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Inside the Policy Process: using textual analysis to measure people-centred approach in tuberculosis policymaking

Sara Balestri

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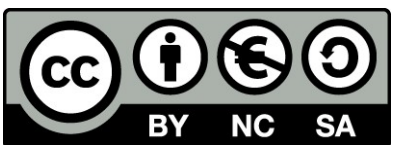

DISEIS
Dipartimento di Economia Internazionale, delle Istituzioni e dello Sviluppo
Università Cattolica del Sacro Cuore
Via Necchi 5
20123
Milano

Inside the Policy Process: using textual analysis to measure people-centred approach in tuberculosis policymaking

Sara Balestri*

*CSCC and DISEIS Universitá Cattolica del Sacro Cuore di Milano

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Abstract

Through a radical change of perspective, the current WHO End TB Strategy recognizes for the first time the role of social determinants in TB diffusion, encouraging the adoption of a people-centred approach, and engaging communities in TB care service provision. This study analyses to what extent actors involved into the elaboration of National Strategic Plans (NSPs) to fight TB perceive these components and propose a consistent perspective. Through computational textual analysis applied to 25 open-question interviews carried out to actors directly involved into the elaboration of NSPs, this study provides evidence of major traits of expression and specificities to detect common trends and draw informative insights for policy design at country level. The identification of conceptual clusters in the narratives allows the selection of keywords, whose distribution is used to assess to what extent respondents are oriented towards a partnering approach, and are focused on people-centred policies. A significant number of respondents, especially if having experienced the StopTB Partnership initiative, support a people-centred approach by emphasizing the importance of the relational components for affected people, and the setup of inclusive processes of community-based care and support services. Results suggest a clear perception of the strategic utility of a national partnering approach. The findings have important implications towards a rights-enhancing policy in service provision: strengthening partnering efforts appears as an effective strategy to promote a people-centered approach in TB policy design.

Corresponding author: sara.balestri@unicatt.it
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JEL Classification: I18; I38

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1 Introduction

Despite recent remarkable achievements, Tuberculosis (TB) remains one of the leading factors causing death worldwide, especially in low and middle income countries, being closely associated with poverty and poor living conditions (WorldHealthOrganization, 2016). Effective diagnosis and timely treatment represent the major challenge; hence substantial efforts are to be made to address such themes. In this regard, the Global Fund to fight against AIDS, Tuberculosis and Malaria (hereafter the Global Fund) is the major international source of funding for TB eradication[1], and it is devoted to remove human rights barriers to health, making health care accessible, affordable and effective. The timely elaboration of a National Strategic Plans (NSP) to fight TB, compliant with the WHO global strategy and specific country needs, is the key component for countries to get access to such international funds. The current WHO global strategy has radically shifted the focus from a clinical perspective to a socio-economic approach which encompasses the inclusion of partnering processes and people-centred approach to enhance TB prevention and care at community level. Through means of textual analysis applied to interviews, this paper examines to what extent this relevant policy change is actually perceived by country experts working on the definition of NSPs, and provides informative insight on the elaboration of a public health policy.

2 Social determinants of TB

Following a growing evidence that national TB incidence rates largely derive from socio-economic drivers, such as poverty, poor housing and limited access to safe water (Jackson et al., 2006; Dye et al., 2009; Lönnroth et al., 2009), the international community is increasingly shifting its attention towards social and economic determinants of health (Raviglione and Pio, 2002; Bhutta et al., 2014), by pushing interventions on material living conditions, as well as on behavioural and biological risk factors, as firmly suggested by the WHO Commission on Social Determinants of Health (on Social Determinants of Health et al., 2008). Accordingly, the current WHO End TB Strategy calls for the adoption of a broader approach in order to overcome a narrow clinical vision of TB[2]. This policy change takes root in the progressive recognition of close relations between health, human rights and poverty reduction strategies (Hargreaves et al., 2011). Socio-economic drivers - ranging from house overcrowding and malnutrition, to social marginalization - produce direct impacts on TB diffusion, by increasing the exposure to infection and facilitating contagion. They negatively impact also on the possibility of timely accessing to health facilities, and therefore to early diagnosis, and on adherence to treatment (Lohiniva et al., 2016). Sustaining the cost of travels, out-of-work periods and the arrangement of alternative child care might translate in insuperable barriers to health access for TB-affected people in low and middle income countries. Furthermore, social stigma may exacerbate such difficulties by increasing marginalization, reducing social support especially for women (Somma et al., 2008), and making

[1] The Global Fund invested more than 4.8USD billion in TB programs in more than 100 countries between 2002 and 2015. See www.theglobalfund.org

[2] The WHO End TB Strategy 2015-2030 was approved on May 24, 2014, calls for a 90% reduction in TB deaths and an 80% reduction in the TB incidence rate by 2030, compared with 2015.

the disease hiding a safer choice, rather than publicly admitting the infection, and possible contamination. It is straight to stress how this poor health-seeker behaviour can dangerously impact on local diffusion of TB. By formally recognizing the social determinants of TB, the WHO is now firmly focussed on promoting coalitions with civil society and local communities, to foster their engagement in TB care and control, given their potential in facilitating access to health services and reducing marginalization by strengthening relational supports. Whereas a clinic-based treatment faces social and economic constraints to be effective, a community-based approach is called to be a possible solution given its efficacy, convenience and cost-effectiveness (Maher et al., 2003; Escott and Walley, 2005; Zvavamwe and Ehlers, 2009; CDI et al., 2010; Marseille et al., 2009). A recent systematic review (Arshad et al., 2014) shows that community-based interventions are associated to a significant increase in TB detection rates, an overall improvement in treatment success rate, and in the access and service utilization at local level, beyond strengthening institutional capacities and reporting systems[3]. It should be mentioned that the national StopTB Partnership initiative, a former WHO program, already encouraged a partnering approach built on the competences of all stakeholders, including communities, in order to increase efficiency of public health service provision and centrality of TB-patient needs[4]. In general terms, a people-centred approach refers to the right and duty of people to participate individually and collectively in all aspects of their lives, including health care. It largely derives from the outcomes of a human rights approach; notwithstanding, its clear inclusion in (global) health policies is a recent achievement and its implementation it is still limited. This narrow application of a human rights approach in TB global advocacy is translated into a lack of TB-specific legislations and of funding devoted to rights-based programming (Brian Citro et al., 2016; WorldHealthOrganization, 2016). Health systems indeed still marginally embody structures which consider the social and cultural context, psycho-social factors, and the relational aspect of the clinical experience. Contrary, the promotion of a people-centred approach in health care implies efforts towards the *i)* empowerment of people, by making them able to engage with health systems and guarantying access to clear, concise and intelligible health information; *ii)* enhancement of participation and involvement in health decision-making processes; *iii)* recognition of the central role of families and communities to provide support and assistance (WorldHealthOrganization, 2016).

3 Research design

The current WHO End TB Strategy is intensely oriented towards the adoption of a people-centred and community-based approach in the design of national health policies. However, to what extent this relevant strategic change is reflected into perceptions of country specialists, actually working on the definition of national policies, is uncertain. By means of quantitative textual analysis, this work aims at casting light on this issue and therefore it is meant to assess to what extent countries accessing to the Global Fund facilities are oriented towards a partnering approach to encompass community-

[3]The systematic review has been carried out over a sample of 41 studies focused on community-based programs for TB prevention and care.

[4]More information about this initiative can be found at http://www.stoptb.org/

based TB issues; and focused on people-centred policies in the elaboration of national plans for prevention, control and treatment of TB. As a multi-stakeholder process, the elaboration of a NSP includes a variety of actors, namely national TB Program Managers, officials of the Ministry of Health, local Partners, and, where existing, the local StopTB Partnership executive secretary[5].These actors - working in the 37 countries actually accessing the Global Fund - have been contacted and invited to take part to a survey based on the administration of a questionnaire composed of three open questions regarding the *i)* description of the process of elaboration of the NSP, including the request for positive and negative examples of events occurred during such process; *ii)* evaluation about the key determinants of TB infection in the own country; *iii)* examination of the main obstacles existing in the country to achieved tangible results in the fight against TB. The questionnaire has been administrated between December 2015 and January 2016, requiring a written answer within a defined time span. The risk of unintended expressions, considering that English is a vehicular language for many respondents, has been reduced by giving sufficient time to freely develop and review answers. Despite the challenging agenda of respondents and the occurrence of some local emergencies, almost 40 per cent of questionnaires were filled, resulting in 25 complete interviews from 18 countries (see Table A1). The resulting textual body (*corpus*) was analysed by quantitative textual analysis techniques, increasingly adopted in different social sciences, including in health issues (Tuzzi, 2003; Smith and Wakefield, 2005; Warrer et al., 2012; Spasić et al., 2014) in order to identify thematic traits and characterizing elements of community-based and people-centred strategies for TB control. The basic assumption is that people with different policy positions or perspectives will use wording that reflects such beliefs. By comparing texts in terms of frequency, presence and absence of words, it is possible to catch distinguishing traits which might orient policy advice. Thus, the final aim of these techniques is making explicit the meanings embedded in the written text and the production of valid and trustworthy inferences. In this paper, I mainly adopt a "bag-of-word" approach (Harris, 1954) which considers words in a text as units of meaning, disregarding grammar and context of use; the frequency of a word determines its weight in the analysis.

4 The textual material

Although dimensionally small, the *corpus* holds specific characteristics which make it suitable for quantitative statistical analysis. Minor manipulations (such as aggregation of plural and singular forms of the same word) helped enhancing the homogeneity and consistency of the text, while only marginally affecting the linguistic richness of the original material. After manipulation, the *corpus* is composed by 11,956 occurrences (word token) and 2,092 different words (word types), with a Type/Token Ratio (a measure of linguistic richness) of 17.49%, compliant with the maximum threshold of 20% suggested by literature (Lebart and Salem, 1988; Bolasco, 2005). The percentage of *hapax legomena* (words occurring only one time within the *corpus*) is quite high and corresponds to 50.6% of word types. Each interview constitutes a fragment of

[5]Since the StopTB Partnership initiative has involved only a limited number of countries, not all countries host reference office.

the *corpus*. Some specific factors may influence respondents' perceptions, such as working in a country involved in the StopTB Partnership initiative, their professional role, or living in a "High Burden Country" (HBC)[6]. The first factor might facilitate the understanding and appropriability of the partnering process required by the new global strategy since it closely recalls it. Secondly, the NSP elaboration process has involved different stakeholders and their professional role may orientate perspectives. Finally, the status of HBC might direct a stronger adherence to global strategies given the common need for international support [7]. Table 1 summarizes the descriptive statistics of the *corpus* as re-organized in different *subcorpora* based on the three factors listed above, specifying the number of fragments and their average length.

Table 1: Descriptive statistics, by *subcorpora*

	Subcorpora	**name**	**fragments**	**length (avg)**
1	Stop TB Partnership	**with**	14	598.5
		without	11	308
2	Respondent Role	**MoH**	1	982
		Partner	7	717.1
		Program Manager	14	340.7
		Stop TB Partn.	3	394.6
3	TB high burden	**HBC**	16	581.1
		No HBC	9	306.2
		total number of fragments	*25*	*478.2*

Looking at fragments' extension, local Partners and respondents working in countries with the StopTB Partnership experience or in HBC describe the NSP process with a significant larger narrative than others[8]. A first identification of distinguishing characteristics between groups of respondents is carried out by looking at which words are exclusively[9] or over-used by one of them. Table 2 provides a list of the most significant exclusive words and words presenting a positive specificity (over-used with respect to the average expected value for each fragment, given the observed value in the whole *corpus*). The frequency gap is evaluated in probabilistic terms. The model is based on the hypergeometric law, asymptotically approximated to a Gaussian distribution [10]

[6]This is a familiar concept in the context of TB, aimed at targeting financial aid with the rationale that progress in the 22 HBCs would be translated into larger global impact in the fight against TB. Despite a recent update, I refer to HBC codification valid till 2015, given the temporal administration of the questionnaire.

[7]In the sample, all HBCs have experienced the StopTB Partnership initiative, with the exception of Ethiopia and Zimbabwe.

[8]Given the limited number of interviews and unbalanced total extension of *subcorpora* for MoH and StopTB secretary respondents, only Partners and Program Managers interviews will be compared later on.

[9]Words not expressed by the other group with at least a frequency of 2.

[10]Statistical significance is tested at p-value<0.025. Given the division in two groups in each *subcorpus*, the analysis of negative specificities (or under-used words respect to average expected value) results scarcely informative since they basically mirror the positive specificities of the other group. This is true also in *subcorpus* 2, organized around the professional role, since Program Manager and Partner questionnaires account for the 82% of the whole *corpus*.

Table 2: Exclusive words and positive specificities, by *subcorpus*

subcorpora	**Exclusive words**	**Positive specificity**	p-value
with StopTb Partn	education	patient	0.013
	information	information	0.014
without StopTb Partn	design	partner	0.000
	locally	care	0.022
	ethnic minority	urban	0.002
Program Manager	data	program	0.000
	management	draft	0.001
	committee	district	0.001
	performance	partner	0.000
Partner	drug	patient	0.000
	spread	women	0.000
	practice	treatment	0.001
	reason	information	0.002
HBC	education	engagement	0.000
	information	private	0.001
	engagement		
	stigma and discrimination		
no HBC	labor migration	partner	0.000
	low salary	urban	0.004
	ethnic minority	rate	0.001
		prevalence	0.003

Most meaningful results include the following. Respondents in countries with StopTB Partnership experience exclusively use the terms *education* and *information*, whose access at community level is intended as a powerful mean for TB prevention and control. This perspective is also confirmed by the over-use of *patient* and *information*, underlining the attention devoted to TB-affected people as active subjects in prevention and care service provision. Respondents in countries with no StopTB Partnership experience report the forms *partner* and *care* as positive specificities. A qualitative insight suggests that the over-use of *partner* discloses awareness about their strategic activity on the ground to reach local communities, and thus to implement more effectively a public health policy. Additionally, *care* is used only by these respondents in association with the word *prevention*, and given that one third of the world's population is estimated to have latent TB infection and preventive care represents a priority target (WorldHealthOrganization, 2016), this focus suggests a substantial assimilation of (or compliance to) international guidelines for the design of national TB policy. Partners' attention to the diffusion mechanisms at local level is expected, given the nature of their commitment; however, the emphasis on *treatment* – that implies making public of having been affected by TB – and awareness about the disease *(information)* deserves to be noted. Finally, terms as *patient* and *women* deserve mentioning, since they witness a people-centred attitude, and attention to beneficiaries' characteristics for health care. As expected, Program Managers appear particularly concerned about the functioning process of NSPs, as revealed by the use of *management*, *committee* and *performance*. This concern is strongly confirmed by over-used words which relate to their coordination

role. More interestingly, results suggest a clear understanding about the relevance of an effective inclusion of partners in public health policy, in order to territorially extend outreach of TB prevention and care services. The word *partner*, indeed, is over-used by Program Managers. This result is particularly worthy, once we consider that among the 14 Program Managers, only 3 of them work in countries with the previous StopTB Partnership experience. Respondents working in a HBC show a very different linguistic register respect to respondents in No-HBC. Whereas the exclusive use of *information* and *education* might be fairly explained by the substantial presence of StopTB Partnership experiences among HBCs, the term *engagement* highlights the actors to be involved, including *private* care providers, in line with the recent WHO strategy. Another dimension underlines specific characteristics of TB-vulnerable people who suffer from *stigma and discrimination*. Social stigma works as relevant barrier to access to services, and TB is often associated with factors that can themselves create stigma: HIV, poverty, drug and alcohol misuse, homelessness, a history of prison and refugee status. Fear of discrimination can lead people with TB symptoms to delay seeking help, worsening their conditions and spreading contagion.

5 Empirical analysis

Following Reinert approach (Reinert, 1986) of "lexical worlds" (classes of units or text segments that have similar lexical content), the analysis is firstly oriented to the identification of the conceptual clusters expressed, and the respondents' tendency to elicit specific arguments. To assess similarity between text segments, this approach uses a descending hierarchical classification method to produce classes of similar units[11]. Represented in a bi-dimensional space, each colour refers to a different class and proximity reflects major similarity between lexical content of words. The clustering process is meant to maximize the similarity of words within a class and maximize difference between classes. Analysing the *corpus*, I found 5 main lexical worlds (Figure 1). Table A2 in the Appendix reports the 20 most frequent words of each cluster. The red cluster refers to TB diffusion and its determinants, suggesting a rising awareness about the need of integrated social, economic and public health policies for TB care. The gray cluster is based on the formal process of NSP elaboration, characterized by terms as *stakeholder*, *plan*, and *draft*. The higher distance is found between these classes, developing their "cloud of words" along two different axes in opposite directions.

The green cluster refers to institutional and social conditions for TB care, including physical and structural infrastructures of service provision (among others, *facility*, *laboratory*, *provider*, *scheme*) and social bodies, as *community*, working as link between people and care. The blue cluster mainly refers to accessing to care and private relational characteristics (*education*, *patient*, *family*, and *woman*). Finally, the violet cluster refers to a future perspective by providing favourable actions for TB care, with particular attention devoted to practical implementation of treatment strategies (*DOTS*, *free of charge*, *control*, *prevention*) and enhancement of effectiveness *(political*

[11] Textual data are organized in a matrix that crosses "Elementary Context Units" (which are natural sentences or natural fragments of sentences delimited by punctuation so as to have similar length) and lexemes, where the cells sign the presence or absence of that lexeme in the ECU.

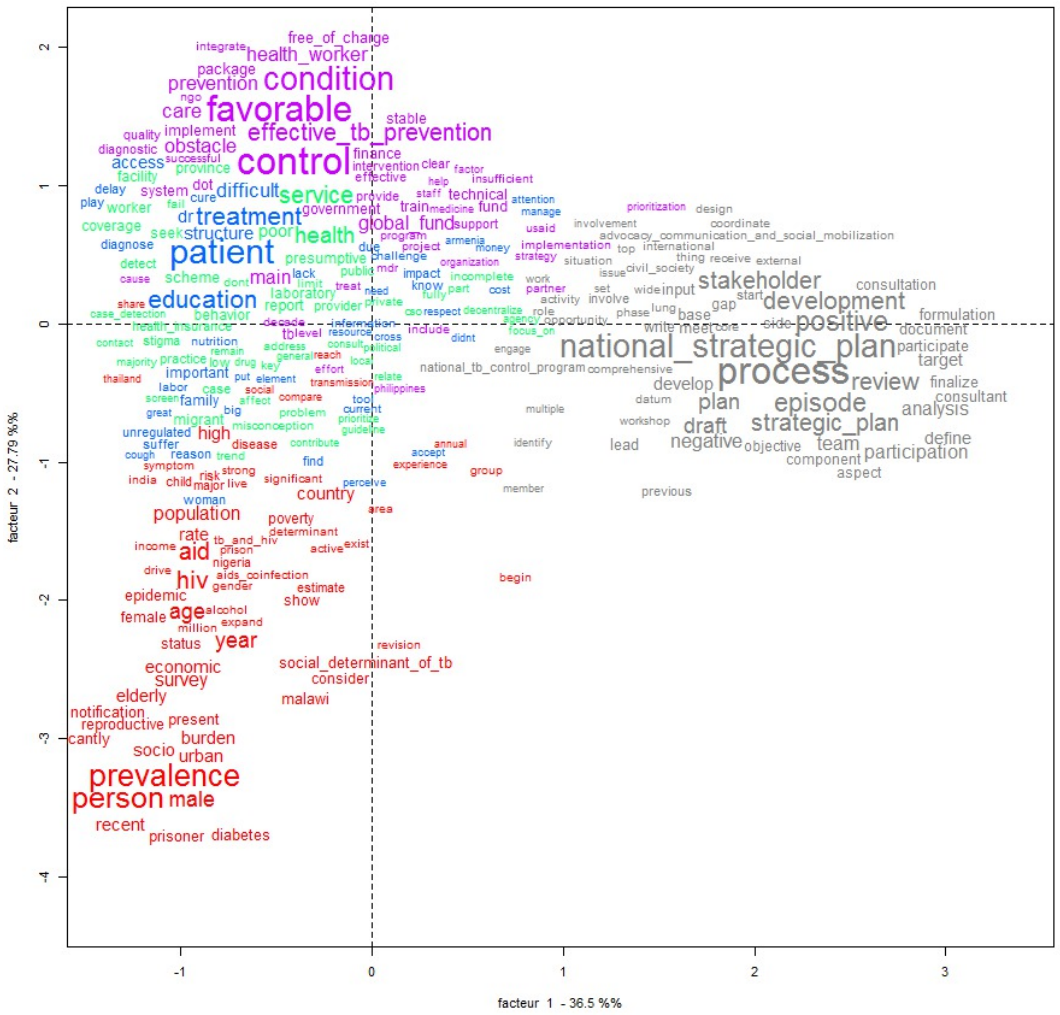

Figure 1: Graphical representation of main conceptual clusters of the text

commitment, *finance)*. Almost 60% of the text belongs to these three central clusters and shows similar contents with a high grade of overlapping on the space of representation. The lexical clusters catch tendencies on how respondents describe their understanding of the NSP elaboration, and therefore they are informative to sustain the subsequent stages of analysis, focused on the characterization of groups of respondents. In order to do that, within the relevant language of the *corpus*, I identified some keywords with high distinguishing power in relation to the whole textual material, and at the same being coherent with the lexical clusters found and the research questions. The distinguishing power of words is measured through the calculation of the TFIDF index (Salton, 1989; Bolasco and Pavone, 2008), which results from each Type Frequency (the number of occurrences of a specific term) times the logarithm of the ratio of the number of fragments constituting a *corpus* and the number of fragments that contains this specific term (Inverse Document Frequency). Words distinguish a fragment respect to the entire *corpus* when they are very frequent in it, while only appearing in a limited subset of fragments. After ranking full words through the TFIDF value, I

selected 25 keywords organized into 5 dimensions (Table 3), whose frequency has been normalized by the total number of token in each *subcorpus*, in order to account for different textual extensions, to obtain an incidence measure comparable across groups (Figure 2). The keywords distribution is meant at characterizing how respondents – grouped in different *subcorpora* – focus on different dimensions of TB policy design through: *i) Mapping the problem* by considering local conditions of affected people; *ii)* promoting participatory and partnering approach into *Policy Design* elaboration; *iii)* referring to organizations and socially structured pattern of behaviour, as (local) *Social Actors and Norms*; *iv)* focussing on patients profile by supporting a *People-centred Approach*; and *v)* sustaining inclusive processes of care, aimed at *Improving effectiveness* of TB national policies.

Table 3: List of selected keywords

n	Keyword	Dimension
1	Group	Mapping the problem
2	Population	
3	Epidemic	
4	Urban	
5	Poverty	
1	Consultation	Policy Design
2	Participation	
3	Civil society	
4	Process	
5	Involvement	
1	Community	Social Actors and Norms
2	Local	
3	Public	
4	Private	
5	Stigma	
1	Patient	People-centred Approach
2	Access	
3	Information	
4	Family	
5	Woman	
1	Include	Improving effectiveness
2	Prevention	
3	Implementation	
4	Care	
5	Political commitment	

Respondents working in countries with no StopTB Partnership experience, as well as working in No-HBC, are more focused on mapping TB diffusion through its social determinants. Interestingly, the individual keyword *poverty* follows an opposite trajectory being more present in the narrative of the other groups. Partners show a higher incidence of keywords belonging to this first dimension, mainly due to a larger use of *population* and *urban* terms, which confirms the attention to local characteristics. The *Policy Design* dimension allows detecting whether an inclusive process of elaboration characterizes the action, since a community-based partnering approach constitutes a turning point for a holistic approach to TB. Results suggest that the StopTB Partnership

experience or working in a HBC does not imply major differences between respondents, whereas large variations are reported in the narrative provided by Partner and Program Manager respondents. In particular, Program Managers are definitely more concerned on this dimension than others. This attention can be partially explained by their tasks; nevertheless such a specific emphasis on partnering approach elements should not be taken for granted, contrary it deserves to be highlighted.

Respondents working in countries with the StopTB Partnership experience or in HBCs show a major emphasis on the existence of *Social Actors and Norms* - including socially structured pattern of behaviour - which influence TB care, and a significant higher attention on *People-centred Approach* respect to others, revealing a major commitment on these elements, in particular on the centrality of patients. It should be mentioned that the keyword *access* follows a different path being more used by respondents working in countries without the StopTB Partnership experience, No-HBC and especially by Program Managers. Finally, the *Improving Effectiveness* dimension measures a forward perspective on TB planning. Somehow the results are unexpected: the respondents more concerned on this dimension are those who have not experienced the StopTB Partnership initiative and work in a No-HBC. However, it should be noted that the corresponding alternative groups are characterized by a higher average value of keywords occurrence per fragment (meaning a significant presence of the issue in their narrative[12]). This finding is particularly driven by the frequency of the keyword *care*.

[12]Not shown in Figure 2. Data are available upon request.

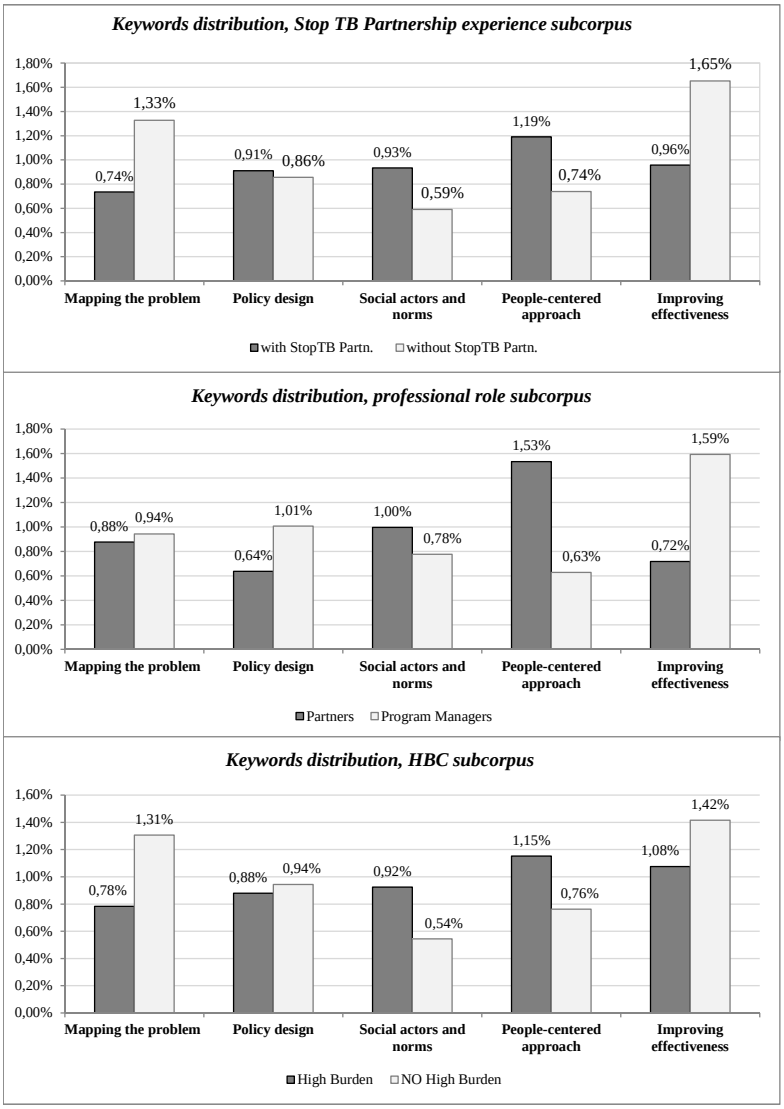

Figure 2: Keywords incidence rate, by *subcorpora*

Table 4: T-test for keywords distribution, by groups

keywords category	**Groups**		
	StopTB Partn.	*Respondent Role*	*High Burden*
Mapping the problem	-	-	-
Policy design	***	-	*
Social actors and norms	***	**	**
People-centered approach	*	**	*
Improving effectiveness	-	-	-
Observations	25	21	25

*Significance levels:*p<0.1, **p<0.05, ***p<0.01.*
Notes: Respondent Role=1 if the respondent is a Program Manager, 0 otherwise.
Wilcoxon rank sum test for non-normal distributions

Once statistically compared, the frequency distribution of keywords belonging to the first and last dimension appears not significantly different between selected groups. This result is consistent regardless the grouping criterion adopted. Contrary, the dimensions *Social Actors and Norms* and *People-Centred approach* move along the opposite path: in any comparison, the keywords distribution is statistically different in each selected group, on average. In other words, not only respondents working in countries with the StopTB Partnership experience tend to refer more to a people-centred approach, this tendency significantly distinguishes their answers from the ones of respondents working in countries without the same experience. As far as regards the *Policy Design* dimension, the frequency distribution appears statistically different only when comparing groups on the basis of having had the StopTB Partnership experience and the level of burden in the country.

5.1 Discussion of the main results

A significant overlapping between countries with the StopTB Partnership experience and classified as HBC make these two groups very close in their attitude towards NSP elaboration. Respondents working in such countries show a strong commitment towards social determinants referring to *education* and *information*, whose reinforcement is recognized essential. They are also more focused on *Social Actors and Norms* and *People-centred Approach* dimensions in the design of a public health policy, regardless the respondent role. They put forward a vision for improving TB strategies by strengthening health system functions with renewed efforts to find people-centred solutions. Based on respondent roles, Partners appear particularly concerned about local mechanisms of diffusion, whose prevention represents their major commitment, and to socio-cultural barriers to health access, including stigma and discrimination. As service providers, they are focused on specific patients' needs, including a gender perspective. They show a higher commitment towards a people-centred approach respect to Program Managers, with an emphasized use of the keyword *community*. On the other hand, Program Managers are particularly concerned on policy design and management. It reasonably derives from their professional responsibility; however the emphasis used reveals the perception of being facing a challenge. They recognize a high value to inclusive processes of elaboration of community-based care and support

services, highlighting a specific attention to *accessing* issues. Their wording regularly makes reference to partners' roles and inclusion, suggesting a clear perception of the strategic utility of a partnering approach.

6 Conclusions

The WHO End TB Strategy for the first time recognizes the role of social determinants in TB diffusion, encouraging the adoption of people-centred approach, and engaging communities in TB service provision. By analysing through content textual techniques 25 interviews carried out to protagonists involved in the elaboration of NSPs, I found that, overall, the recognition of non-material dimensions of human relations and the attention to a people-centred approach is supported by a significant number of respondents, especially if Partners, or working in HBC or having experienced the StopTB Partnership initiative. Furthermore, respondents working in countries where partnership experiences devoted to TB care and control are not established strongly emphasise the role that local partners might play, regardless their professional role. The findings have important implication towards a rights-enhancing policy in service provision: strengthening the partnering efforts at country level represents an effective strategy to promote the inclusion of a people-centred approach in the design of TB policies. In this regards, the previous experience of national StopTB Partnerships appears as meaningful flywheel for this process.

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Appendix

Table A1: List of respondents, by professional role and country

n.	ID	Respondent Role	Country	StopTB Partnership	HBC
1	ARM01	Programme Manager	Armenia		
2	BTW01	Programme Manager	Botswana		
3	ETH01	Programme Manager	Ethiopia		Yes
4	FIJ01	Programme Manager	Fiji		
5	GEO01	Programme Manager	Georgia		
6	GH01	Local Partner	Ghana	Yes	Yes
7	GH02	Programme Manager	Ghana	Yes	Yes
8	IN01	Local Partner	India	Yes	Yes
9	IND01	Local Partner	Indonesia	Yes	Yes
10	KEN01	StopTB Partn. secretary	Kenya	Yes	Yes
11	LAO01	Programme Manager	Laos		
12	MAL01	Local Partner	Malawi		
13	MAL02	Programme Manager	Malawi		
14	NIG01	Local Partner	Nigeria	Yes	Yes
15	NIG02	Programme Manager	Nigeria	Yes	Yes
16	NIG03	StopTB Partn	Nigeria	Yes	Yes
17	PHIL01	Local Partner	Philippine	Yes	Yes
18	PHIL02	Local Partner	Philippine	Yes	Yes
19	PHIL03	Programme Manager	Philippine	Yes	Yes
20	PHIL04	StopTB Partn. secretary	Philippine	Yes	Yes
21	SRL02	Programme Manager	Sri Lanka		
22	TAJ01	Programme Manager	Tajikistan		
23	THAI01	MoH official	Thailand	Yes	Yes
24	UG01	Programme Manager	Uganda	Yes	Yes
25	ZIM01	Programme Manager	Zimbabwe		Yes

Table A2: Most frequent words, by lexical cluster

Cluster	Label	Graphical forms	*Corpus* coverage
1 (red)	Tb diffusion and determinants	prevalence, person, hiv/aids, aid, age, year, male, population, survey, country, high, urban, socioeconomic, recent, burden, elderly, reproductive, rate, social determinants, epidemic	16.5%
2 (gray)	NSP elaboration process	process, positive, national strategic plan, episode, development, stakeholder, review, plan, draft, negative, analysis, team, participation, develop, target, technical assistance, define, input, meet	23.8%
3 (green)	Institutional and social conditions for TB care	service, health, poor, scheme, report, migrant, facility, seek, laboratory, province, presumptive, worker, coverage, behavior, awareness, community, public, low, provider, health insurance	21.8%
4 (blue)	Accessing care and relational dimension	patient, education, treatment, difficult, structure, transnational strategy, access, important, family, due, find, diagnose, delay, language, cure, woman, lack, follow, unregulated, play	14.9%
5 (violet)	Favorable actions for TB care	control, favorable, condition, effective TB prevention, obstacle, health worker, care, political commitment, mean, global fund, package, free of charge, implement, finance, system, fund, DOTS, government, stable	23%