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## Effect of therapeutic smoking cessation on anxiety level in a Tunisian population

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## Introduction

Today, the physical health benefits of smoking cessation are well documented, but little is known about the mental health effects of smoking cessation. The aim of this study was to assess the impact of smoking cessation on anxiety and depression levels at the first contact and the end-point in a Tunisian population.

## Methods

We carried out a quasi-experimental study in the Department of Preventive Medicine and Epidemiology in Monastir. We included patients who were admitted to the smoking cessation consultation setting at two period (from June to December 2019 and from January to June 2021). Follow up duration was the time between the first medical visit and the date of the telephone survey expressed in months. The baseline data was initially collected in the smoke cessation clinic during the first visit. the smoking status and the HAD-D at point date were collected by phone. We analyzed depression scores according to abstinence status.

#### Results

We had assessed 270 patients to eligibility, from them 141 were included. The median age was 35 years (Q1-Q2:26-51). Sex ratio of 16.6. Successful cessation was confirmed for 23.4% of participants (N=33). Having previous attempts, having a lower anxiety score, having a lower score of FTND were significantly associated to successful quit with p=0.045, p=0.037 and p=0.004 respectively. Additionally, the successful quitters showed a significant decrease for HAD-D scores from 4.85 (3.88-6.03) to 2.06 (1.33-3.06); p=<10-3 respectively. This decrease was not associated with either Fagerström test for nicotine dependence (p=0.49) or the presence of previous attempts (p=0.79). For unsuccessful quitters, they showed a slight increase but non-significant for the HADS-D (p=0.59).

## Discussion

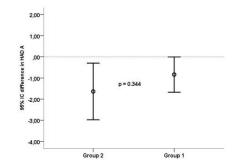
In the present study we demonstrated a significant decrease in the HADS-D among the successful quitters. Consistently, In the meta-analysis led by Taylor et al., four studies reported significant decrease in anxiety from baseline to follow up (ranging from seven weeks to 12 months). Ten studies reported decrease in depression from baseline to follow-up, with follow up ranging from three months to six years.

# Conclusion

Smoking cessation significantly improves patients' level of depression.

Table: Anxiety level according to success in smoking cessation.

	All (N=141)	Group 1	Group 2	P
HAD_A initial:  Mean (CI <sub>95%</sub> )	8.19 (7.53;8.83)	8.59 (7.85;9.39)	6.88 ( 5.64;8.06)	0.037
HAD_A at survey: Mean (CI <sub>95%</sub> )	7.16 (6.58;7.71)	7.75 (7.04;8.47)	5.24 (4.30;6.24)	< 0.001
Diff A	-1.03 (-1.75;-0.32)	-0.84 (-1.66;-0.00)	-1.63 (-2.91;-0.27)	
Paired analysis	0.005	0.049	0.018	



Group 1: the current smokers at survey; Group 2: the successful quitters at survey

Figure: Difference of HAD A according to quitting success

#### Reference

- Taylor G, McNeill A, Girling A, Farley A, Lindson-Hawley N, Aveyard P. Change in mental health after smoking cessation: systematic review and meta-analysis. BMJ. 2014 Feb 13;348(feb13 1):g1151–g1151
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