

Risk factors for suicidal behavior in patients hospitalized for adjustment disorders

Facteurs de risque de conduites suicidaires chez les patients hospitalisés pour troubles de l'adaptation

Sabria Khouadja¹, Ahmed Mohammed Hadded², Samira Younes¹, Walid Bouali¹, Lazhar Zarrouk¹

1. Psychiatric department of university hospital of Mahdia, Tunisia
2. University of medicine of Monastir, Tunisia

ABSTRACT

Introduction: Adjustment disorder (AD) is a common psychiatric diagnosis, but it is often considered less severe than other diagnoses. However, it is strongly associated with suicidal behavior.

Aim: To identify the factors linked to suicidal behavior in patients hospitalized for AD.

Methods: This is a retrospective, descriptive, and analytical study conducted in the psychiatric department of Mahdia's hospital over a period of nine years. The study included patients who were hospitalized for the first time due to adjustment disorder, according to DSM-5 diagnostic criteria.

Results: The study population included 129 patients. AD was prevalent among young (median age 29 years) and female patients (75.2%). Almost half of the cases were single (48.1%) and having a history of suicidal behavior (48.3%). Sixty patients (46.5%) were hospitalized following a suicidal attempt (SA) and drugs were used as a way in half of the cases (50%). Conflicts were the dominant factor precipitating the SA in 88.3% of cases. Factors linked to suicidal behavior in patients with AD were being in an intimate relationship and the presence of family conflicts. Indeed, the risk of suicidal behavior was found to be increased by 3.15 times in patients with AD who experienced family conflicts. Besides, being in an intimate relationship in patients with AD multiplies the risk of suicidal behavior by 5.863.

Conclusions: Given the high risk of suicide associated with AD, it is essential to have a more in-depth understanding of the suicidal process and AD through new studies.

Key words: Psychiatry, Adjustment disorder, Suicide attempt, Tunisia

RÉSUMÉ

Introduction: Le trouble de l'adaptation (TA) représente l'un des diagnostics psychiatriques les plus fréquents en pratique courante, mais considéré comme diagnostic anodin et moins péjoratif par plusieurs praticiens malgré sa forte association avec le comportement suicidaire.

Objectif: Etudier les facteurs associés aux conduites suicidaires des patients hospitalisés pour TA.

Méthodes: Il s'agit d'une étude rétrospective, descriptive et analytique menée au service de psychiatrie de l'hôpital de Mahdia sur une période de 9 ans. On a inclus les patients hospitalisés pour la première fois pour trouble de l'adaptation selon les critères diagnostiques de DSM-5.

Résultats: Notre population d'étude était composée de 129 patients. La population de l'étude était composée de 129 patients. Le TA était plus fréquent chez les jeunes (âge médian de 29 ans) et les femmes (75,2 %). Près de la moitié des cas étaient célibataires (48,1 %) et avaient des antécédents de conduite suicidaire (48,3 %). Soixante patients (46,5%) étaient hospitalisés à la suite d'une tentative de suicide (TS) et les médicaments étaient le moyen utilisé dans la moitié des cas (50%). Les conflits étaient le facteur dominant qui a précipité la TS dans 88,3 % des cas. Les facteurs liés au comportement suicidaire chez les patients atteints de TA étaient le fait d'être dans une relation intime et la présence de conflits familiaux. En effet, le risque de comportement suicidaire était multiplié par 3,15 chez les patients atteints de TA qui avaient des conflits familiaux. De plus, le fait d'être dans une relation intime chez les patients atteints de TA multiplie le risque de comportement suicidaire par 5,863.

Conclusion: Compte tenu du risque élevé de suicide associé au TA, il est essentiel d'avoir une compréhension plus approfondie du processus suicidaire et du TA grâce à de nouvelles études.

Mots clés: Psychiatrie, Trouble de l'adaptation, Tentative de suicide, Tunisie

Correspondance

Sabria Khouadja

Psychiatric department of university hospital of Mahdia, Tunisia

Email: mouna369@gmail.com

INTRODUCTION

Human beings must adapt to variations in their environment and unfamiliar circumstances daily. If individuals' strategies for adapting to stress are deficient or ineffective, they may develop an adjustment disorder (AD) (1).

The literature frequently emphasizes the significant correlation between suicidal behavior and AD (2). In fact, 7.6% of patients who committed suicide had AD, and an individual with this diagnosis is twelve times more likely to succeed in his suicide attempt than someone without it (3). Furthermore, this disorder is often diagnosed in patients who present to emergency departments and psychiatric services due to suicidal behavior (4,5).

We aimed to identify the factors linked to suicidal behavior in patients hospitalized for AD.

METHODS

This is a retrospective, descriptive, and analytical study conducted in the psychiatric department of Mahdia's hospital (Tunisia) over a nine-year period (from 1st of January 2014 to 31st of December 2022).

We have included all the patients hospitalized at the psychiatric department of Mahdia's hospital during the study period that were diagnosed with AD according to the diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders, fifth version (DSM-5) in its five subtypes (With depressed mood, with anxiety, with mixed anxiety and depressed mood, with disturbance of conduct, with mixed disturbance of emotions and conduct). Only data from the first hospitalization were included in the case of multiple hospitalizations for the same patient.

We have excluded patients hospitalized for an unspecified AD or those hospitalized for other diagnosis. Patients with missing data in their medical records were not included in our study.

The data were collected by the same evaluator from the archived medical records using a pre-established form. Data entry and statistical analysis were carried out using IBM SPSS Statistics® software, version 21.

The descriptive study concerned patients who fulfilled the inclusion and exclusion criteria. For the analytical study, we have selected from these patients those who have been hospitalized following a suicide attempt (TA) (whatever the means used and the timing in relation to the current hospitalization). These patients were compared to the rest of the initial study population, defined as those with AD hospitalized for other reasons than suicide attempts.

To unify tests used, we have transformed quantitative variables into qualitative ones (such as the case for the variable age which was subdivided into three intervals: < 30 years, > 50 years and in between 30 and 50 years) and therefore we have used the Chi-square test or the Fischer test to study the factors associated to SA in patients with AD. Variables were included at the 20% level in the multivariate analysis (binary logistic regression) to

determine risk factors for SA. The 5% significance level was used to judge statistical significance.

RESULTS

During the study period, 129 patients were included. The median age was 29 years [18.5-38.5], with the extremes ranging from 14 to 72 years. Three quarters of the patients were female (75.2%), with a sex ratio of 0.32. Nearly half of the study population was single (48.1%). Sixty patients were hospitalized following a SA. Of this group, almost half (48.3%) had a history of suicidal behavior. Additionally, drugs were used as a mean for the SA in half of the cases (50%).

Prior to the incident, 46.7% of patients reported experiencing feelings of worthlessness and powerlessness. Following the incident, 16.7% of patients did not seek help. In most cases (88.3%), the factor that triggered the SA was a conflict. Furthermore, in 56.6% of cases, the patient's family environment was violent or neglectful.

The analytical study included sixty patients who had been hospitalized after a SA. At the end of the univariate analysis, 18 factors had a significance level of less than 20%: The 2 age groups <30 years, >50 years, the 2 education levels illiterate and secondary, being in an intimate relationship, blue-collar occupation, personal history of surgery, personal history of a depressive episode, personal history of an anxiety disorder, family conflict as a stressor, school failure as a stressor, personal illness as a stressor, sexual harassment or rape as a stressor, romantic break-up as a stressor, AD with depressed mood, AD with mixed anxiety and depressed mood, AD with disturbance of conduct and comorbidity with histrionic personality disorder.

Multivariate analysis identified 2 risk factors for SA in patients with AD: marital status in an intimate relationship ($p=0.003$, $OR=5.863$) and the presence of family conflicts as a stress factor ($p=0.004$, $OR=3.155$) (Table 1).

Table 1. Risk factors for suicide according to multivariate analysis

	OR	CI 95%	P
Age <30 years	0,868	0,308-2,451	0,790
Age >50 years	0,711	0,156-3,247	0,660
Illiteracy	0	0	0,999
Secondary education level	0,838	0,352-1,997	0,690
Being in a relationship	5,863	1,858-18,500	0,003
Blue collar occupation	2,289	0,795-6,591	0,125
History of surgery	1909583106	0	0,999
History of a depressive disorder	0,891	0,221-3,582	0,871
History of an anxiety disorder	0,119	0,014-1,022	0,052
Family conflict	3,155	1,449-6,872	0,004
School failure	0	0	0,999
Personal illness	0,136	0,014-1,302	0,083
Sexual harassment /Rape	0	0	0,999
Romantic break-up	0	0	0,999
AD with depressed mood	0,352	0,098-1,078	0,066
AD with mixed anxiety and depressed mood	0,356	0,105-1,207	0,097
AD with disturbance of conduct	1,229	0,461-3,279	0,680
Histrionic personality disorder	0,529	0,159-1,759	0,299

AD: Adjustment disorder

The risk of suicidal behavior was found to be increased by 3.15 times in patients with AD who experienced family conflicts. Besides, being in an intimate relationship in patients with AD multiplies the risk of suicidal behavior by 5.863.

DISCUSSION

We compiled a list of 129 patients who had been admitted to the psychiatric department of Mahdia Hospital during the study period and who had been diagnosed with an AD. The 2 risk factors for SA in our patients were: being in an intimate relationship and the presence of family conflict as a stress factor.

In the published literature, the stressful events associated with a high risk of suicide are family conflicts and romantic break-ups (6–8). In a study published in 2012, dysfunctional family dynamics were found to be the strongest predictor of suicidal behavior by Hetrick et al. (9). A study conducted in New York by Johnson et al. (10) showed that living in a violent family environment and experiencing parental abuse in childhood can lead to severe family conflict in adolescence, which in turn plays a crucial role in the development of later suicidal behavior.

Results from a study in Turkey show that family conflict is very often associated with increased risk of suicide among girls and young women. Indeed, the low psychosocial status of rural women living in southern and south-eastern Turkey appears to be underlying this psychological distress and suicidal behavior (11). According to a study published by Bhugra (2002), the tension between traditional family values and the expectations of modern society is a major source of stress for young women (12). Female gender seemed to be a risk factor for suicidal behavior in people with AD. In a study published in 2014 by Ferrer et al., the rates of suicidal ideation and suicidal tendency in adolescents with AD were significantly higher in girls than in boys on two scales: the Suicide Risk Inventory for Adolescents (IRIS) Suicidal Ideation and Intention scale ($t = 8.15, p < 0.001$) and the Millon Adolescent Clinical Inventory (MACI) Suicidal Tendency scale ($t = 6.6, p < 0.001$) (7).

Other risk factors for suicidal behavior have been described in the published literature. For it is worth noting that in a study published in 2015 by Casey et al., which examined the factors associated with suicidality, defined as suicidal ideation and suicidal behavior in patients with AD, the severity of depressive symptoms was retained in their multivariate analysis as a risk factor for suicidality ($p = 0.012$), as was young age, which was significantly associated with suicidal ideation ($p = 0.032$) (13). While Polyakova et al found that suicidal behavior in AD patients was associated with single marital status, low level of education and blue-collar occupational status ($p < 0.05$) (14).

Table 2 summarizes the risk factors for suicidality in AD found in the literature.

Table 2. Summary of risk factors for suicidality in AD

Studies	Risk factors of suicidality
Farzaneh et al. (6), Ferrer et al. (7), Gould (8)	Romantic break-up, love disappointment, Family conflict
Ferrer et al. (7)	Female gender
Coskun et al. (11)	Rural living environment, Family conflict
Casey et al. (13)	Young age
Polyakova et al. (14)	Single, Low level of education, blue-collar occupation
Grudnikoff et al. (15), Magat et al. (16), Wai et al. (17), Mitrev (18)	Family conflict
Stewart et al. (19)	Severity of depressive symptoms
Our study	Being in a relationship Family conflict

CONCLUSION

Although AD is often considered a benign diagnosis, it is frequently diagnosed in patients who present to emergency departments or are hospitalized in psychiatry, particularly in those who present suicidal behavior. Our results are consistent with the existing literature, but there is limited data on the risk factors for suicidal behavior in patients with AD. Developing prevention strategies and improving the management of AD requires a deeper understanding of the suicidal process, which can be achieved through new studies.

REFERENCES

1. Maercker A, Lorenz L. Adjustment disorder diagnosis: Improving clinical utility. *World J Biol Psychiatry*. 2018;19(sup1):S3-13.
2. Fegan J, Doherty AM. Adjustment Disorder and Suicidal Behaviours Presenting in the General Medical Setting: A Systematic Review. *Int J Environ Res Public Health*. 2019 Aug;16(16):2967.
3. Gradus JL, Qin P, Lincoln AK, Miller M, Lawler E, Lash TL. The association between adjustment disorder diagnosed at psychiatric treatment facilities and completed suicide. *Clin Epidemiol*. 2010 Aug;2:23-8.
4. Schnyder U, Valach L. Suicide attempters in a psychiatric emergency room population. *Gen Hosp Psychiatry*. 1997 Mar;19(2):119-29.
5. Greenberg WM, Rosenfeld DN, Ortega EA. Adjustment disorder as an admission diagnosis. *Am J Psychiatry*. 1995 Mar;152(3):459-61.
6. Farzaneh E, Mehrpour O, Alfred S, Moghaddam HH, Behnoush B, Seghatoleslam T. Self-poisoning suicide attempts among students in Tehran, Iran. *Psychiatr Danub*. mars 2010 Mar;22(1):34-8.
7. Ferrer L, Kirchner T. Suicidal tendency in a sample of adolescent outpatients with Adjustment Disorder: Gender differences. *Compr Psychiatry*. 2014 Aug;55(6):1342-9.
8. Gould MS, Fisher P, Parides M, Flory M, Shaffer D. Psychosocial Risk Factors of Child and Adolescent Completed Suicide. *Arch Gen Psychiatry*. 1996 Dec;53(12):1155-62.
9. Hetrick SE, Parker AG, Robinson J, Hall N, Vance A. Predicting suicidal risk in a cohort of depressed children and adolescents. *Crisis*. 2012 Jan 1;33(1):13-20.
10. Johnson JG, Cohen P, Gould MS, Kasen S, Brown J, Brook JS. Childhood Adversities, Interpersonal Difficulties, and Risk for Suicide Attempts During Late Adolescence and Early Adulthood. *Arch Gen Psychiatry*. 2002 Aug;59(8):741-9.
11. Coskun M, Zoroglu S, Ghaziuddin N. Suicide rates among Turkish and American youth: a cross-cultural comparison. *Arch Suicide Res*. 2012;16(1):59-72.

12. Bhugra D. Suicidal behavior in South Asians in the UK. *Crisis*. 2002;23(3):108-13.
13. Casey P, Jabbar F, O'Leary E, Doherty AM. Suicidal behaviours in adjustment disorder and depressive episode. *J Affect Disord*. 2015 Mar 15;174:441-6.
14. Polyakova I, Knobler HY, Ambrumova A, Lerner V. Characteristics of suicidal attempts in major depression versus adjustment reactions. *J Affect Disord*. 1998 Jan;47(1-3):159-67.
15. Grudnikoff E, Soto EC, Frederickson A, Birnbaum ML, Saito E, Dicker R, et al. Suicidality and hospitalization as cause and outcome of pediatric psychiatric emergency room visits. *Eur Child Adolesc Psychiatry*. 2015 Jul;24(7):797-814.
16. Magat RC, Guerrero APS. Suicidal behavior trends in a pediatric population in Hawai'i. *Hawaii Med J*. 2008 Mar;67(3):69-73.
17. Wai BH, Hong C, Heok KE. Suicidal behavior among young people in Singapore. *Gen Hosp Psychiatry*. 1999 Mar-Apr;21(2):128-33.
18. Mitrev I. A study of deliberate self-poisoning in patients with adjustment disorders. *Folia Med (Plovdiv)*. 1996;38(3-4):11-6.
19. Stewart JW, Quitkin FM, Klein DF. The pharmacotherapy of minor depression. *Am J Psychother*. 1992 Jan;46(1):23-36.