reliability of this tool have been reported as favorable in the sample of patients with chronic neuropathic and non-neuropathic pain (27).

Multi-dimensional Csychometric characteristic of Perceived Social Support (MSPSS)

The Perceived Social Support Scale measures the amount of perceived social support in 12 items in three areas of family, friends, and important people in life. The reliability and validity of this scale in the study of Wang et al. (28) internal stability due to Cronbach's alpha has been investigated and has been reported equal to 0.95. Also, the retest quality of this tool is estimated to be 0.91. Cronbach's alpha calculated in the present study is estimated to be 0.89.

Results

In terms of age dispersion index, 258 people (71.66%) were between 36 and 45 years old, 92 people (25.55%) between 26 and 35 years and only 10 people (2.77%) were between 18 and 25 years old. In terms of marital status, 215 participants (59.7%) are married, 80 participants (22.2%) are single. The duration of time passed since the diagnosis for 198 patients (55%) is less than one year, 115 patients (31.9%) are between one and two years, and only 47 patients (13.1%) are over two years. The distribution of participants' scores in four indices of pain perception, adverse childhood experiences, social support and attachment with respect to skewness and elongation was observed as normal through Kolmogorov–Smirnov test. Also, the co-linear hypothesis of the data was investigated and confirmed, and the values of tolerance coefficient less than 0.1 and values of variance inflation factor for each of the predictor variables higher than 10 were not observed. The results of confirmatory factor analysis of the questionnaires of the present study showed that the fitting of all four questionnaires was observed to the desired level.

The distribution of study participants' scores in each of the studied indices is presented in Table 1.

Correlation coefficients of the indices of pain perception, adverse childhood experiences, social

Table 1: Distribution of study participants' scores on the indices of pain perception, adverse childhood experiences, social support and attachment.

Variable		Skewness	Elongation
Pain perception	Sensory perception of pain	-0.049	-0.999
	Emotional perception of pain	-0.129	-0.7
	Various pains	0.196	-0.771
	Perception of pain assessment	-0.328	-0.536
	Total	0.336	-1.013
Adverse childhood experiences	Emotional abuse	1.472	1.991
	Sexual abuse	1.47	1.256
	Emotional negligence	0.488	-0.47
	Physical negligence	0.746	-0.343
	Physical abuse	1.792	2.091
	Total	1.015	0.538

Social Support					
Family support	-0.85	-0.047	Friend's support	0.186	-0.543
Others' support	-0.358	-0.852	Total	-0.503	-0.214

Attachment	Avoidance	0.128	-1.085
	Safe	0.269	-0.943
	Two-sided	0.347	-0.679

Table 2: Correlation matrix between research variables.

Research variables							
Pain perception (main dependent)		1					
Social support (mediator dependent)		-0.432**	1				
Predictive variables							
Attachment styles	Avoidant attachment	0.364**	-0.114*	1			
	Secure attachment	-0.421**	0.072	-0.371**	1		
	Bilateral attachment	0.359**	-0.113*	0.479**	-0.458**	1	
	Childhood trauma	0.438**	-0.236**	0.115*	-0.231**	0.112*	1

**P<0.01

Figure 1. Path coefficients of the hypothesized model of the mediating role of cognitive flexibility in the relationship between post-traumatic growth and attitude towards death.

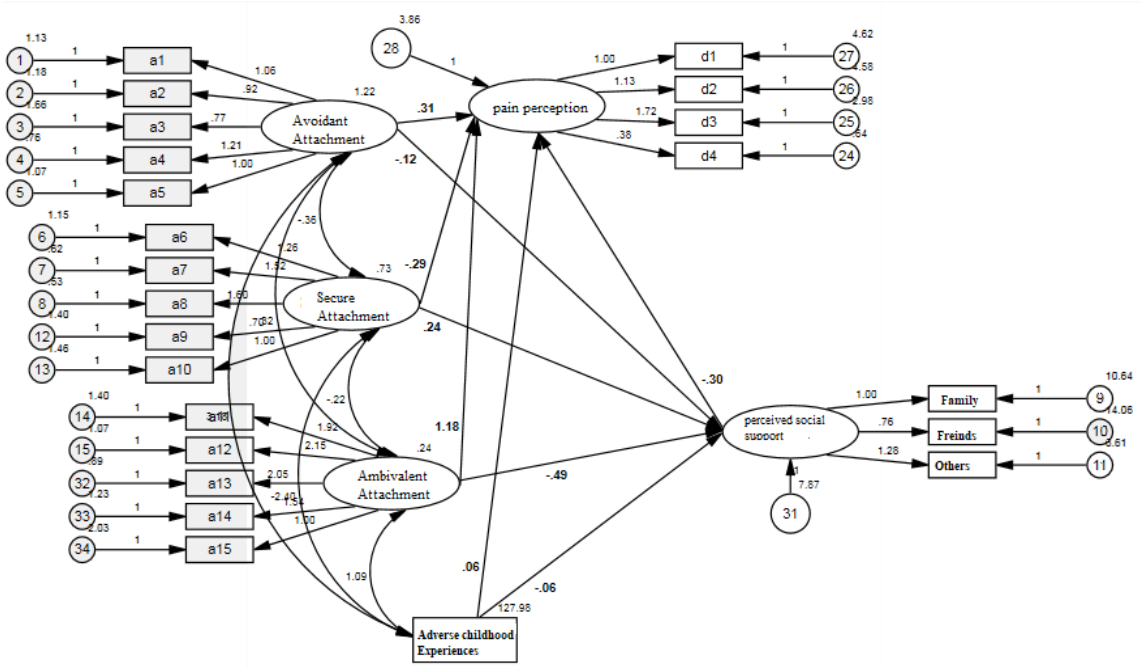
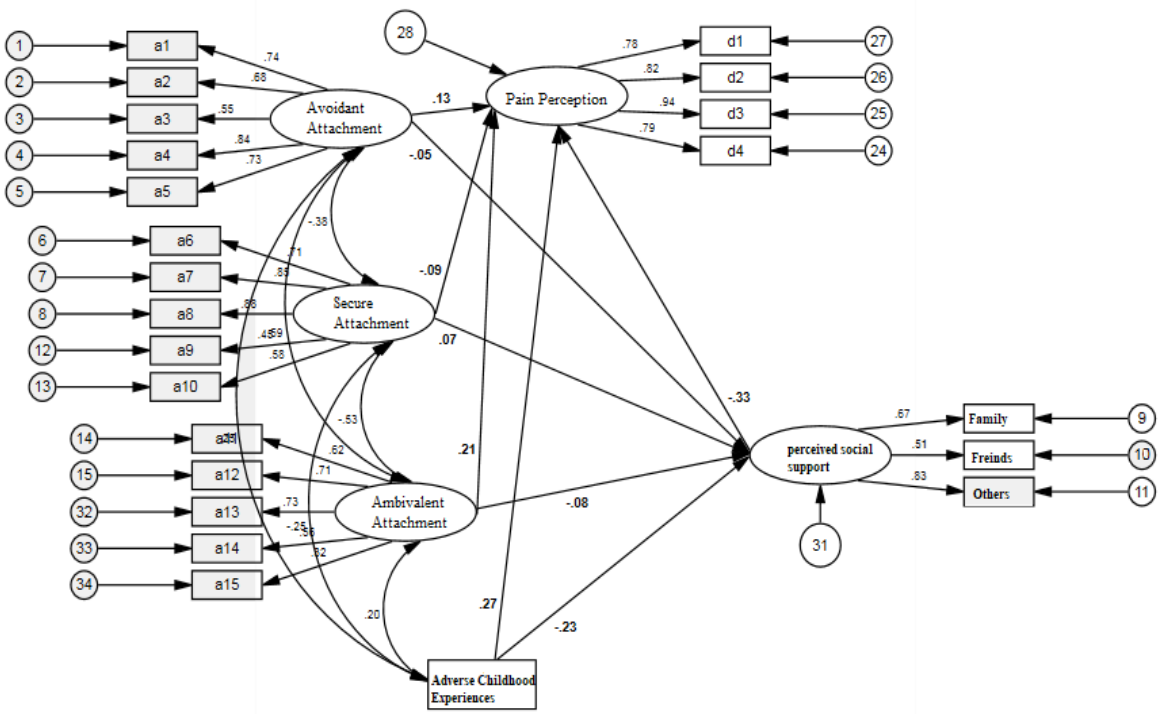


Figure 2. Structural model and its parameters using standard data (β).



support, and attachment in the form of correlation matrix are presented in Table 2.

As the findings in Table 2 show, the pain perception variable had a moderate positive relationship with childhood trauma (0.438), avoidant attachment (0.364) and bilateral attachment (0.359), respectively, and had

a moderate negative relationship with the social support index (-0.432) and secure attachment (-0.421) at the significance level of 0.01. Also, the variables of social support have a weak negative relationship with childhood trauma (-0.236), avoidant attachment (-0.114) and bilateral attachment (-0.113) at a significance level of 0.05. Weak to moderate relationship (0.479) was observed between the predictor variables of attachment styles and childhood trauma (0.112) at the significant level of 0.01 and 0.05.

In this model, it was hypothesized that adverse childhood experiences and attachment styles were related to pain perception through social support. Examination of fitting indices obtained from testing the structural model of the research showed that, as expected, the obtained chi-square indicated the fit of the model with the data ($p < 0.01$, df (216) =483.417, $\chi^2/df=2.238$). Other fitness indices were examined (CFI = 0.923, GFI = 0.9, AGFI = 0.87, IFI = 0.924 and RMSEA = 0.059) and the indices of acceptable model fit were observed. The structural model and its parameters using non-standard and standard data are presented in Figures 1 and 2.

Total, direct, and indirect path coefficients between predictor variables, mediating variables with pain perception were analyzed in the structural model. The results showed that the indirect path coefficient between adverse childhood experiences ($P < 0.01$, $\beta = 0.074$) and pain perception in women with breast cancer was significant at the level of 0.01; Thus, it was observed that adverse childhood experiences mediated by perceived social support is related to the perception of pain in women with breast cancer. It can be acknowledged that adverse childhood experiences through perceived social support affects the perception of pain in women with breast cancer and reduces it.

Also, some of the findings showed that the indirect path coefficient between avoidance attachment styles ($\beta = 0.015$), safe ($\beta = -0.023$) and bilateral ($\beta = 0.026$) on pain perception in women are not significant for breast cancer at the 0.05 significance level ($P < 0.05$); Thus, attachment styles mediated by perceived social support are not related to the perception of pain in women with breast cancer, and attachment styles through perceived social support cannot have a significant effect on the perception of pain in women with breast cancer.

Discussion

The aim of this study was to investigate the role of adverse childhood experiences and attachment style in predicting pain perception in women with breast cancer with the mediating role of perceived social support. Findings showed that the adverse childhood experiences index mediated by perceived social support is related to the perception of pain in women with breast cancer. In addition, data analysis showed that attachment styles through perceived social support could not have a significant effect on the perception of pain in women with breast cancer.

Although no similar study has evaluated the multiple relationships between adverse childhood experiences, attachment, social support, and pain, the research background suggests a significant linear relationship between these indices. In this regard, the findings of the study by You and Meagher (29) showed that changes related to adverse childhood experiences can facilitate its relationship with the pain index. Findings of the study by Walton (30) showed that adverse childhood experiences can affect the assessment and perception of pain and overestimation of trauma, and adverse childhood experiences can be considered as a significant predictor of pain. In this regard, Kell et al (31) showed that adverse life events are significantly associated with impaired descent control of spinal pain, and it can be considered as the mechanism of the effect of adverse childhood experiences on pain. Regarding the facilitator role of social support in pain perception, the results of the study by Yu et al. (32) show that there is a significant relationship between social support and satisfaction with pain management in cancer patients and social support explains about twenty percent of pain management variance in patients. On the other hand, research background suggests a relationship between insecure attachment and traumatic childhood experiences (33).

Although attachment theory has provided a developmental framework for understanding physical problems and physiological regulation and the relationship between attachment and adverse childhood experiences, in the present study different attachment

styles could not predict the pain index in cancer patients, and this issue deserves clinical and research attention. Contrary to our findings, the results of the study by Le et al (34) showed that adverse childhood experiences is associated with anxiety attachment and can be a predictor of health indices (including pain perception). Meredith et al (35) in a clinical trial showed that attachment significantly increases pain thresholds. On the other hand, new findings show that in a group of patients we see the phenomenon of pain habit (PH), which is associated with reduced activity in brain areas associated with pain perception, including somatosensory processing and reduced attention to pain (36). These findings may explain some of the findings of our study. Inconsistent with the findings of the present study, the systematic results of review study by Nicholls et al. (37) showed that insecure attachment style leads to poor therapeutic outcomes in terms of psychological adjustment to cancer and affect patients' ability to understand and access social support. In another study, Kelly et al (21) showed that secure attachment is a predictor of higher perceived support in patients with cancer.

However, in the present study, different attachment styles could not predict the pain index in cancer patients. One of the possible explanations for this lack of significance is the collective coping model (CCM) in cancer patients, which states that patients create a catastrophe in order to transmit discomfort and gain support (38). This catastrophe can be considered as a compensatory and calming mechanism through emotional discharge and affect the patient's perception in both indicators of attachment and pain (39). The present study had some limitations during the implementation process. These include retrospective study and the possibility of bias in data collection. Other limitations of the present study include the mere use of self-report tools (questionnaires) which can be associated with bias in response (40). It is suggested that in future studies, biomarkers such as interleukin-6 (41), salivary cortisol and plasma cortisol be used in assessing psychological indices.

Conclusion

Knowledge of the theory of attachment and its coping mechanism with other psychological indices can play a significant role in helping cancer patients and meeting their supportive needs in the family. However, more studies are needed to understand the mechanisms of attachment effectiveness.

Acknowledgment

The authors would like to thank all the people who participated in this study and helped to facilitate the research process.

Conflict of Interest

The authors declare that they have no conflict of interest.

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