BUKTI KORESPONDENSI ARTIKEL PADA JURNAL INTERNASIONAL BEREPUTASI

PENGUSUL: dr. Arulita Ika Fibriana, M.Kes

JUDUL ARTIKEL:

Predictors of smear non-conversion among new-treatment pulmonarytuberculosis: a single center case-control study in Indonesia

Publikasi

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Penulis	:	Arulita Ika Fibriana, Muhamad Zakki Saefurrohim, Akhriyah AtsnaSetiana, Mahalul Azam, Avissena Dutha Pratama

Kepada Yth.
Tim Penilai Usulan PAK

Bersama ini kami sertakan bukti korespondensi dan proses review artikel kami berjudul "Predictors of smear non-conversion among new-treatment pulmonary tuberculosis: a single center case-control study in Indonesia" dipublikasikan di Medical Journal of Indonesia Vol 29 No 4 tahun 2020 tanggal 30 Desember 2020.

Resume Kronologi

No	Tanggal	Aktivitas
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2	27 September 2019	Submission dikonfirmasi Editor jurnal dan initial check, serta permintaan revisi fase initial check.
3	05 Desember 2019	Permintaan revisi pertama (komentar dapat dilihat di lampiran)
4	30 Desember 2019	- Respon perbaikan atas review 1 - Respon selengkapnya terlampir dalam lampiran
5	07 Februari 2020	Review dan masukan untuk perbaikan kedua
6	29 Februari 2020	Respon dan submit ulang perbaikan tahap kedua
7	22 April 2020	Pertanyaan ke editor atas perbaikan dan hasil revisi.
8	27 April 2020	Permohonan dari jurnal untuk perbaikan selanjutnya (tahap 3)
9	02 Mei 2020	Submit ulang perbaikan
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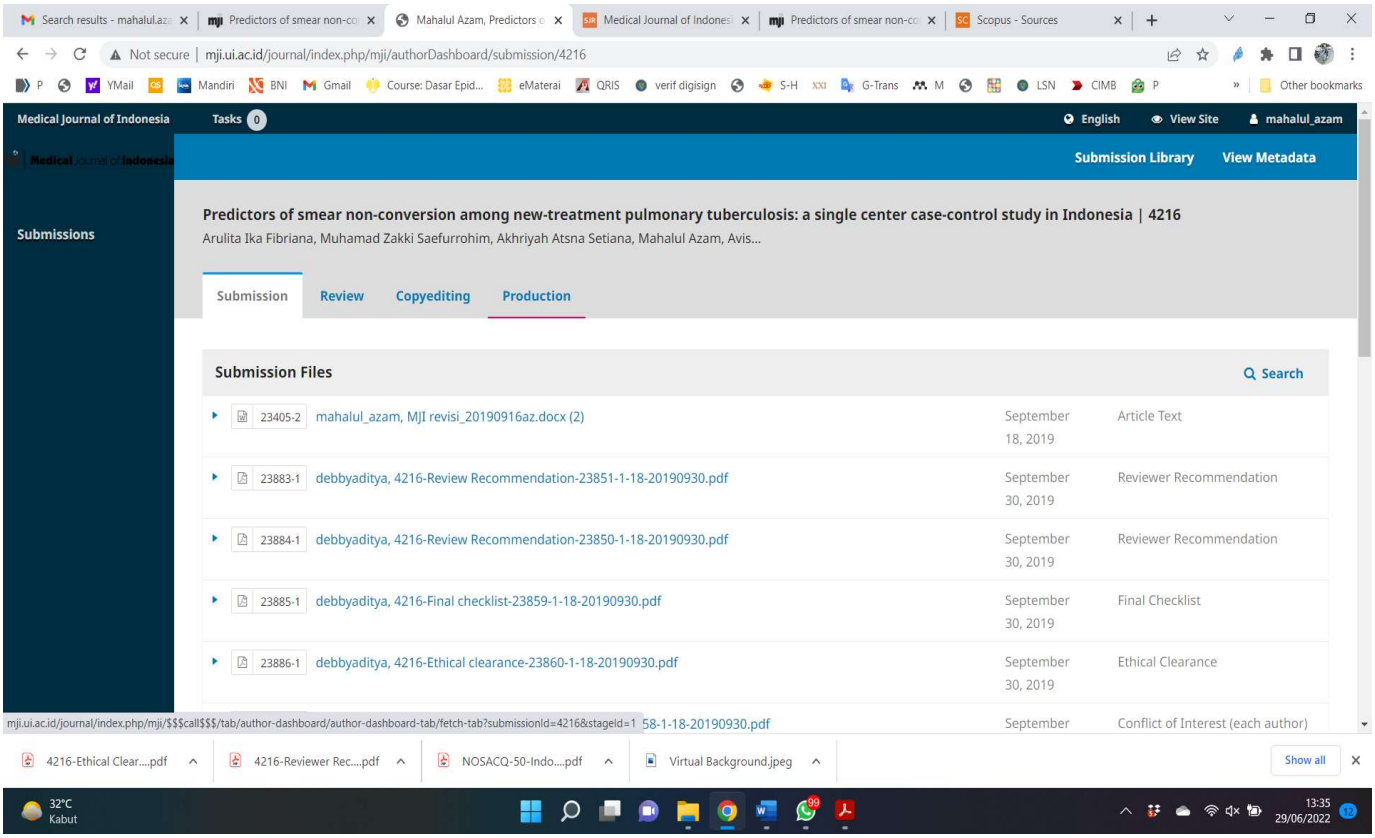
Demikian atas perhatian Bapak/Ibu, saya mengucapkan terima kasih

Semarang, 12 April 2023

dr. Arulita Ika Fibriana, M.Kes (Epid)

Lampiran Rinci Kronologi dan Dokumen Email Korespondensi dengan Editor Jurnal terlampir sebagai berikut:



[MJI] Revision Request (ID: 4216)

Participants

Novi Arie Anggraeni (noviarie)

Mahalul Azam (mahalul_azam)

Messages

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Regards,

Felix F. W

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2020-06-30
01:39 PM

Thank you very much for the continuing review to improve our manuscript.

We have revised our manuscript according to the review and enclosed is the revised version of the manuscript.

We are looking forward to furthering information from you regarding our manuscript.

Thank you very much for all the services given to us.

mahalul_azam
2020-07-07
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Yth. Dr. Mahalul Azam,

Penelitian Penulis dan tim yang berjudul “Smear grading predicts non-conversion pulmonary tuberculosis: study in Dr. Kariadi general hospital Semarang, Indonesia” sebenarnya sangat menarik, namun pembahasan dalam nasakh ini masih belum mendalam dan komprehensif. Berikut poin-poin yang perlu Penulis perbaiki:

1. Metode penelitian juga tidak jelas tergambarkan bahwa ini adalah studi kasus kontrol. Kriteria inklusi dan eksklusi juga tidak jelas dan bagaimana sampling method perlu dijelaskan baik pada kasus maupun kontrol.
2. Waktu pengambilan sputum masih belum dijelaskan.
3. Tuliskan juga dengan rumus apa Penulis menentukan sample size.
4. Mengapa hanya satu perbandingan case dan control 1:1 melihat banyaknya subjek pada kontrol yang mungkin juga eligible? Disarankan untuk menambahkan pada kontrol menjadi 1:2 atau 1:3 supaya lebih sahih dalam mengambil simpulan.
5. Secara logika tentu saja semakin tinggi smear grading semakin banyak kuman maka semakin sulit pula konversi. Tetapi bagaimana menjelaskan hal ini perlu didiskusikan lebih lanjut.
6. Dalam naskah ini masih terlalu banyak faktor yang dibahas tetapi jumlah subjek sedikit sehingga menyebabkan power menjadi sangat rendah.
7. Fokus banyak pada menjelaskan RS Kariadi dan bukan fokus bahwa prediktor ini berguna untuk apa.
8. Apa yang menarik dari penelitian ini dan bagaimana hasilnya dibandingkan dengan penelitian lain juga belum banyak terbahas terutama dalam kaitannya sebagai prediktor.
9. Penelitian lain bagaimana apakah ada prediktor lain yang lebih baik. Limitasi dari penelitian ini apa? Sebagai contoh DM saja mungkin tidak dapat menjadi prediktor, mungkin uncontrolled DM yang bisa menjadi prediktor. Itu juga tidak ada dalam diskusi. Perdalam diskusi agar lebih menarik.

Kami berharap Penulis bersedia memperbaiki artikel ini sesuai saran reviewer, agar menjadi layak muat di Med J Indones, dan diterima untuk publikasi.

Bersama ini saya kirimkan artikel yang sudah diberi comment untuk mempermudah perbaikan. Perbaikan harap dilakukan pada file ini dengan balon tidak dibuang serta diberikan highlight kuning pada bagian yang diubah.

Terimakasih banyak atas kerjasamanya Penulis.

Editor,

dr. Felix F. Widjaja, Sp.PD

Smear grading predicts non-conversion pulmonary tuberculosis: a case control study in Indonesia

Arulita Ika Fibriana,[1] Muhamad Zakki Saefurrohim,[1] Akhriyah Atsna Setiana,[1]

Mahalul Azam,[1] Avissena Dutha Pratama[2]

[1]Public Health Department, Faculty of Sport Sciences, Universitas Negeri Semarang, Semarang, Indonesia

[2]Department of Pulmonology Medicine, Dr. Kariadi General Hospital, Semarang, Indonesia

Disclaimer (if any) : -

Conflict of interest : None

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Corresponding author

Name : Mahalul Azam

Full address : FIK UNNES Gd. F1 Lt.2 Sekaran, Gunungpati, Semarang

Phone/Fax numbers : +62-24-8508007/+62-24-8508007/

+628122853982 (Cell-phone)

E-mail address : mahalul.azam@mail.unnes.ac.id

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2. Dr. Kariadi General Hospital, Semarang

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Number of tables : 3

ABSTRACT

BACKGROUND Non-conversion is the most important indicator of pulmonary tuberculosis (TB) management. Non-conversion after 2 months of treatment of the intensive phase tends to be a failure after completing treatment. The previous study concluded predictors for smear non-conversion globally as well as in Indonesia. However, little is known in the population setting of the hospital in Indonesia. The current study explored the predictors for smear non-conversion PTB in Dr. Kariadi General Hospital.

METHODS A case-control study was conducted. Data were collected both either secondary and primarily accessed in medical records and subjects directly. Study observed the subject's characteristics as well as the predictors for smear non-conversion. Chi-square test and Binary logistic regression were conducted to conclude the association of predictors and the smear non-conversion.

RESULTS A number of 254 subjects were diagnosed as PTB with positive acid-fast bacilli (AFB), consisting of 209 subjects with conversion status after 2 months of intensive treatment (82.3%), while 45 subjects with non-conversion (17.7%). A number of 35 subjects determined both in the case and control status and involved in the final analysis. Chi-square test concludes that age, sex, AFB smear grading, smoking status, and diabetes mellitus (DB) were the predictors for smear non-conversion PTB status. Household income and AFB smear grading finally involved in the model of binary logistic regression and conclude that only AFB smear grading was the predictor for smear non-conversion.

CONCLUSION AFB smear grading was the predictor for smear non-conversion PTB subjects.

KEYWORDS: pulmonary tuberculosis, mycobacterium, microbiological techniques

Commented [N1]: Masih terlalu panjang, buat maksimal 3 kalimat

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Pulmonary tuberculosis (TB) is the most burden of morbidity and mortality, especially in developing countries.[1,2,3] The failure in management of PTB in developing countries related to the limited resources, low quality of health system, and the high of HIV infection rate. In 2016, 10.4 million new PTB cases over the world, which is 6.2 million cases occur in men, 3.2 million in women, and 1 million cases in children.[4] Indonesia ranks second place of the highest number of tuberculosis (TB) cases after India.[4,5]

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The important parameter for evaluating PTB management is cure rate and smear conversion rate.[6,7,8] TB cure rate in Indonesia on 2018 was 71.08% which is still low compare to the rate determined by WHO i.e. 85%.[4,5] Smear conversion rate was also decreased extremely from 80.6% in 2013 to 50.5% in 2014.[4] Smear non-conversion will make the treatment longer and increase the risk of drug resistance, relapse, and mortality as well as the TB transmission to others.[1,9,10] Previous study concluded that smear non-conversion PTB was associated with some factors i.e. patient's compliance,[11,6] smoking status,[6,7,8,12] diabetes mellitus (DM),[13,14] drugs side effects,[15] and smear acid-fast bacilli (AFB) grading.[7,11] AFB smear grading identified as important predictor of smear conversion status.[7,11]

Conversion rate in Dr. Kariadi General Hospital in 2017 was 77 % and increasing to be 88% in 2018, a high number although still below 90%.[16] Conversion rate in Persahabatan General Hospital, Jakarta was 90.8% in 2014,[16] and Sri Venkateswara Ramnarain Ruia General Hospital, Tirupati, India was 90,4%.[17] Previous studies were conducted and concluded the risk factors of smear non-conversion TB, however to the best of our knowledge little is known in the setting population of the hospital in Indonesia. Current study aimed to explore predictors for smear non-conversion PTB in Dr. Kariadi General Hospital. The

present study hypothesized that AFB smear grading, body mass index (BMI), drugs side effect, smoking, and household income were the predictors for smear non-conversion PTB.

METHODS

Present study conducted a case-control study, by secondary data usage captured from medical records as well as primary data collected from an interview and observation directly in subjects recorded in the PTB registry in Dr. Kariadi General Hospital during 2017–2019. The study protocol was approved by the Institutional Review Board Committee, Public Health Department, Universitas Negeri Semarang (No.052/KEPK/EC/2019).

Secondary data were collected to determine smear non-conversion status in the intensive phase of treatment, subjects' characteristics i.e. age, sex, BMI, level of education, and occupational status. Level of education categorized as high for subject who passed the high school and undergraduate degree. This study also observed determinant of non-conversion PTB i.e. patient's compliance, smoking status, alcohol consumption, the presence of drugs side effects, health care access, AFB smear grading, DM, the housing condition, house density, and household income. Access to the health services limited for subjects who limited in the distance and finance matter. AFB smear ratings were determined as high if the results were either 3+ or 2+ while low if they were either 1+ or scanty. Housing condition consists of wall condition, floor condition, and the lighting. Housing density determined as a calculation result of the building area divided by the number of family members living in the same house. A condition which met the criterion

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Introduksi belum menggambar the known, the unknown and the gap of the study. Belum jelas definisi non-conversion pulmonary TB. Belum jelas emngapa tiba2 penulis mau menilai predictor smear non-conversion. Faktor-faktor ini seharusnya di RS manapun mempunyai faktor yang sama. Apakah kuman MTB di Semarang virulensi lebih tinggi? Mengapa banyak sekali menceritakan RS Kariadi. Bila dirasa ingin menjelaskan ini untuk mewakili populasi tulis satu kalimat di method.

Commented [MJoI8]: Belum dijelaskan bagaimana pengambilan sputum dan kapan saja pembambilannya

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Tuliskan juga dengan rumus apa Anda menentukan sample size.

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of housing condition and house density as published elsewhere used to determine the status.[18]

Data were presented in frequency and the percentage based on case and control group. Chi-square analysis was performed to conclude the association of predictors and the smear non-conversion PTB status. P value <0.05 was considered as statistically significant. The predictors with the p value lower than 0.25 involved in the Binary logistic regression analysis. All statistical analysis was performed using SPSS 16.0 (IBM Corporation, NY, USA). (Figure 1)

RESULTS

Of 674 subjects which recorded in the Dr. Kariadi General Hospital TB registry during 2017–2019, 254 subjects diagnosed PTB with positive AFB and 209 subjects with conversion status (conversion rate=82.3%). The rest 45 subjects with non-conversion (non-conversion rate=17.7%). Of the 45 non-conversion subjects only 35 subjects completed primary and secondary data, 5 subjects rejected to be interviewed, 2 subjects died, and 3 subjects were lost to follow up. The same number of 35 subjects with conversion status were determined as control group and obtained sequentially from the last visit to the hospital until the number was obtained as determined. The detailed study subjects recruitment illustrated in Figure 1.

Subject's characteristics i.e. age, sex, level of education, and occupational status based on case and control group presented in Table 1. The frequency of subjects' age was significantly different between the group (p=0.03). Proportion of subject in the non-

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conversion group was higher in subject with age ≥ 55 years old (57.1%) than subject with 15–54 years old (42.9%) and contrary the proportion of subject in the conversion group was lower in subject with age ≥55 years old than 15–54 years old; 28.6% and 71.4% respectively. The frequency of sex was also significantly different between the group (p=0.031). Proportion of subjects in the non-conversion group was higher for male than female, 68.6% and 31.4%, respectively. In contrary, proportion of subjects in conversion group was lower in male (40%) compare to female (60%). The other characteristics i.e. level of education and occupational status were comparable between the group (p value >0.05).
(Table 1)

Table 2 showed the association between predictors and smear non-conversion status i.e. AFB smear grading, BMI, drugs side effects, smoking status, alcohol consumption, DM, patient's compliance, access to the health services, housing condition, housing density, and household income. Chi square test results showed that AFB smear grading, smoking status, and DM were the predictors for smear non-conversion PTB status. Proportion of non-conversion group was higher in AFB smear ≥2+ (82.9%) than in AFB smear <2+ (17.1%), contrary proportion of conversion group was lower in AFB smear ≥2+ (25.7%) than AFB smear <2+ (74.3%) with significance level p=0.0001.

Proportion of non-conversion group in the smoking group was higher than non-smoking group, 60% and 40%, respectively and as well as the proportion of conversion group was lower in the smoking group than non-smoking group, 31.4%, and 68.6%, respectively. Surprisingly, proportion of non-conversion group was lower in the DM group (48.6%)

compare to in non-DM group (51.4%), although the proportion of conversion group was also lower (8.6%) than in non-DM group (91.4%), with p value was 0.001.

There was no significant difference in BMI between groups (p value=0.805). The proportion of drug side effects was also comparable between groups (p value=0.801). Alcohol consumption proportion in non-conversion group higher (11.4 %) than in conversion group (5.7 %) but was also not different significantly (p value=0.669). Access to the health services between groups was also comparable (p value=0.784). Housing conditions, housing density, and household income were also comparable between groups, however, housing conditions and household income tend to have different proportions. The proportion of bad housing conditions higher in the non-conversion group (22.9 %) than the conversion group (5.7 %), although the statistical significance still not different (p value=0.088). Similarly, the low household income proportion in the non-conversion group was higher (74.3 %) than in the conversion group (51.4 %) but was also not statistically different (p value=0.083).

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(Table 2)

Table 3 and Figure 2 showed the results of binary logistic regression. The final model involved predictor household income and smear grading. The analysis concluded that only smear grading that significantly predicts smear non-conversion PTB status with adjusted odds ratio (OR) was 14.18 and 95% confident interval (CI) was 4.279–47.006 (p=0.0001).

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(Table 3)

(Figure 2)

DISCUSSION

Present study found that the conversion rate of PTB subjects in Dr. Kariadi General Hospital were 82.3%. This finding was in accordance with previous study globally or in Indonesia which ranged 74.7 to 90.8.[3,6,11,16] The current study also found that AFB smear grading was the single predictor for smear non-conversion PTB status in Dr. Kariadi General Hospital (OR=14.18; 95% CI=4.279–47.006). This finding contributed to add knowledge of predictor for non-conversion PTB status in Indonesia, which had a limited related study especially in the hospital setting, notably in Dr. Kariadi General Hospital. This finding strengthening previous study that concluded AFB smear grading as a predictor for smear non-conversion PTB status, however to the best of our knowledge, this finding was the first finding that conclude single major predictor i.e. AFB smear grading. Previous study also concluded AFB smear grading together with other factors are the risk factors for smear non-conversion PTB status. Study concluded AFB smear 3+ have a higher risk to get non-conversion after intensive phase of treatment.[10] Another study concluded PTB subjects with AFB 2+ and 3+ only 34 % with smear conversion after 2 months intensive phase of treatment.[19] AFB grading plays an important role in the management of PTB which is describing PTB severity and transmission ability[20] as well as indicating the late drugs resolution that related to the existence of lung cavity and the density of the mycobacterium.

The binary logistic regression analysis involved household income in the final model, although did not meet the significance level (p=0.096). The previous study in Ethiopia concluded that the lower-income have a risk of 2.83 times to be non-conversion compared to the higher income.[21] Another study reported that lower income is related to the poor treatment outcome.[22] Indeed, the level of income plays a pivotal role in the prevention and

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treatment of diseases moreover the disease with long-time treatment include PTB. A systematic review reported financial burden for TB patients that consist of direct medical cost, direct non-medical cost, and indirect cost. The mean total costs ranged from USD 55 to USD 8198, with an average of USD 847.[21]

Smoking status and DM was not involved in the final model of binary logistic regression, however, smoking status and DM were significantly related to the smear non-conversion PTB based on the Chi-square test. Previous study reported that smoking is related to the adherence to the anti-tuberculosis treatment.[23] Previous study also concluded that cigarette smoking in active PTB is related to delayed culture conversion. The frequency of delayed culture conversion after 2 months of treatment increasingly in sequentially in a group of ex-smokers, current non-smokers, never smokers, ever smokers, and current smokers.[24] Regarding DM status, previous study reported that DM was associated with failure to sputum smear convert at 2 months and failure.[13] Other study also reported that PTB cases with DM were common to be delayed sputum conversion and failure.[25] On the contrary, a study reported DM influenced the clinical presentation and response to the treatment, but there was no difference in the drug resistance and relapse rates.[25]

The current study conducted in the setting of hospital-based data in Dr. Kariadi General Hospital which is not represented the general population condition, moreover the status of the hospital is national referral imply the PTB cases tend to be complex referral cases. The current study was also using primary data, however, prior secondary data were used in medical records. The use of culture to diagnose and its conversion after 2 months of

treatment was not conducted in the present study. Further research is needed to understand well the related predictors for smear non-conversion PTB.

CONFLICTS OF INTEREST

The authors affirm no conflict of interest in this study.

FUNDING SOURCES

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We acknowledge the Lembaga Penelitian dan Pengabdian Masyarakat (LPPM) Universitas Negeri Semarang for the financial support and Dr. Kariadi General Hospital, Semarang, Indonesia for providing data and permission to meet subjects.

REFERENCES

1. Kayigamba FR, Bakker MI, Mugisha V, de Naeyer L, Gasana M, Cobelens F, et al. Adherence to Tuberculosis Treatment, Sputum Smear Conversion and Mortality: A Retrospective Cohort Study in 48 Rwandan Clinics. PLoS One. 2013;8(9):1–10.
2. Cheon SA, Cho HH, Kim J, Lee J, Kim HJ, Park TJ. Recent tuberculosis diagnosis toward the end TB strategy. J Microbiol Methods [Internet]. 2016;123(April):51–61. Available from: http://dx.doi.org/10.1016/j.mimet.2016.02.007
3. Saffari M, Jolandimi HA, Sehat M, Nejad NV, Hedayati M, Zamani M, et al. Smear grading and the Mantoux skin test can be used to predict sputum smear conversion in patients suffering from tuberculosis. GMS Hyg Infect Control. 2017;12:Doc12.
4. World Health Organization. (2017). Global Tuberculosis Report 2017, https://doi.org/WHO/HTM/TB/2017.23
5. Kementerian Kesehatan Republik Indonesia. Pedoman Nasional Pengendalian Tuberkulosis. Direktorat Jendral Pengendalian Penyakit Dan Penyehatan Lingkungan, Jakarta, Indonesia, ISBN (2014): 978-979;
6. Diktanas S, Vasiliauskiene E, Polubenko K, Danila E, Celedinaite I, Boreikaite E, et al. Factors associated with persistent sputum positivity at the end of the second month of tuberculosis treatment in Lithuania. Tuberc Respir Dis (Seoul). 2018;81(3):233–40.
7. Pefura-Yone EW, Kengne AP, Kuaban C. Non-conversion of sputum culture among patients with smear positive pulmonary tuberculosis in Cameroon: A prospective cohort study. BMC Infect Dis. 2014;14(1):2–7.
8. Maciel ELN, Brioschi AP, Peres RL, Guidoni LM, Ribeiro FK, Hadad DJ, et al. Smoking and 2-month culture conversion during anti-tuberculosis treatment. Int J Tuberc Lung Dis. 2013;17(2):225–8.
9. Nahid P, Jarlsberg LG, Rudoy I, Jong BC De, Unger A, Kawamura LM, et al. Factors associated with mortality in patients with drug-susceptible pulmonary tuberculosis. BMC Infec Dis. 2011;1–7.
10. Caetano Mota P, Carvalho A, Valente I, Braga R, Duarte R. Preditores de convers?o tardia dos exames micobacteriol?gicos direto e cultural de expetora??o numa popula??o portuguesa com tuberculose pulmonar (Predictors of delayed sputum smear and culture conversion among a Portuguese population with pulmonary

tuber. Rev Port Pneumol [Internet]. 2012;18(2):72–9. Available from: http://www.ncbi.nlm.nih.gov/pubmed/22277838%0Ahttp://linkinghub.elsevier.com/retrieve/pii/S0873215912000037

11. Mlotshwa M, Abraham N, Beery M, Williams S, Smit S, Uys M, et al. Risk factors for tuberculosis smear non-conversion in Eden district, Western Cape, South Africa, 2007-2013: A retrospective cohort study. BMC Infect Dis [Internet]. 2016;16(1):1–12. Available from: http://dx.doi.org/10.1186/s12879-016-1712-y
12. Masjedi MR, Hosseini M, Aryanpur M, Mortaz E, Tabarsi P, Soori H, et al. The effects of smoking on treatment outcome in patients newly diagnosed with pulmonary tuberculosis. Int J Tuberc Lung Dis. 2017;21(3):351–6.
13. Mi F, Tan S, Liang L, Harries AD, Hinderaker SG, Lin Y, et al. Diabetes mellitus and tuberculosis: Pattern of tuberculosis, two-month smear conversion and treatment outcomes in Guangzhou, China. Trop Med Int Heal. 2013;18(11):1379–85.
14. Leung CC, Yew WW, Mok TYW, Lau KS, Wong CF, Chau CH, et al. Effects of diabetes mellitus on the clinical presentation and treatment response in tuberculosis. Respirology. 2017;22(6):1225–32.
15. Marizan M, Mahendradhata Y, Wibowo TA. Faktor yang berhubungan dengan non-konversi BTA positif pada pengobatan tuberkulosis paru di kota Semarang. Ber Kedokt Masy. 2016;32(3):77–81.
16. Tama TD, Adisasmita AC, Burhan E. Indeks Massa Tubuh dan Waktu Terjadinya Konversi Sputum pada Pasien Tuberkulosis Paru BTA Positif di RSUP Persahabatan Tahun 2012. J Epidemiol Kesehat Indones. 2016;1(1):1–8.
17. Bineni C, Yarasani P, Ravi Prabhu G. A study on role of sputum conversion rate in management of tuberculosis in South Indian population. Int J Community Med Public Heal. 2018;5(4):1419.
18. Low CT, Lai PC, Tse WSC, Tsui CK, Lee H, Hui PK. Exploring tuberculosis by types of housing development. Soc Sci Med [Internet]. 2013;87:77–83. Available from: http://dx.doi.org/10.1016/j.socscimed.2013.03.024
19. Jayakody W, Harries AD, Malhotra S, de Alwis S, Samaraweera S, Pallewatta N. Characteristics and outcomes of tuberculosis patients who fail to smear convert at two months in Sri Lanka. Public Heal Action. 2013;3(1):26–30.
20. H. I. N. Association of sputum conversion and outcome with initial smear grading

among new smear positive Tuberculosis patients in a Tertiary Health Facility, South East Zone, Nigeria. IOSR J Dent Med Sci. 2013;4(6):21–5.

21. Tanimura T, Jaramillo E, Weil D, Raviglione M, Lönnroth K. Financial burden for tuberculosis patients in low- And middle-income countries: A systematic review. Eur Respir J. 2014;43(6):1763–75.
22. Djibuti M, Mirvelashvili E, Makharashvili N, Magee MJ. Household income and poor treatment outcome among patients with tuberculosis in Georgia: A cohort study. BMC Public Health. 2014;14(1):1–7.
23. Underner M, Perriot J, Peiffer G, Meurice JC, Dautzenberg B. Tabagisme et observance du traitement antituberculeux. Rev Mal Respir [Internet]. 2016;33(2):128–44. Available from: http://dx.doi.org/10.1016/j.rmr.2015.08.005
24. Nijenbandring De Boer R, Baptista De Oliveira E Souza Filho J, Cobelens F, De Paula Ramalho D, Campino Miranda PF, De Logo K, et al. Delayed culture conversion due to cigarette smoking in active pulmonary tuberculosis patients. Tuberculosis [Internet]. 2014;94(1):87–91. Available from: http://dx.doi.org/10.1016/j.tube.2013.10.005
25. Viswanathan V, Vigneswari A, Selvan K, Satyavani K, Rajeswari R, Kapur A. Effect of diabetes on treatment outcome of smear-positive pulmonary tuberculosis - A report from South India. J Diabetes Complications [Internet]. 2014;28(2):162–5. Available from: http://dx.doi.org/10.1016/j.jdiacomp.2013.12.003

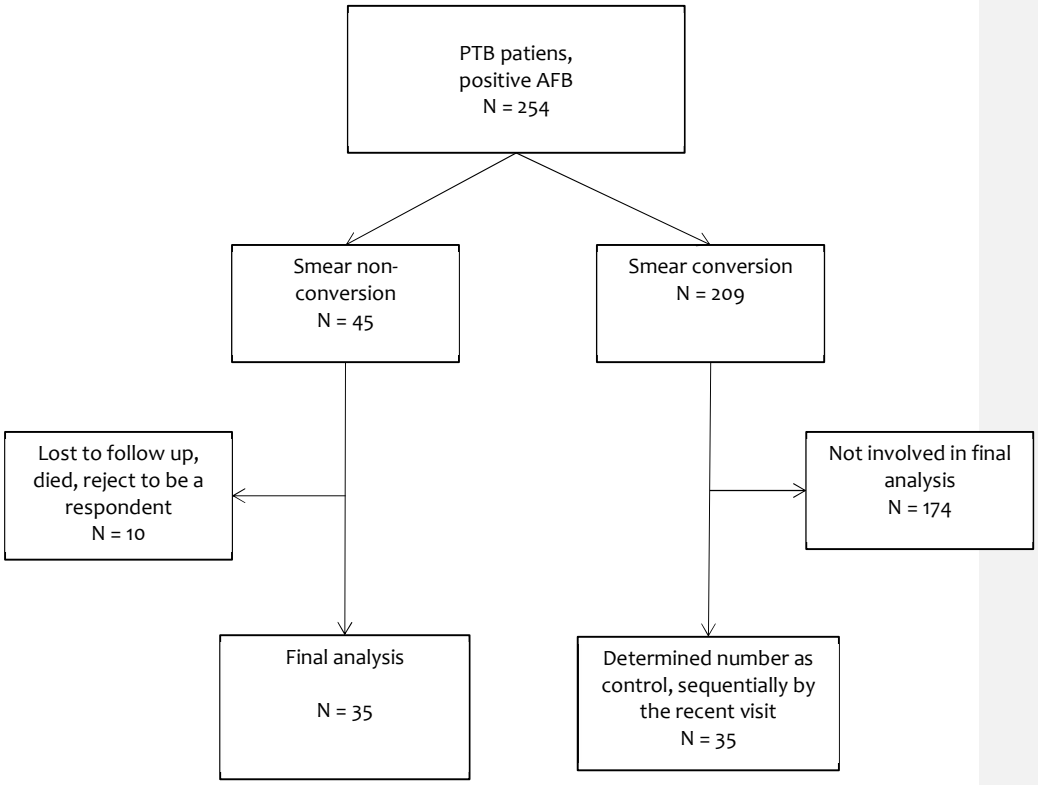

Figure 1. Subject recruitment

Table 1. Subject's characteristics

Characteristics	Non-conversion status		*p* value*
	Yes, n (%)	No, n (%)	
Age (yo)			0.030
≥ 55	20; 57.1	10; 28.6	
15–54	15; 42.9	25; 71.4	
Sex			0.031
Male	24; 68.6	14; 40.0	
Female	11; 31.4	21; 60.0	
Level of education			
Low	6; 17.1	4; 11.4	0.733
High	29; 82.9	31; 88.6	
Occupational status			
Un-employee	12; 34.3	11; 31.4	1.000
Employee	23; 65.7	24; 68.6	

Chi-square test
yo: years old

Commented [MJoI22]: Mohon diubah dalam bentuk n (%)
contoh
20 (57.1)
15 (42.9)
dst

Table 2. Predictors for smear non-conversion status PTB

Predictors	Non-conversion status		*p value**	OR (CI 95%)
	Yes	No		
AFB smear grading				
≥2+	29; 82.9	9; 25.7	0.000	13.963 (4.374–44.573)
<2+	6; 17.1	26; 74.3		
BMI				
Under (<18.5)	14; 40.0	12; 34.3	0.805	1.278 (0.483–3.377)
Normal (>18.5)	15; 42.9	18; 51.4		
Overweight (>23)	6;17.1	5;14.3		
Drugs side effects				
Yes	11; 31.4	13; 37.1	0.801	0.776 (0.288–2.087)
No	24; 66.6	22; 62.9		
Smoking status				
Yes	21; 60.0	11; 31.4	0.031	3.273 (1.224–8.748)
No	14; 40.0	24; 68.6		
Alcohol consumption				
Yes	4; 11.4	2; 5.7	0.669	2.129 (0.364–12.459)
No	31; 88.6	33; 94.3		
DM				
Yes	17; 48.6	3; 8.6	0.001	10.074 (2.595–39.111)
No	18; 51.4	32; 91.4		
Compliance				
No	2; 5.7	2; 5.7	1.000	1.000 (0.133–7.527)
Yes	33; 94.3	33;94.3		
Access to the health services				
Limited access	10; 28.6	8; 22.9	0.784	1.350 (0.460–3.964)
Fair	25;71.4	27; 77.1		
Housing condition				
Bad	8; 22.9	2; 5.7	0.088	4.889 (0.957–24.973)
Fair	27; 77.1	33; 94.3		
Housing density				
Very density	10; 28.6	5; 14.3	0.244	2.400 (0.725–7.949)
Fair	25; 71.4	30; 85.7		
Household income				
Low	28; 74.3	18; 51.4	0.083	2.728 (0.997–7.468)
Fair	9; 25.7	17; 48.6		

* *Chi-square* test
BMI: body mass index

Commented [N23]: Gabungkan table 2 dan table 3. Tuliskan juga yang dimasukkan dalam analisis multivariate walupun hasil tidak bermakna.

Commented [MJoI24]: Mohon cara penulisan disamakan dengan komentar sebelumnya n (%)

Table 3. Binary logistic regression.

Predictors	*β*	Adjusted OR (95% CI)	*p* value*
Household income	1.041	2.83 (0.831–9.657)	0.096
AFB smear grading	2.652	14.18 (4.279–47.006)	0.000
Constant	-2.134	0.118	0.001

*Binary logistic regression test

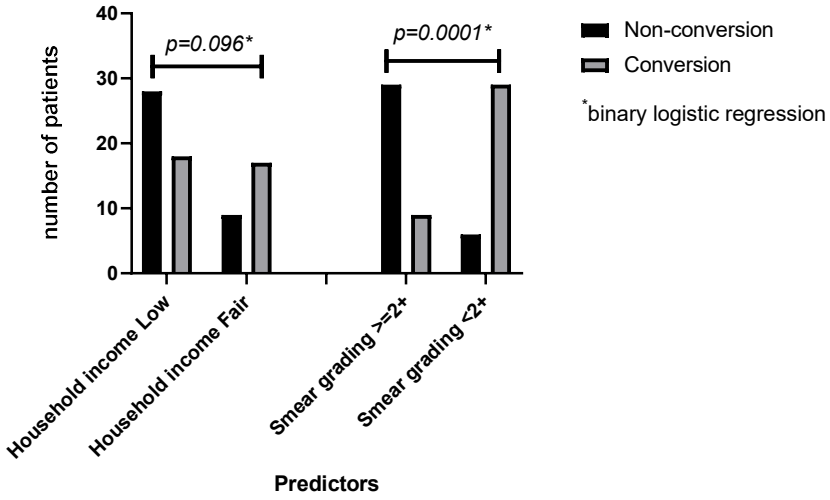

Figure 2. Predictors for smear non-conversion PTB.

Yth. Editor Medical Journal of Indonesia.

Bersama ini kami kirimkan kembali hasil revisi manuskrip kami dengan judul " **Diabetes mellitus and smear grading predict non-conversion among new-treatment pulmonary tuberculosis: a case-control study in Indonesia"** setelah mendapatkan masukan dari Reviewer.

Berikut ini daftar masukan dari Reviewer dan perbaikan dari kami

Penelitian Penulis dan tim yang berjudul "Smear grading predicts non-conversion pulmonary tuberculosis: study in Dr. Kariadi general hospital Semarang, Indonesia" sebenarnya sangat menarik, namun pembahasan dalam nasakh ini masih belum mendalam dan komprehensif. Berikut poin-poin yang perlu Penulis perbaiki:

1. Metode penelitian juga tidak jelas tergambarkan bahwa ini adalah studi kasus kontrol. Kriteria inklusi dan eksklusi juga tidak jelas dan bagaimana sampling method perlu dijelaskan baik pada kasus maupun kontrol.
   - → Metode penelitian menggunakan desain case-control study, dengan menetapkan kelompok kasus dan kontrol sebagaimana dijelaskan di bagian metode.
   - → Kriteria inklusi; adalah penderita pengobatan baru dengan BTA + dan mengekslusi: HIV/AIDS, TB ekstra paru, kasus kambuh (re-treatment)
   - → Telah ditambahkan di metode
2. Waktu pengambilan sputum masih belum dijelaskan.
   - ➔ Sudah dijelaskan di metode juga
   - ➔ Smear examinations were done for three sputum smear specimens, i.e., first spot, morning, and second spot sputum. Results determined as positive if at least one of the specimens is positive, while negative if all of them are negative
3. Tuliskan juga dengan rumus apa Penulis menentukan sample size.
   - ➔ Formula sampling merujuk Rumus Lemeshow (Adequacy of Sample Size in Health Studies) untuk desain kasus kontrol

4. Mengapa hanya satu perbandingan case dan control 1:1 melihat banyaknya subjek pada kontrol yang mungkin juga eligible? Disarankan untuk menambahkan pada kontrol menjadi 1:2 atau 1:3 supaya lebih sahih dalam mengambil simpulan.
   ➔ Kami menetapkan perbandingan kasus:kontrol = 1:2 dengan kembali turun ke lapangan untuk mengambil/menambah data kontrol
5. Secara logika tentu saja semakin tinggi smear grading semakin banyak kuman maka semakin sulit pula konversi. Tetapi bagaimana menjelaskan hal ini perlu didiskusikan lebih lanjut.
   ➔ Kami telah menambahkan penjelasan pada bagian pembahasan, dengan menambah rujukan dan menjelaskan kontribusi confounding utama yaitu HIV/AIDS dan status pengobatan baru (kasus baru) yang memang dalam penelitian kami, kami batasi
6. Dalam naskah ini masih terlalu banyak faktor yang dibahas tetapi jumlah subjek sedikit sehingga menyebabkan power menjadi sangat rendah.
   ➔ Sesuai saran yang diberikan kami menambahkan jumlah responden kontrol sehingga didapatkan sejumlah total 76 kontrol.
7. Fokus banyak pada menjelaskan RS Kariadi dan bukan fokus bahwa prediktor ini berguna untuk apa.
   ➔ Telah diperbaiki di pembahasan
8. Apa yang menarik dari penelitian ini dan bagaimana hasilnya dibandingkan dengan penelitian lain juga belum banyak terbahas terutama dalam kaitannya sebagai prediktor.
   ➔ Kami tambahkan keterangan di pembahasan
9. Penelitian lain bagaimana apakah ada prediktor lain yang lebih baik. Limitasi dari penelitian ini apa? Sebagai contoh DM saja mungkin tidak dapat menjadi prediktor, mungkin uncontrolled DM yang bisa menjadi prediktor. Itu juga tidak ada dalam diskusi. Perdalam diskusi agar lebih menarik.
   ➔ Kami tambahkan keterangan di pembahasan

Kami berharap Penulis bersedia memperbaiki artikel ini sesuai saran reviewer, agar menjadi layak muat di Med J Indones, dan diterima untuk publikasi.

Bersama ini saya kirimkan artikel yang sudah diberi comment untuk mempermudah perbaikan. Perbaikan harap dilakukan pada file ini dengan balon tidak dibuang serta diberikan highlight kuning pada bagian yang diubah.

Terimakasih banyak atas kerjasamanya Penulis.

Demikian, kiranya perbaikan ini dapat menjadikan pertimbangan Editor agar naskah kami dapat diterima di Medical Journal of Indonesia.

Atas masukan, review dan diprosesnya naskah kami, atas nama seluruh penulis kami mengucapkan terima kasih.

Salam,

Mahalul Azam

(Correspondent author)

Notifications

[MJI] Editor Decision (ID:4216)

2020-09-03 11:17 AM

Dear Dr. Mahalul Azam, Dr. Arulita Ika Fibriana, Muhamad Zakki Saefurrohim, Akhriyah Atsna Setiana, Avissena Dutha Pratama:

We have reached a decision regarding your submission to Medical Journal of Indonesia, "Smear grading predicts non-conversion pulmonary tuberculosis: study in Dr. Kariadi general hospital Semarang, Indonesia".

Our decision is to: accept your submission.

Agus Rizal Hamid
Editor-in-chief Medical Journal of Indonesia
rizalhamid.urology@gmail.com

Notifications

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Editor-in-chief Medical Journal of Indonesia
rizalhamid.urology@gmail.com

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