



# WeChat public platform-based intervention may improve health seeking behavior of tuberculosis among urban residents in China



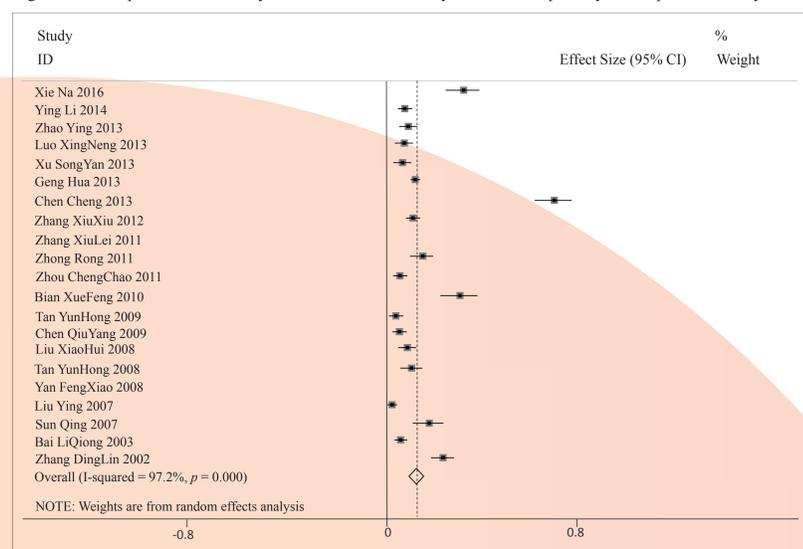
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## BACKGROUND

Our previous published meta-analysis reported incorrect health seeking behavior consisted in healthcare-associated-TB spreading in China. Therefore, we conducted a prospective study to assess the effect of WeChat public platform-based intervention on TB knowledge, attitudes and behavior.

Figure 1 Forest plots of meta-analysis of first-visited facility about TB dispensary in our previous study



## RESULTS

In the baseline and deadline surveys, 520 and 606 questionnaires were collected, respectively. The percentage of correct answers about suspected symptoms, probable transmission mode, credible diagnosis, regular treatment duration, and the national policy for TB was significantly enhanced. Participants' intention to seek healthcare was synchronously improved as they recognized the signs of TB. Older age and higher educational background were independently associated with the first visiting of TB dispensaries; whereas income and insurance types affected the first visiting of tertiary hospitals. There was no difference about behavior intention between the interact group and free-interact group.

Table 2 TB knowledge, attitudes and behavior before and after intervention

Outcomes	Content	N (Before)	N (After)	$\chi^2$	P value
TB knowledge	Suspected symptoms	397	503	118.484	<0.0001
	Probable transmission mode	113	165	13.441	<0.0001
	Credible diagnosis	175	303	64.503	<0.0001
	Regular treatment duration	244	315	20.295	<0.0001
	National policy for TB	99	210	14.856	<0.0001
Attitudes for health management of TB	Willing	8	4		
	Time-depends willing	287	233	14.038	0.001
	Not willing	208	266		
Behavior intention to seek healthcare for TB	Suffering until progressing	14	4		
	Relying on OTC	28	10	15.7677	0.0004
	Seeing doctor in TB dispensary	458	489		

Abbreviations: N (Before), the number of participants with correct answer about TB awareness before intervention; N (After), the number of participants with correct answer about TB awareness before intervention; OTC, over the counter

## MATERIALS AND METHODS

Study involved a longitudinal intervention for 3 months among a representative sample of urban residents in Beijing. Participants subscribed WeChat public account of FeiyanFeiyu which means "Be aware of the differences between Health lung and Sick lung with TB". These subscribers were divided into the interact group and free-interact group. From May 9 to August 1 in 2016, 27 articles about TB prevention and compulsory healthcare policy were disseminated via FeiyanFeiyu, whereas in the interact group, a quiz for a phased summarization and a lucky-draw cash prize as an incentive for adherence were offered each month.

Table 1 Summaries of articles disseminated via FeiyanFeiyu (Be aware of the differences between Health lung and Sick lung with TB)

No.	Date	Articles Title in FeiyanFeiyu of WeChat public platform	Readers	"赞"s	Messages
1		Preface: Thanks for your attention	442	38	0
2	9-May-2016	Knowledge about pulmonary tuberculosis (TB)	773	61	0
3	12-May-2016	Do you know how pulmonary TB communicated to?	948	76	0
4	17-May-2016	Who is among the vulnerable populations of TB?	1070	86	0
5	19-May-2016	Why is it called so catastrophic expense for the family of TB?	1211	65	0
6	23-May-2016	What happens to drug-resistant TB?	943	95	0
7	26-May-2016	How to prevent TB in congesting school or army dormitories?	843	170	4
8	30-May-2016	Knowledge about disinfection of <i>Mycobacterium tuberculosis</i> (Mtb)	1231	117	1
9	31-May-2016	1 <sup>st</sup> quiz for a phased summarization with a lucky-draw cash prize	1197	16	2
10	2-Jun-2016	Answers for the 1 <sup>st</sup> quiz	1108	86	0
11	6-Jun-2016	Which is the most effective strategy for TB prevention?	1128	107	0
12	9-Jun-2016	Free and compulsory TB diagnosis and treatment policy	1184	146	5
13	13-Jun-2016	TB dispensaries/hospitals provide free health & medical care services	1125	127	1
14	16-Jun-2016	What do you need to know about TB in children and adolescent?	1136	128	13
15	20-Jun-2016	Can be a woman with TB pregnant?	1129	109	5
16	23-Jun-2016	Latest core & common knowledge of TB prevention and treatment care	1142	131	9
17	27-Jun-2016	2 <sup>nd</sup> quiz for a phased summarization with a lucky-draw cash prize	1057	65	0
18	30-Jun-2016	Answers for the 2 <sup>nd</sup> quiz	1019	90	2
19	4-Jul-2016	Helpless and sad but interesting history of tuberculosis treatment care	1032	99	7
20	7-Jul-2016	Do occupational groups have to stop working for tuberculosis?	1130	131	7
21	11-Jul-2016	What are the characteristics of geriatric tuberculosis?	1114	116	6
22	14-Jul-2016	AIDS & tuberculosis: difficult brother and difficult brother	1104	151	4
23	18-Jul-2016	Precautions against tuberculosis for complicated with diabetes	1029	156	4
24	21-Jul-2016	Key points of hospital infection control over tuberculosis	1172	141	15
25	25-Jul-2016	[collection] basic principles of anti tuberculosis treatment	1034	98	7
26	28-Jul-2016	3 <sup>rd</sup> quiz for a phased summarization with a lucky-draw cash prize	1056	81	1
27	1-Aug-2015	Answers for the 3 <sup>rd</sup> quiz	925	67	1

## CONCLUSIONS

WeChat platform is effective for improving TB awareness, which offers easy access to health education via social networks online.

## BIBLIOGRAPHY

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