Depression and anxiety in patients with multidrug-resistant tuberculosis in Nepal: an observational study

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Setting: Multidrug-resistant tuberculosis (MDR-TB) patients in the national TB treatment programme of Nepal.

Objective: To estimate the prevalence of depression and anxiety in people receiving treatment for MDR-TB, identify potential risk factors for depression and anxiety and determine temporal changes in their severity during treatment.

Design: An observational study using a screening tool, the Hopkins Symptom Checklist (HSCL-25) for depression and anxiety, administered monthly to a group of 135 patients in Nepal. Logistic and multilevel linear regression models were used to identify any patient characteristics associated with depression and anxiety.

Results: Most of the 135 patients were male (76%) and living with their families (68%). The period prevalences of depression and anxiety were respectively 22.2% and 15.6%. Patients reporting physical side effects of MDR-TB treatment had a higher depression score on HSCL by 2.63 points (95%CI 0.77–4.48) and a 1.59 point higher anxiety score (95%CI 0.45–2.73) than those who did not report any side effects. Being single was associated with having anxiety (aOR 0.2, 95%CI 0.03–1.0).

Conclusion: Given the high rates of depression observed among MDR-TB patients, national TB treatment programmes should ensure their patients are routinely screened for depression and anxiety, and effective treatment offered.

Multidrug-resistant tuberculosis (MDR-TB) poses a significant global public health challenge in the twenty-first century.¹ The World Health Organization (WHO) defines MDR-TB as TB that is resistant to two first-line drugs: isoniazid and rifampicin. Only half the patients in national MDR-TB programmes worldwide are successfully cured.² In 2016–2017, Nepal reported 31 764 TB cases, of which 2.2% of new cases and 15.4% of retreatment cases had MDR-TB.³

There is a high prevalence of comorbid mental disorders among individuals diagnosed with physical illness.⁴ This is associated with worse mortality and morbidity, treatment adherence, health care use and quality of life.^{4–8} In TB and human immunodeficiency virus (HIV), rates of depression have been identified, at respectively 48.9%⁹ and 39.1%.¹⁰ There is minimal research estimating the prevalence of mental disorders among MDR-TB patients.¹¹ Two studies from Pakistan estimated that the prevalence of depression in MDR-TB patients was 69.6% and 42.8%.^{12,13}

We aimed to estimate the prevalence of depression and anxiety in people receiving treatment for MDR-TB

in Nepal and to identify potential risk factors. We also sought to determine the temporal nature of depression and anxiety during the course of treatment for MDR-TB.

METHODS

This observational study was nested within a feasibility study offering a brief individual psychological therapy to treat low moods in MDR-TB patients with depression in the Nepal National TB Programme.¹⁴ The study took place at two urban TB clinics that supported MDR-TB patients on a monthly out-patient basis using a 20–24 month regimen of anti-tuberculosis drugs.

We collected monthly screening data for depression and anxiety at the TB clinics between March 2015 and May 2016. Any MDR-TB patient who attended either clinic was approached to be screened regardless of whether they had been screened at a previous visit or their current stage of MDR-TB treatment. Some patients only had data for one screening event. For others, we were able to collect data over several monthly visits to the clinic.

We screened patients for depression and anxiety using the Nepali version of the 25-item Hopkins Symptom Checklist (HSCL-25), which is designed to identify probable cases of anxiety (10 items; cut-off ≥ 17 points) and depression (15 items; cut-off ≥ 24 points). The checklist has previously been tested for validity in Nepal among internally displaced people,¹⁵ and validated in several other countries. It was administered by researchers with no background in mental health care who received 3 days' training from a Nepalese mental health non-governmental organisation, the Transcultural Psychosocial Organization Nepal.

Participants were at least aged 18 years with a confirmed diagnosis of MDR-TB (new and existing patients). Patients were excluded if they had drug-susceptible TB or extensively drug-resistant TB (XDR-TB), as we were interested in MDR-TB patients only. As this was a post-hoc analysis of observational data from a feasibility study, no power calculation was performed.

Data analysis

Period prevalence was calculated as the proportion of all patients who screened positive for anxiety or depression at least once in any of the monthly visits for which we were able to collect data. We also explored the change of severity of depression and anxiety over the course of MDR-TB treatment. We did this by calculating the month of MDR-TB treatment each data

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point corresponded to in our data set. We then plotted the median of HSCL-25 scores for each month of treatment (20 months) with their corresponding interquartile ranges (IQRs).

Variables in the analysis

The outcome variable for the logistic regression models was the presence or absence of depression and anxiety (as identified by the screening tool cut-points) at any of the patient's screening events. If the patient had at least one of their screening events above the cut-points for depression or anxiety, they were considered a case. The outcome variables for the linear regression models were the HSCL-25 screening tool scores for depression and anxiety. Given the lack of existing evidence, we selected independent variables identified in studies on drug-susceptible TB,^{16,17} HIV studies¹⁰ and our previous qualitative work.¹⁸ These time invariant variables were all collected at the first screening event for each patient (which was not necessarily the start of their MDR-TB treatment) and comprised age (in years), sex, treatment centre, marital status (single or not, due to small numbers of widowed persons), type of accommodation (living alone, with friends/family or in a TB hostel), new or relapse TB/MDR-TB case, whether they had relocated for anti-tuberculosis treatment, if accompanied by a friend or family member at their baseline assessment (as proxy for social support) and self-reported physical side effects from medication. We then constructed several regression models: first, logistic regression models to explore the effects of time-independent factors, followed by multilevel linear regression models to explore the effects of time of screening and data clustering for each participant.

Logistic regression models

Logistic regression models were constructed to identify associations between potential risk factors at baseline and probable depression and anxiety. Independent variables with $P < 0.25$ in the univariate analysis were included and retained in the multivariable logistic model: we used this broad inclusion criterion, as we had little previous MDR-TB evidence to guide us.¹⁹ Due to a problem of separation in the data (all probable cases of anxiety/depression reported physical side effects), the Firth methods of penalised likelihood were employed to reduce potential small sample bias (STATA firthingit) (StataCorp, College Station, TX, USA).²⁰

Multilevel linear regression models

Given the amount of missing data due to the difficulties collecting screening data following the disruption caused by the April 2015 earthquake, multivariable, multilevel mixed-effects models were also used to analyse the data set. These explored the change over time in each of the depression and anxiety scores, and which variables could be used to explain the differences in these changes. We accounted for variations at the level of the participant and the level of the month of MDR-TB treatment within the analysis. Each independent variable was introduced separately and retained in the multivariable model only if it was signifi-

cantly associated ($P < 0.1$ to account for correlation) with the outcome (HSCL-25 score). Only those variables that remained significant at the 0.1 level were retained in the final models.

Multicollinearity between the independent variables was assessed using recognised thresholds of correlation coefficients (>0.8), tolerance values (<0.25) and variance inflation factors (>2.5).¹⁹ STATA v 13 (StataCorp) was used to analyse the data.

Ethics approval and consent to participate

Ethics approval for the study was provided by the Nepal Health Research Council, Kathmandu, Nepal (Approval number: 130/2012) and the University of Leeds Medical Research Ethics Committee, Leeds, UK (Approval number: HSLTM/11/026). Written informed consent was provided by all research participants. Illiterate patients were informed verbally and consent confirmed using thumb prints. No incentives were provided to participants. Consent from patients included consent to publish.

The data sets generated and analysed during the current study are not publicly available as patient consent did not include this requirement, but are available from the corresponding author on reasonable request.

TABLE 1 Sociodemographic characteristics of the sample of MDR-TB patients from Nepal ($n = 135$)

Characteristics	<i>n</i> (%)
Age, years, median [IQR]	30 [23–43]
Sex	
Male	102 (75.6)
Female	33 (24.4)
Occupation before MDR-TB diagnosis	
Not working	3 (2.2)
Housewife	14 (10.4)
Student	22 (16.3)
Paid work	96 (71.1)
Occupation after MDR-TB diagnosis	
Not working	94 (69.6)
Housewife	6 (4.4)
Student	7 (5.2)
Paid work	28 (20.7)
Family situation	
Living alone (including those in TB hostels)	41 (30.3)
With family/spouse	92 (68.1)
Other	2 (1.6)
Marital status	
Single	44 (32.6)
Married	88 (65.2)
Widowed	3 (2.2)
Self-reported side effects	
Side effects	95 (70.4)
No side effects	40 (29.6)
Treatment centre	
Centre A	52 (38.5)
Centre B	83 (61.5)

MDR-TB = multidrug-resistant TB; IQR = interquartile range; TB = tuberculosis.

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TABLE 2 Logistic regression model of factors associated with depression

	Depression status		Univariate		Multivariable (<i>n</i> = 134)	
	Yes <i>n</i>	No <i>n</i>	OR (95%CI)	<i>P</i> value	aOR (95%CI)	<i>P</i> value
Age, years, median [IQR]	30 [24–43]	30 [23–42]	1.0 (0.98–1.04)	0.64	Not included in final model	
Sex						
Male	20	82	1	—	1	—
Female	10	23	1.8 (0.7–4.3)	0.20	2.0 (0.7–5.6)	0.20
Centre						
Centre A	3	49	1	—	1	—
Centre B	27	56	7.9 (2.3–27.6)	<0.01	4.3 (1.2–15.8)	0.03
Marital status						
Married or widowed	24	67	1	—	1	—
Single	5	39	0.3 (0.1–1.0)	0.04	0.6 (0.2–1.9)	0.36
Accommodation						
With family/friends	23	72	1	—	Not included in final model	
Alone	1	8	0.4 (0.1–3.5)	0.42		
TB hostel	6	25	0.8 (0.3–2.2)	0.66		
TB case						
New case	2	12	1	—	Not included in final model	
Relapse case	28	89	1.9 (0.4–9.0)	0.42		
Relocation						
Not relocated	24	73	1	—	Not included in final model	
Relocated	6	31	0.6 (0.2–1.6)	0.29		
Social support						
Not accompanied	18	85	1	—	1	—
Accompanied	12	19	3.0 (1.2–7.2)	0.02	1.9 (0.7–5.2)	0.20
Side effects						
No side effects	0	40	1	—	1	—
Side effects	30	65	37.7 (2.2–633.9)	0.01	34.2 (2.0–593.8)	0.02

OR = odds ratio; CI = confidence interval; aOR = adjusted OR; IQR = interquartile range; TB = tuberculosis.

RESULTS

In total, 135 patients with MDR-TB were screened on at least one occasion for depression and anxiety in this study (Table 1). This represents 69% of the patients attending the two MDR-TB clinics during this period. Screening scores were obtained for 667 visits by these 135 patients. The median number of monthly screens administered per patient was 5 (range 1–11). Reasons for incomplete data include starting or finishing treatment part way through the study, non-attendance at the clinic, death, loss to follow-up, transfer to another clinic and the large earthquakes that affected central Nepal in April 2015. The median age of participants was 30 years (IQR 23–43). Most of the patients were male (102/135, 76%). Two thirds were living with their families (92/135, 68%). A third were single (44/135, 33%). Some were staying in a Government-run MDR-TB hostel (23.0%). More patients were recruited at centre B than centre A (61.5% vs. 38.5%). As no demographics exist for the national MDR-TB treatment population, it is unclear how representative our sample is (Table 1).

Of the 135 patients in the sample, 30 had at least one HSCL-25 depression score of ≥ 24 points in any of the months they were screened: the period prevalence of depression was 22.2% (95% confidence interval [CI] 15.9–30.1). The prevalences of depression among females (30.3%, 95%CI 16.9–48.2) and males (19.6%, 95%CI 12.9–28.6) were not significantly different: the mean difference was 10.7% (95%CI –22.7 to 44.1).

The number of patients with at least one HSCL-25 anxiety score of ≥ 17 points in any of the months they were screened was

21: the prevalence of anxiety was 15.6% (95%CI 10.3–22.8). The prevalences of anxiety in females (15.2%, 95%CI 6.3–32.1) and males (15.7%, 95%CI 9.8–24.2) were similar: the mean difference was 0.5% (95%CI –36.7 to 35.7). The prevalence of either depression, anxiety or both was 23.0% (95%CI 16.6–30.9). All but one participant with anxiety also had depression.

The main physical side effects reported by all patients were joint or limb problems (26%), dizziness (25%), gastro-intestinal problems (13%), weakness (12%) and hearing problems (8%). All patients who screened positive for depression and/or anxiety (31/135) also self-reported that they had experienced physical side effects such as dizziness (51%), joint or limb problems (26%), weakness (23%), gastro-intestinal (13%) and hearing problems (6%). Just under half of all patients (59/135, 44%) reported two or more side effects. This increased to over two thirds (21/31, 68%) in those with depression and/or anxiety. Multicollinearity among the independent variables was assessed and deemed not problematic.

Factors associated with probable depression and anxiety in logistic regression models

Depression was associated (univariate analysis, $P < 0.25$) with sex, treatment centre, being single, being accompanied and reporting side effects (Table 2). After multivariable adjustment, significant ($P < 0.05$) associations remained only with the treatment centre (adjusted odds ratio [aOR] 4.3, 95%CI 1.2–15.8) and reporting side effects (aOR 34.2, 95%CI 2.0–593.8).

Anxiety was associated (univariate analysis, $P < 0.25$) with treatment centre, being single, being accompanied and reporting

TABLE 3 Logistic regression model of factors associated with anxiety

	Anxiety status		Univariate		Multivariable (<i>n</i> = 134)	
	Yes <i>n</i>	No <i>n</i>	OR (95%CI)	<i>P</i> value	aOR (95%CI)	<i>P</i> value
Age, years, median [IQR]	30 [22–42]	31 [25–45]	1.02 (0.99–1.06)	0.26	Not included in final model	
Sex					Not included in final model	
Male	16	86	1	—		
Female	5	28	1.0 (0.3–2.9)	0.94		
Centre						
Centre A	2	50	1	—	1	—
Centre B	19	64	7.4 (1.7–33.4)	0.01	2.6 (0.6–11.3)	0.21
Marital status						
Married or widowed	20	71	1	—	1	—
Single	1	43	0.1 (0.0–0.6)	0.02	0.2 (0.0–1.0)	0.05
Accommodation					Not included in final model	
With family/friends	15	80	1	—		
Alone	1	8	0.7 (0.1–5.6)	0.71		
TB hostel	5	26	1.1 (0.4–3.2)	0.92		
TB case					Not included in final model	
New case	1	13	1	—		
Relapse case	20	97	2.7 (0.3–21.7)	0.36		
Relocation					Not included in final model	
Not relocated	16	81	1	—		
Relocated	5	32	0.8 (0.3–2.3)	0.67		
Social support						
Not accompanied	14	89	1	—	1	—
Accompanied	7	24	1.9 (0.7–5.1)	0.23	1.4 (0.5–4.2)	0.55
Side effects						
No side effects	0	40	1	—	1	—
Side effects	21	74	23.4 (1.4–396.1)	0.03	20.7 (1.2–355.7)	0.04

OR = odds ratio; CI = confidence interval; aOR = adjusted OR; IQR = interquartile range; TB = tuberculosis.

side effects (Table 3). After multivariable adjustment, significant associations remained only with reporting side effects (aOR 20.7, 95%CI 1.2–355.7) and being single (aOR 0.2, 95%CI 0.03–1.0).

Factors associated with changes in HSCL-25 scores for depression and anxiety in multilevel linear regression models

Depression scores reduced on average by 0.33 HSCL points (95%CI –0.42 to –0.25) per month (Table 4 and Figure). Those

patients recruited at centre B had on average a 2.59 point (95%CI 0.83–4.34) higher depression score on HSCL than those recruited at centre A, at any given month. Centre and side effects were significantly ($P < 0.05$) associated with the change in HSCL depression score over time. After inclusion in a multivariable model, both were found to be independent risk factors. Those patients reporting side effects had on average a 2.63 higher HSCL depression score (95%CI 0.77–4.48) than those

TABLE 4 Factors associated with depression: multilevel mixed-effects model

Potential risk factor	Univariate		Multivariable	
	Mean difference in score at any given month (95%CI)	<i>P</i> value	Mean difference in score at any given month (95%CI)	<i>P</i> value
Mean change in score per month	–0.33 (–0.42 to –0.25)	<0.001	–0.31 (–0.4 to –0.23)	<0.001
Age per one-year increase	0.06 (–0.01 to 0.13)	0.11		
Sex (female vs. male)	0.95 (–1.08 to 2.99)	0.36		
Centre (Centre B vs. Centre A)	2.59 (0.83 to 4.34)	0.004	2.27 (0.52 to 4.02)	0.01
Single (yes vs. no)	–1.54 (–3.39 to 0.32)	0.11		
Living alone (yes vs. no)	–1.18 (–4.56 to 2.2)	0.50		
Living in hostel (yes vs. no)	–0.91 (–3.05 to 1.24)	0.41		
Relapse (relapse vs. new)	0.29 (–2.59 to 3.16)	0.84		
Relocated (yes vs. no)	–1.4 (–3.41 to 0.61)	0.17		
Accompanied (yes vs. no)	1.03 (–1.02 to 3.07)	0.33		
Side effects (yes vs. no)	2.95 (1.09 to 4.81)	0.002	2.63 (0.77 to 4.48)	0.005

CI = confidence interval.

FIGURE Median HSCL-25 scores for depression and anxiety over the course of MDR-TB treatment ($n = 135$). As the depression section of the screening tool has more questions than the anxiety section, scores tend to be higher, and is reflected in the higher cut-off score for depression (15 items; cut-off ≥ 24 points) than for anxiety (10 items; cut-off ≥ 17 points). MDR-TB = multidrug-resistant tuberculosis; HSCL = Hopkins Symptom Checklist; IQR = interquartile range.

who did not report any side effects, after adjusting for recruitment centre.

HSCL anxiety scores decreased on average by 0.22 points (95%CI -0.28 to -0.16) per month (Table 5 and Figure). Age, centre, single status and side effects were significantly associated ($P < 0.05$) with the change in HSCL anxiety score over time. With every increase in the decade of patient age, the difference in the HSCL anxiety score at any given month was 0.5 points (95%CI 0.01–0.09). Patients recruited at centre B had on average a 1.6 point (95%CI 0.55–2.66) higher HSCL anxiety score than those recruited at centre A, in any given month. Relocation status was associated with the anxiety score ($P < 0.1$), and was therefore included in the multivariable model. Age, single status and relocation status were no longer significant at the $P = 0.1$ level and were therefore excluded from the final model. Recruitment centre and reporting of side effects were found to be independent risk factors. Those patients reporting side effects had on average a 1.59 point (95%CI 0.45–2.73) higher HSCL anxiety score than those

who did not report any side effects, adjusting for recruitment centre.

DISCUSSION

Nearly a quarter of patients were identified as having comorbid depression and/or anxiety. The period prevalences of depression and anxiety were respectively 22.2% and 15.6%, with the presence of side effects from MDR-TB treatment being associated with both depression and anxiety. The trend of severity of depression and anxiety declined gradually over time throughout the MDR-TB treatment course of 20 months.

Some patients who screened positive for depression in each centre ($n = 12$) received brief psychological therapy (as part of the feasibility study), which reduced their depression scores. However, after disregarding these counselled patients, the same trend remained (data not shown). Higher HSCL-25 scores for depression and anxiety (and a higher proportion of cases of depression) were

TABLE 5 Factors associated with anxiety: multilevel mixed-effects model

Potential risk factor	Univariate		Multivariable	
	Mean difference in score at any given month (95%CI)	P value	Mean difference in score at any given month (95%CI)	P value
Mean change in score per month	-0.22 (-0.28 to -0.16)	<0.001	-0.21 (-0.27 to -0.15)	<0.001
Age per increase in year	0.05 (0.01 to 0.09)	0.02		
Sex (female vs. male)	0.3 (-0.98 to 1.58)	0.65		
Centre (B vs. A)	1.6 (0.55 to 2.66)	0.003	1.36 (0.29 to 2.44)	0.01
Single (yes vs. no)	-1.21 (-2.36 to -0.05)	0.04		
Living alone (yes vs. no)	-1.2 (-3.2 to 0.8)	0.24		
Living in hostel (yes vs. no)	-0.37 (-1.77 to 1.02)	0.6		
Relapse (relapse vs. new)	-0.12 (-1.9 to 1.67)	0.9		
Relocated (yes vs. no)	-1.22 (-2.5 to 0.07)	0.06		
Accompanied (yes vs. no)	0.68 (-0.6 to 1.96)	0.3		
Side effects (yes vs. no)	1.9 (0.73 to 3.07)	0.002	1.59 (0.45 to 2.73)	0.006

CI = confidence interval.

reported at centre B than at centre A. Potential explanations for this include differences in levels of deprivation and inter-rater reliability issues between the researchers at each site that produced different screening scores (although this was not assessed).

With background prevalence estimates in Nepal of respectively 3.2% and 3.6%,²¹ these estimates represent a seven-fold increase in the prevalence of depression and a four-fold increase in the prevalence of anxiety among MDR-TB patients. Among our MDR-TB patients, depression was more common among females than males, although the difference was not significant. This could be due to the negative financial impact of MDR-TB on married women who often cannot continue paid work and lack support from their husbands and wider social networks.¹⁸ Anxiety was associated with being single. However, this finding is contrary to those of a large multicountry population survey, where anxiety was found to be associated with being married, relative to never having been married, for the onset of anxiety disorders.²²

The presence of physical side effects from MDR-TB medication was associated with both depression and anxiety. All patients who screened positive for either mental disorder also reported side effects. This suggests the presence of side effects may be an important consideration for MDR-TB programmes.

The study had several limitations. First, screening data collection was severely affected by the widespread social disruption and internal displacement of people following the large earthquakes in Nepal in April 2015 and social unrest caused by border blockades with India in 2015–2016. Second, we used a brief screening tool for depression and anxiety rather than structured psychiatric assessments, which produce more reliable diagnoses. Third, our sample may not be representative of all MDR-TB treatment cohorts in Nepal. Fourth, we did not collect data on alcohol/drug use, which was an oversight and could explain the high rates of depression. Despite these limitations, our findings suggest a high burden of common mental disorders among MDR-TB patients.

Depression contributes to a range of poor clinical outcomes in other diseases as well as to poor treatment adherence.⁶ Untreated depression and anxiety may contribute to high rates of loss to follow-up in MDR-TB treatment programmes worldwide.²³ If the WHO target of ending TB by 2035 is to be realised,²⁴ routine screening and treatment of comorbid depression and anxiety in MDR-TB patients should be incorporated into TB programmes using a more holistic approach to MDR-TB care.

An evidence base is emerging suggesting that depression is an important comorbidity in TB, with a bidirectional effect where each disorder is a risk factor for the other.²⁵ Interventions adapted to MDR-TB patients are being developed;¹⁴ these build on previous work to develop treatment for comorbid mental disorders.²⁶ Further research is needed to develop both the epidemiology of comorbid mental disorders in MDR-TB patients and effective treatment modalities.

CONCLUSION

The high prevalence of depression and anxiety, and the plausible association between mental disorders and poor MDR-TB treatment adherence suggest that national treatment programmes should ensure that screening and treatment for depression and anxiety are implemented routinely.

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Contexte : Les patients atteints de tuberculose multirésistante (TB-MDR) du programme national de traitement de la TB du Népal.

Objectif : Estimer la prévalence de la dépression et de l'anxiété chez les personnes recevant un traitement de TB-MDR, afin d'identifier les facteurs de risque potentiels de dépression et d'anxiété et les modifications temporelles de leur gravité pendant le traitement.

Schéma : Une étude d'observation recourant à un outil de dépistage (*Hopkins Symptom Checklist* [HSCL-25]) de la dépression et de l'anxiété, administré chaque mois à un groupe de 135 patients au Népal. Les modèles de régression logistique et de régression linéaire multi niveaux ont identifié toutes les caractéristiques des patients associées à la dépression et à l'anxiété.

Marco de referencia: Los pacientes con tuberculosis multirresistente (TB-MDR) en el programa nacional contra la TB de Nepal.

Objetivo: Estimar la prevalencia de depresión y ansiedad en las personas que reciben tratamiento por TB-MDR, con el fin de detectar los posibles factores de riesgo de aparición de estas afecciones y las modificaciones transitorias de su gravedad durante el tratamiento.

Método: Se realizó un estudio observacional con un instrumento de detección de la depresión y la ansiedad (la lista de verificación de síntomas Hopkins [HSCL-25]), aplicado cada mes a un grupo de 135 pacientes en Nepal. Mediante modelos de regresión logística y modelos de regresión lineal multinivel se reconoció toda característica de los pacientes asociada con la depresión y la ansiedad.

Résultats : La majorité des 135 patients ont été des hommes (76%) et vivaient avec leur famille (68%). La prévalence dans cette période de la dépression et de l'anxiété a été de 22,2% et de 15,6%, respectivement. Les patients se plaignant d'effets secondaires physiques du traitement de la TB-MDR ont eu un score de dépression plus élevé de 2,63 points sur le HSCL (IC95% 0,77–4.48) et un score d'anxiété plus élevé de 1,59 points (IC95% 0,45–2,73) que ceux qui n'ont pas rapporté d'effets secondaires. Le fait d'être célibataire a été associé avec l'anxiété (OR ajusté 0,2 ; IC95% 0,03–1.0).

Conclusion : Devant le taux élevé de dépression mis en évidence parmi les patients TB-MDR, les programmes nationaux de traitement de la TB devraient s'assurer que leurs patients bénéficient d'un dépistage en routine de la dépression et de l'anxiété et d'un traitement efficace de ces problèmes.

Resultados: La mayoría de los 135 pacientes era de sexo masculino (76%) y vivía con la familia (68%). La prevalencia en un período específico fue 22,2% para la depresión y 15,6% para la ansiedad. Los pacientes que referían efectos adversos del tratamiento de la TB-MDR obtuvieron una puntuación 2,63 puntos más alta de la escala de depresión con el instrumento HSCL (IC95% 0,77–4,48) y un índice de ansiedad 1,59 puntos superior (IC95% 0,45–2,73) que los pacientes que no informaron ningún efecto secundario. El hecho de ser soltero se asoció con la presencia de ansiedad (OR ajustado 0,2; IC95% 0,03–1,0).

Conclusión: Dadas las altas tasas de depresión observadas en los pacientes con TB-MDR, los programas nacionales encargados de la TB deben procurar el tamizaje sistemático de la depresión y la ansiedad en sus pacientes y el suministro de tratamientos eficaces.