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Knowledge, Attitudes and Practices of Adults About Tuberculosis In Morocco

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Abstract

Objectives:
Tuberculosis (TB) is a public health problem and one of the leading causes of death from infectious disease worldwide. The aim of our study is to assess the knowledge levels, attitudes, and practices of the population on TB in Beni Mellal.
Methods: A sample of 205 people was included in this descriptive cross-sectional research of the general population of Beni Mellal City.
Results: In the population of Beni-Mellal, 53% had poor knowledge. The overall average knowledge was around 3.10/7. They had good knowledge of the treatment method (86%) and
contagiousness (82%), but poor knowledge of curability (4%) and treatment duration (25%). A positive attitude towards hospital care was noted, but 60% did not want to accompany a tuberculosis patient. Only 27% of respondents had visited a relative with tuberculosis.
Conclusion: The population of Beni-Mellal had a low level of knowledge about TB. a good attitude towards TB health care and a negative attitude towards patients.

Keyword :- Knowledge; Attitude; Practice; Tuberculosis; Morocco

Introduction

Tuberculosis (TB) is a public health problem and is one of the top ten causes of death worldwide. According to the World Health Organization, it is estimated that more than 10 million people have contracted this disease, and 1.7 million have died from it. Over 95% of TB deaths occur in low- and middle-income countries (World Health Organization, 2019, 2018)

Among these countries, Morocco is an endemic country for this disease. Tuberculosis is considered a major public health problem in this country. It records more than 30,000 cases of all forms of tuberculosis each year, which represents an incidence of more than 100 new cases per 100,000 inhabitants per year with 1,000 cases of death (Ministère de la santé marocain, 2020; World Health Organization, 2019)

Although the Moroccan Ministry of Health has a national strategy for the fight against TB, the impact of the efforts made on the rate of decline in the incidence of the disease is far from satisfying the objective set by this strategy. This high frequency requires awareness among the population to improve and strengthen the measures taken to control the disease (Eddabra and Neffa, 2020). Indeed, the ignorance of the populations with regard to this disease negatively affects the efforts made to control it, and on the other hand, social and community mobilization offers an opportunity for success in the implementation of the various strategies against the disease (Dembele, 2004)

Thus, studying the population's knowledge of this disease could help decision-makers to re-evaluate the programming of prevention activities.

A mixed-methods study was conducted in Bangladesh on the knowledge, attitudes, and practices of the population regarding tuberculosis, involving 432 participants. The results showed that 53% of the respondents had good knowledge of TB. However, considerable knowledge gaps were observed among community health workers. This study revealed varying levels of knowledge and mixed attitudes towards TB (Paul et al., 2015).

An urban study in Morocco with 301 subjects aimed to describe the perception of TB in a general population. There was a lot of unfavorable prejudice against tuberculosis. Most non-patients knew that TB could be cured, but many did not know that diagnosis and treatment were free. The ideas about the etiology and transmission of TB that circulated in this population clashed with the biomedical viewpoint (Ottmani et al., 2008)

To the best of our knowledge, no study has been conducted to assess the knowledge, attitudes, and behavioral practices of the community in the Beni Mellal region. Our study aims to

assess the knowledge, attitudes, and behavioral practices related to tuberculosis in the city of Beni Mellal.

I. Methods

1.1. Study type and design

We conducted a cross-sectional study in the city of Beni Mellal. The survey was a knowledge, attitudes, and practices (KAP) study. It is a quantitative, self-reporting method conducted through standardized questionnaires and provides access to quantitative and qualitative information. KAP surveys reveal ideas, representations, and potential barriers to behavior change. The aim is to propose an intervention strategy adapted to the local context (SPRING project, 2011) (project SPRING, 2011)

The adult population of Beni Mellal City made up our population. The sample was composed of 204 subjects. Beni Mellal is a city in central Morocco that is situated on the edge of the Tadla plain at the base of the High Atlas Mountains.

1.2. Data collection and analysis

The questionnaire consisted of 17 items covering socio-demographic data (age, occupation, gender, education), data on knowledge about TB (7 questions on the disease, symptoms, infection, severity, and treatment), and data on attitudes and practices in different TB-related situations.

The survey was conducted in the second half of 2021 in the 8 administrative districts of the city.
Subjects were recruited and interviewed in different public places and health centres after a
brief description of the study. It was emphasised that participation was free and voluntary.

In this study, respect for the dignity, privacy and freedom of the individual was observed.
Confidentiality between the subjects and us was also maintained with anonymous
questionnaires.

Regarding the analysis of the respondents' knowledge He/she was considered to have low knowledge (3 or fewer correct answers out of 7 questions), medium knowledge (4 to 5 correct answers), and good knowledge (6 or more correct answers). The collected data was entered and analyzed in Excel 2016 and SPSS version 25.

II. Results

The participants were represented by 51% men and 49% women. The majority of respondents were young people aged 26 to 45 (49%). The respondents had a secondary education level or higher (60%). The majority of respondents (78%) did not have a close relative affected by tuberculosis, and all had never been affected by tuberculosis. All characteristics are presented in Table 1.

Table 1: Characteristics of participants

Characteristics	N (%)	Characteristics	N (%)
Gender		Level of education	
Women	99 (49)	Illiterate	35 (17)
Men	105 (51)	Primary	47 (23)
Age		Primary	80 (39)
18- 25	61 (30)	Higher	42 (21)
26-45	100 (49)	having a relative sickness with TB	
46-60	43 (21)	Yes	44 (22)
		No	160 (78)

3.2. Participants knowledge of TB:

The average knowledge score for the seven knowledge items was 3.10/7. 53% of subjects had a low level of knowledge about tuberculosis (table 2). 49% of people had heard about TB on radio and television, followed by the community (9%), family (8%), people in hospitals (8%), friends (7%), and other sources (19%).

Table 2: Knowledge of the population about tuberculosis

Knowledge	Answers	NO	%
Low knowledge	3 or less correct	110	53%
Average knowledge	4 to 5 correct	66	32%
Good knowledge	6 or better	28	14%

People who did not have this knowledge in relation to the disease's symptomatology represented 39%. 82% of the respondents stated that the disease was contagious, while 10% did not believe so. Regarding the modes of transmission, 65 people knew that tuberculosis is transmitted by sputum, 41 participants believed that touch is the mode of transmission, and 48 participants did not know any mode of transmission of the disease. Regarding the severity of the disease, 68% of the interviewees believed that it was fatal.

Only 4% of the respondents believed in the curability of TB. The majority of the respondents (86%) knew that modern or conventional medicine was the treatment modality for TB; 5% opted for traditional medicine; 3% believed in a mixed modality; and 6% did not know anything about the modalities. Only 25% of the survey participants were aware that the duration of TB treatment exceeds six months. The number of participants who had correct answers will be presented in Figure 1 for each disease characteristic.

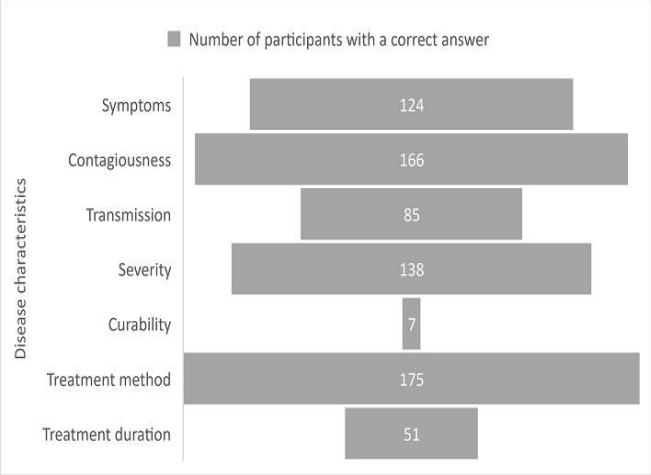

Figure 1: Correct knowledge for each characteristic of the disease.

3.3. Attitudes and practices of participants:

All of the respondents declared that they would take them to the hospital if they suspected or confirmed tuberculosis instead of treating them at home or with alternative medicine. More than half of the subjects (60%) declared that they would not prefer to accompany or mix with a person suffering from tuberculosis. Faced with a persistent cough for more than a month, practically all the subjects (96%) had a positive attitude towards a medical consultation in the hospital. The majority of subjects (73%) who had a relative with tuberculosis did not visit them. Half of the people who visited a TB patient took protective measures by avoiding the patient, wearing a bib, or taking hygienic measures (Table 3).

Table 3: Attitudes and practices of participants

Attitudes and practices	N (%)	Attitudes and practices	NO (%)
Attitude towards a persistent cough		**Acts in the company of a tuberculosis patient**	
Come to the hospital	195 (96%)	Sleeping	8 (4)
Come to the pharmacy	4 (2)	Eat and boron	41(20)
Stay at home	2 (1)	Pray	33 (16)
Go see a radiation therapist	3 (1)	Nothing	122 (60)
Practice of a visit to a loved one with tuberculosis	86(69.9)	**Protective measures when visiting a tuberculosis patient**	
Yes	12 (27)	Yes	6 (50)
No	32 (73)	No	(50)

III. Discussion

Knowledge and perceptions about TB could improve understanding of this disease and, thus, treatment adherence and success (Institute of Medicine (US) Committee on the Elimination of Tuberculosis in the United States, 2000). Our study, which had this purpose, revealed that the general population of Beni Mellal had poor knowledge of tuberculosis by about 53%.

This finding was similar to that found in another study in Morocco in urban communities where the majority of study participants had little knowledge of TB, including its causes and transmission. Only 9% had good knowledge of TB etiology. Even for patients with TB, only 1 in 5 patients identified their disease as TB (Ottmani et al., 2008).

In Cameroon, poor understanding and misguided beliefs were also identified by a survey of 3663 households in the community. Only 37.6% knew that coughing for more than 15 days was a sign of TB, while weight loss was identified by 35% of the population. Only 2% identified fever as a sign, and only 15% cited fatigue (Kwedi Nolna et al., 2016)

In contrast, in Ethiopia, 54% of participating subjects were assessed as having good knowledge of TB (Kasa et al., 2019). In Lesotho, a country well known for its high incidence of tuberculosis, a large-scale survey including more than 9000 subjects revealed that 59.9% of participants from the general population had good knowledge of tuberculosis (Luba et al., 2019). Also in Afghanistan, 87.7% of participants had good knowledge of the subject (Essar et al., 2022).

Our results also differed from those of Colson et al. who found respectively that the majority of respondents in the USA, regardless of whether they were US-born or immigrants, had good knowledge about TB (scores were: 7.2/11 for US-born and 6.86/11 for foreign-born), except that participants had misunderstandings about the transmission of the disease. Indeed, 77% of respondents believed that TB can be transmitted through kissing (Colson et al., 2010). Also in Brazil, only 37.1% of subjects knew the modes of transmission of the disease (Junior et al., 2019).

This misunderstanding is also valid for Morocco, as in our study, 60% of the participants had low knowledge of the mode of transmission in the two major cities of Morocco: Casablanca and Fez. 82% of the interviewed subjects thought that TB is transmitted through sexual relations, 80% through food, 74% through personal objects, and 71% through blood (Ottmani et al., 2008).

In contrast, in Cameroon, 66.9% of participants experienced airborne contamination, but 30.4% believed that sharing the same dish was a mode of transmission (Kwedi Nolna et al., 2016). Also in Ethiopia, 74% of participants were aware of the airborne mode of transmission of the disease (Kasa et al., 2019).

We found that only 7 patients believed in the curability of the disease, while in Brazil, 95% of the patients surveyed believed in it (Junior et al., 2019).

The attitudes of our subjects were generally positive towards the management of the disease; they had all agreed to take their relatives with TB to the hospital, and 96% also saw that they should visit the hospital if they had been coughing for more than a month. Knowledge about transmission, on the other hand, influenced attitudes and practices towards TB patients. 60% had a negative attitude towards accompanying a TB patient, and 73% of the people did not visit their relatives with TB.

In Brazil, too, the low knowledge of TB symptoms, transmission, and prevention influenced attitudes and practices towards TB. Although 88.5% of the respondents had a positive

attitude towards visiting a primary health care facility in case of signs of TB, a remarkable stigma towards TB patients was found. Indeed, the majority had a rejectionist attitude towards these patients (Junior et al., 2019).

On the other hand, in Lesotho, 93% of respondents agreed to work with TB patient (Luba et al., 2019). In Indonesia, although more than 80% of the participants had a positive attitude towards hospital TB management, 50% of the respondents found TB a shameful disease (Ramadhany et al., 2020).

A positive attitude towards treatment and care was also observed in Afghanistan in 96.5% of participants (Essar et al., 2022). In the Middle East and North Africa region, and particularly in Oman, the participants had good knowledge (53%), which impacted their positive attitude towards the disease, TB patients, and TB management (Al Khalili et al., 2022).

Conclusion

Our study has a significant proportion of subjects with a low level of knowledge, particularly with regard to curability, transmission, and duration of treatment. The population of the city of Beni Mellal had a positive attitude towards TB care but a stigmatized and negative attitude towards TB patients.

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