EXPLORING INDONESIAN DOCTORAL STUDENTS RESEARCH PUBLICATION BARRIERS IN REPUTABLE INTERNATIONAL JOURNALS: MIXED METHOD APPROACH

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Abstract - The porpose of this study to explore the inhibiting factors of Indonesian doctoral students in conducting reputable international publications with qualitative exploratory methods and knowing the relationship between inhibiting factors with the performance of publications with quantitative methods. This research uses exploratory sequential mixed methods, Primary data collection using in-depth interviews with 7 (seven) doctoral program students who were selected and determined using purposive sampling method. Collecting primary data using an online questionnaire with 110 respondents who were selected using the snowball sampling method and then analyzed using the LISRELL program. The results of this research indicate that doctoral student respondents have had several constraints to publishing in journals international reputation such as negative result reviewer, lack of Funding, long respon time, low english skill, lack of writing time, limiting writing skill, limiting submision skill, high publication fee, inadequate facilities, limited journals reference, limited technology skill. Novelty of this research is the first research of the obstacles in the publication of doctoral students in Indonesia with the Exploratory Sequential Mixed Methods method with the scope of the territory of a country. This research can be a reference for similar research, and subsequent research can be conducted in other countries.

Keywords : Reputable International Journal, Research Publication Constraints, Doctoral Students

Scientific Article

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INTRODUCTION

The doctoral students in Indonesia has increased significantly every year, according to Ristekdikti data in 2019 the number of doctoral students was 34,364 students and students who graduated in 2019 were 6,041 students. International journals of Indonesian repute have shown a significant increase in the number of publications, namely 33,177 in 2019 (Kuwado, 2019). Indonesia to reach the first rank in Southeast Asia, overtaking neighboring countries Malaysia, Singapore and Thailand. Indonesia also has more than one hundred thousand researchers who can publish research in both the national and international landscape. With a number of higher education institutions, Indonesia has more than 4,500 public and private bodies (PDDIKTI, 2020). According to Circular Letter Number B / 323 / B.B1 / SE / 2019 concerning Publication of Scientific Work of Undergraduate Programs, Masters Programs and Doctoral Programs That to produce quantity and quality of publication of scientific works of undergraduate students, master programs, and doctoral programs at national and international scale as an effort to

develop science and technology as well as increase the nation's competitiveness graduates of doctoral programs compile dissertations and papers that have been published in reputable international journals; and graduates of applied doctoral programs compile dissertations and papers that have been published in accredited national journals with a minimum ranking of 3 or accepted in international journals or works that are presented or exhibited in international forums.

Factors inhibiting the productivity of doctoral students in the publication of scientific papers in international journals indexed sourced from external factors or outside themselves are work activities, the amount of publication costs, the availability of print journal subscriptions, the availability of online journal subscriptions and limited print journal access. Many students have not yet received a diploma because they have not made publications in reputable international journals, there are even some universities that hold hundreds of doctoral graduates because they have not made publications, Research Publication Requirements through Scopus for Graduation Difficulty (mediaindonesia.2019). Of 5,463 professors who have registered scientific publications, there are only 4,299 people. While those who passed scientific publications were 1,551 people (Siedo.com, 2020). The obligation to write scientific papers published in Scopus indexed journals is like a scary "ghost". (Galamedianews.com, 2018).The still low publication of Indonesian research results at the international level, especially the number of publications of internationally reputed scientific journals.(Tribunnews. Om, 2019) Indonesian scientific work and research, which is included in scientific publications in international published journals, is still low compared to neighboring countries, such as South Korea, Japan, China and India. (suaramerdeka.com.2019)

Research problem

The purpose of this research is to explore the inhibiting factors of Indonesian doctoral students in conducting reputable international publications with qualitative exploratory methods and find out the relationship between inhibiting factors with the performance of publications with quantitative methods, creating new models of obstacles to the ability of international publications and providing recommendations to students, institutions, journal managers and the government to make improvements. Novelty of this research is the first research of the obstacles in the publication of doctoral students in Indonesia with the Exploratory Sequential Mixed Methods method with the scope of the territory of a country. This research can be a reference for similar research, and subsequent research can be conducted in other countries.

Methodology

This research uses a mixed method approach with a sequential exploration design conducted from January 2020 to March 2020. The sequential exploration design is characterized by the collection and analysis of qualitative data in the first phase followed by the collection and analysis of quantitative data in the second phase (Creswell 2014). This research uses exploratory sequential mixed methods. The first stage is a qualitative analysis exploring factors inhibiting the publication of doctoral students. Primary data collection using in-depth interviews with 7 (seven) doctoral program students who were selected and determined using purposive sampling method. Participants selected by criteria have published in reputable international journals. The next step is to conduct a quantitative analysis to get the correlation between the inhibiting factors and the performance of the publication. Collecting primary data using an online questionnaire with 110 respondents who were selected using the snowball sampling method and then analyzed Partial least square using the LISRELL program.

Qualitative Phase

In the first phase, this research used a case research approach with a qualitative method. Determination of participants using purposive sampling, non-probability, for this research determined the number of participants as many as 7 doctoral students who have been determined with the criteria of having published articles in reputable international journals. From 7 students who were invited to participate, all students confirmed their agreement to be involved. Participants' ages varied from 35 years to 45 years. The participants were 2 students from Java Island, 2 students from Sumatra, 1 student from Kalimantan, 1 student from Papua and 1 student from Sulawesi. All participants have published an article in a reputable international journal.

Table 1. Participant Distribution

Initial	Age	Gender	Location
R1	46	Male	Java
R2	45	Male	Java
R3	55	Female	Sumatra
R4	43	Male	Sumatra
R5	46	Female	Kalimantan
R6	36	Female	Sulawesi
R7	38	Male	Papua

There are three main interview questions based on relevant literature review to get in-depth information about obstacles. Three questions that were asked to all participants namely RQ 1 was "how do you see the policy regarding journal publications before graduating from the doctoral program?" "and RQ 3 is" what recommendations do you want to propose? "Questions focus on constraints to publication and interviews carried out for about 30 minutes. Participant involvement is voluntary, Participant participation is voluntary and interviewed using in Indonesian, for participants who are outside the island are interviewed by telephone. In this research, participants 'names, universities, and other personal information were hidden in the initials, which are pseudonyms to protect participants' confidentiality. All participants were given initials as R1 to R7 for the current research report. The output of this qualitative phase is determined by the inhibiting factors of doctoral students for publication in reputable international journals which will be defined as variables X1, X2, X2, X3, X4, X5 to Xn. Based on the results of qualitative data reduction obtained independent variables as follows Negative result reviewer (X1) Lack of Funding, (X2) Long Response time, (X3) Low skills in English, (X4) Lack of time to write, (X5) Limiting writing skills , (X6) Limiting submission skills, (X7) High Publication Fee, (X8) Inadequate Facilities, (X9) Limited reference, (X10) Limited Technology skill, (X11) Limited Destinations journal

According to Creswell (2014) Data validity tests in qualitative research include tests of credibility (internal validity), transferability (external validity), dependability (reliability), and confirmability (objectivity). According to Creswell (2014) Testing the credibility of data or trust in data from qualitative research results can be done by extending the observation by re-interviewing some of the participants who have been interviewed, Transferability Testing shows the degree of accuracy or the applicability of the results of the research to the population where the sample was taken, So that other people can understand the results of this qualitative research so that it is possible to apply the results of the research. This test is conducted on other doctoral students who have not become participants. Dependability Testing is when someone else can replicate this research process by conducting an audit of the entire research process by the

supervisor. According to Creswell (2014) Conformability Testing is if the research is said to be objective if the research results have been agreed by many people

Quantitative Phase

After analyzing the qualitative phase, the next step is the quantitative phase. This second step of this research is quantitative and the method used in this research is a survey method and data collection by distributing The first step in developing the survey was to set the survey instrument based on the analysis of the interview data in qualitative phase, the independent variable is the result from qualitative phase, namely X1, X2, X3, X4, X5 and Xn. Each question item is given five answer options, namely: strongly agree (SS) score 5, agree (S) score 4, disagree (KS) score 3, no agree (TS) score 2, and strongly disagree (STS) score 1. Data collection is done by online questionnaire via google form, then data processing uses partial least square with the LISRELL program. Respondents in this research were 110 doctoral students who had conducted research publications in reputable international journals, respondents were selected by the snowball sampling method, each respondent helped distribute questionnaires to other respondents.

Table 2. Respondent Distribution

Location	Male	Female	Total
Java	28	15	43
Sumatra	14	11	25
Kalimantan	8	5	13
Sulawesi	5	3	8
Maluku Papua	8	4	12
Bali Nusa Tenggara	6	3	9
T O T A L	69	41	110

Respondents of Quantitative Phase is Indensian doctoral students in the island of Java were 43 students consisting of 28 male students and 15 female students, on the island of Sumatra 25 students consisting of 14 male students and 11 female students, on the island of Kalimantan 13 students consisting of 8 male students and 5 female students,, on the island of Sulawesi as many as 8 students consisting of 5 male and 3 female students, on Maluku and Papua as many as 12 students consisting of 8 male and 4 female students, on the island of Bali Nusa Tenggara 9 students consisting of 6 male and 6 male students female 3 students,

Based on the results of qualitative data reduction obtained independent variables as follows Negative result reviewer (X1) Lack of Funding, (X2) Long Response time, (X3) Low skills in English, (X4) Lack of time to write, (X5) Limiting writing skills , (X6) Limiting submission skills, (X7) High Publication Fee, (X8) Inadequate Facilities, (X9) Limited reference, (X10) Limited Technology skill, (X11) Limited Destinations journal and the dependent variable is Publication Constraints (Y). So that this quantitative research model can arrange the research framework as follows
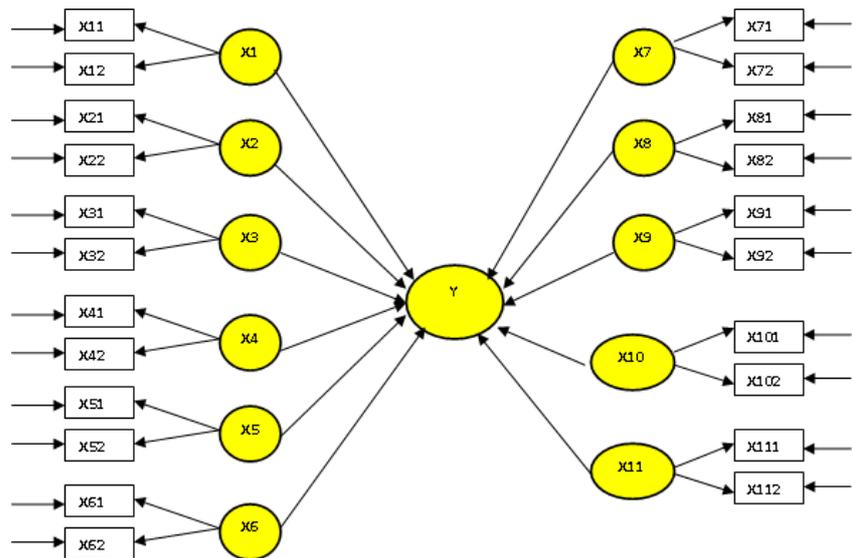
Figure 1. Research Model

X1-Negative Result Reviewer,X2 – Lack of Funding,X3 – Long Respon Time, X4 – Low English Skill, X5 – Lack of Time, X6 – Limiting Writing Skill, X7 – Limiting Submision Skill, X8 – High Publication Fee, X9 – Inadequate Facilities, X10 – Limited Reference, X11 – Limited Technology Skill

The research hypothesis is as follows:

H1: Negative result reviewer (X1) has positive and significant effect on Publication Constraints (Y).

H2: Lack of Funding (X2) has positive and significant effect on Publication Constraints (Y).

H3: Long Response time (X3) has a positive and significant effect on Publication Constraints (Y).

H4: Low skills in English (X4) have a positive and significant effect on Publication Constraints (Y).

H5: Lack of time to write (X5) has a positive and significant effect on Publication Constraints (Y).

H6; Limiting writing skills (X6) have a positive and significant effect on Public Constraints (Y).

H7: Limiting submission skills (X7) have a positive and significant effect on Publication Constraints (Y).

H8: High Publication Fee (X8) has a positive and significant effect on Publication Constraints (Y).

H9: Inadequate Facilities (X9) has a positive and significant effect on Publication Constraints (Y).

H10: Limited reference (X10) has a positive and significant effect on Publication Constraints (Y).

H 11: Limited Technology skill (X11) has a positive and significant effect on Publication Constraints (Y).

Results

The findings of this research are discussed in two phases namely the first phase is qualitative and the second phase is quantitative as follows:

Qualitative Phase Result

In this qualitative phase, There are three main interview questions based on relevant literature review to get in-depth information about obstacles. Three questions that were asked to all participants namely RQ 1 was "how do you see the policy regarding journal publications before graduating from the doctoral program?" "and RQ 3 is" what recommendations do you want to propose? "Questions focus on constraints to publication and interviews carried out for about 30 minutes.The results of the interview in open questions to seven participants were summarized as follows:

Negative result reviewer (X1)

There were five participants who gave an opinion that one of the publication constraints in international reputable journal was the negative result reviewer

R1 *"... I have submitted three papers and all of my papers were rejected by journal reviewers ..."*

R2 "... *My paper was rejected by reviewers and editors and commented on a lot and I had to revise my total paper ...*"

R5 "... *All the papers I submitted were major revision results, lots of notes from reviewers. then I replace with another paper ...* "

R6 "... *My paper must be totally revised, major revision and I will not proceed and I will withdraw my paper ...*"

R7 "... *Every paper that I submit can always get a lot of notes from reviewers and need time to revise them ...*"

Lack of Funding (X2)

There were five participants who gave an opinion that one of the publication constraints in international reputable journal was the lack of funding

R1 "... *I am experiencing constraints of limited funds to conduct research ...*"

R3 "... *My funds are limited which is my main problem ...*"

R4 "... *My money is limited which is a problem for me ...*"

R5 "... *I have difficulty getting research funding ...*"

R7 "... *sometimes I can't afford to fund research…*"

Long Response time (X3)

There were five participants who gave an opinion that one of the publication constraints in international reputable journal was Long Response time

R1 "... *Responses from editors and reviewers sometimes take too long, three to six months ...*"

R2 "... *I have been waiting for the results of the review for one year, in my opinion this is too long ...*"

R3 "... *the response from the editor in my opinion is very long ... it can take up to 8 months ...*"

R4 "... *I waited too long for the results of the review, then I submitted it to another journal ...*"

R5 "... *International journals have a long review process, sometimes one year gets a response ...*"

Skills in English (X4)

There were four participants who gave an opinion that one of the publication constraints in international reputable journal was Skill in English

R2 "... *My tone is a reputable international journal requiring good English…*"

R4 "... *My main problem is my foreign language mastery which is not good ...*"

R5 "... *Some of my papers were rejected because English grammar is not good ...*"

R7 "... *all the papers that I submitted were rejected and the major revision was due to poor English...*"

Lack of time to write (X5)

There were five participants who gave an opinion that one of the publication constraints in international reputable journal was Lack of time to write

R2 "... *I am experiencing time constraints to do research and make paper ...*"

R4 "... *my time is limited which is my main problem in making paper ...*"

R5 "... *I am too busy and have trouble getting research time ...*"

R6 "... *sometimes I don't have time to do research…*"

R7 "... my time is limited and I have little time to write research papers ..."

Limiting writing skills (X6)

There were six participants who gave an opinion that one of the publication constraints in international reputable journal was Limiting writing skills

R1 "... *My constraint is an internationally reputed journal requiring good writing skills*."

R2 "... *My writing ability is still lacking while reputable international journals require good quality paper*."

R3 "... *My main problem is my lack of mastering Limiting writing skills ...*"

R5 "... *I still have a lot to learn to write papers ...*"

R6 "... *Some of my papers were rejected because of poor writing skills ...*"

R7 "... *all the papers I submitted were rejected and major revision was due to poor writing skills ...*"

Limiting submission skills (X7)

There were four participants who gave an opinion that one of the publication constraints in international reputable journal was Limiting submission skills

R1 "... *My obstacle is a reputable international journal that requires good submission skills*."

R3 "... *My main problem is that my submission skills are poor*."

R6 "... *Some of my papers were rejected because submissions were not good ...*"

R7 "... *all the papers I submitted were rejected and major revision was due to my poor submission skills ...*"

High Publication Fee (X8)

All participants who gave an opinion that one of the publication constraints in international reputable journal were High Publication Fee

R1 "... *My constraint is a reputable international journal requiring a High Publication Fee*."

R2 "... *My main problem is High Publication Fee ...*"

R3 "... *Some of my papers were withdrawn because of the High Publication Fee ...*"

R4 "... *I can't afford the high publication fees ...*"

R5 "... *publication costs are high and my money is limited which is a problem for me ...*"

R6 "... *I have difficulty paying high publication fees ...*"

R7 "... *sometimes I can't afford to pay publication fees*"

Inadequate Facilities (X9)

There were six participants who gave an opinion that one of the publication constraints in international reputable journal was Inadequate Facilities

R1 "... *I am experiencing constraints of limited facilities to conduct research* ..."
R2 "... *My facilities are not adequate* ..."
R3 "... *My facilities are limited which is my main problem* ..."
R6 "... *I have difficulty finding research facilities and making research papers*."
R7 "... *sometimes I don't have the facilities to make a research paper*"

Limited reference (X10)

There were five participants who gave an opinion that one of the publication constraints in international reputable journal was Limited reference

R2 "... *I have a limited reference constraint to do research* ..."
R3 "... *My reference is limited which is my main problem* ..."
R5 "... *I have difficulty finding research references* ..."
R6 "... *I am having trouble finding references to the latest updates for my paper*."
R7 "... *sometimes I don't have a reference to do research*"

Limited Technology skill (X11)

There were four participants who gave an opinion that one of the publication constraints in international reputable journal was the Limited Technology skill

R1 "... *I am experiencing Limited Technology skills to do research and paper writing* ..."
R4 "... *My limited technology skills are limited which is my main problem* ..."
R6 "... *I have difficulty making research papers because of Limited Technology research skills* ..."
R7 "... *sometimes I experience Limited Technology skills to make research papers*.."

All participants gave answers and all answers from all 7 participants were summarized in the following table as follows:

Table 3.Data Reduction of Participants Answers

No	Variabel	R1	R2	R3	R4	R5	R6	R7	Total
X01	Negative result reviewer	V	V	-	-	V	V	V	5
X02	Lack of Funding	V	-	V	V	V	-	V	5
X03	Long Respon time	V	V	V	V	V	-	-	5
X04	Skills in English	-	V	-	V	V	-	V	4
X05	Lack of time to write	-	V	-	V	V	V	V	5
X06	Limiting writing skill	V	V	V	V	V	V	-	6
X07	Limiting submision skill	V	-	V	-	-	V	V	4
X08	High Publication Fee	V	V	V	V	V	V	V	7
X09	Inadequate Facilities	V	V	V	-	-	V	V	5
X10	Limited reference	-	V	V	-	-	V	V	4
X11	Limited Technology skill	V	-		V	-	V	V	5

From the table above, it can be concluded that the negative result reviewer variable is 5 participants, Lack of Funding is 5 participants, Long Response time is 5 participants, Skills in English is 4 participants, Lack of time to write is 5 participants, Limiting writing skill is 6 participants ,Limiting submission skills are 4 participants, High Publication Fee is 7 participants,

Inadequate Facilities are 5 participantsLimited references were 4 participants, Limited Technology skills were 5 participants.

Credibility Test
The next step is to conduct a validity and reliability test with a credibility test carried out with extensive observations, increased persistence in research, triangulation and member checks.

Triangulation of Time
Credibility Test with time triangulation was conducted by re-interviewing 2 participants namely R3 and R7 a month later and the following results were obtained:R3 "... *I agree that the factors inhibiting publication in international journals are Lack of Funding, Long Response Time, Skills in English, Lack of time to write, Limiting writing skills, Limiting submission skills, High Publication Fee, Inadequate Facilities, Limited references , Limited Technology …* " and R7 "... *I also agree and agree the factors inhibiting publication in international journals are Lack of Funding, Long Response time, Skills in English, Lack of time to write, Limiting writing skills, Limiting submission skills, High Publication Fee, Inadequate Facilities , Limited references, Limited Technology ...* "
From the results of the re-interview the results were the same as the results of this research so that this research concluded that it was credible.

Source Triangulation
Credibility test with source trangulation is done by reading books and reading references, based on research conducted by Prasojo et al (2019), Okoduwa et al (2018), Julianto (2018), Pardjono et al (2017), Sihite et al (2020), Mokhtari (2020), Noorelahi (2015), Osman (2016) and Dadipool (2020) found that the inhibiting factors of publication in international journals were Lack of Funding, Long Response Time, Skills in English, Lack of time to write, Limiting writing skills, Limiting submission skills, High Publication Fee, Inadequate Facilities, Limited references and Limited Technology.From the results of several international journal references, the results are the same as the results of this research, so that this research is concluded credible.

Member Check
Credibility Test with member check is done by re-interviewing 2 participants namely R1 and R4 a month later and the following results are obtained:
R3 "... *I agree that the factors inhibiting publication in international journals are Lack of Funding, Long Response Time, Skills in English, Lack of time to write, Limiting writing skills, Limiting submission skills, High Publication Fee, Inadequate Facilities*, .. ". R7 "... *I also agree and agree the factors inhibiting publication in the international journal Skills in English, Lack of time to write, Limiting writing skills, Limiting submission skills, High Publication Fee, Inadequate Facilities, Limited references, Limited Technology* ...".From the results of the member check, the results are the same as the results of this research so that this research concluded that it is credible.

Transferability
In order to understand the results of this qualitative research so that it is possible to apply the results of the research elsewhere, interviews were conducted with 3 other doctoral students namely initial S1, S2 and S3. The results of the interview are as follows: S1 students say *"... I can do this research in another place and at another time ...*", S2 students argue *"... I can do this research at another place and time*" ... and S3 Doctoral student said "... *It's easy for me to*

replicate this research ...".From the interviews of 3 doctoral students it was concluded that this research was transferable.

Quantitative Phase Result

The method of data analysis at this quantitative stage was carried out with a Structural Equation Model (SEM) using the Linear Structural Model (LISREL) version 8.71 from Joreskog and Sorbom (2008). Confirmatory Factor Anaysis (CFA) testing is carried out by looking at the loading factor value (> 0.5) and t count value (> 1.96). A factor load of 0.50 or more is considered to have a validity strong enough to explain latent constructs (Hair et all, 2010), Ghozali (2012). Sharma (1996) explains that the weakest loading factor that can be accepted is 0.40. Hair et all (2010) states that constructs have good reliability is if the value of Construct Reliability (CR) ≥ 0.70 and the extracted variance value (VR) ≥ 0.50. Hair et all (2010) adds that the interpretation of the reliability construct size can be said to be good if the value is more than 0.40. Data analysis was carried out using the LISREL program with the criteria for loading factor values (> 0.5) and t arithmetic values (> 1.96) whose results can be seen in the following figure:
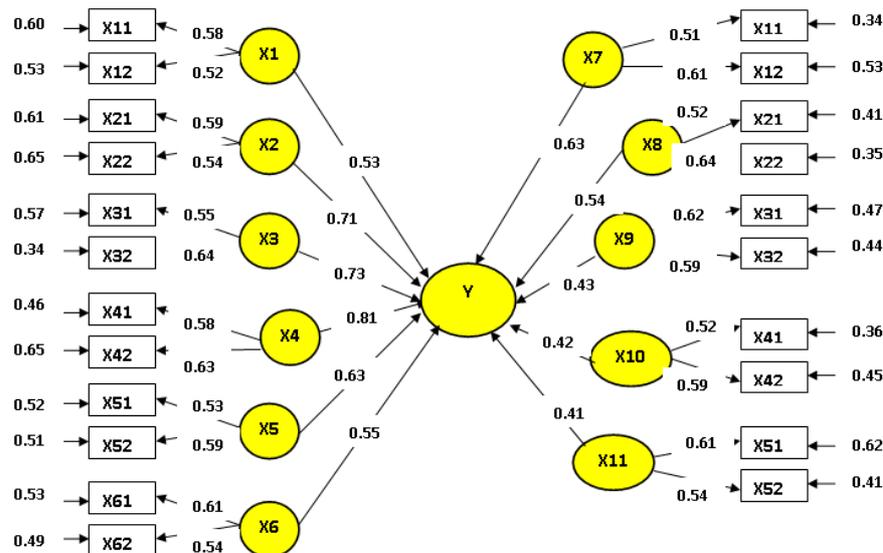

Figure 2. Loading Factor Confirmatory Factor Analysis Publication Inhibition

The first level of analysis is carried out from the latent construct of the aspects to the indicators. Based on the results of the analysis above shows that all factors loading values> 0.5 and all values of t count needed to test the significance of loading factor values greater than 1.96. This means that of the 22 indicators are all valid and significant items. The summary of the results of the analysis can be seen in the following table:

Table 4. Indicators Construct Validity Analysis

No	Indicators	Loading Factor	t-Value	Remark
1	X11	0.58	7.12	Significant
2	X12	0.52	6.72	Significant
3	X21	0.59	7.32	Significant
4	X22	0.54	6.32	Significant
5	X31	0.64	6.32	Significant
6	X32	0.58	6.34	Significant
7	X41	0.63	5.87	Significant

| 8	X42	0.53	2.17	Significant
9	X51	0.59	8.76	Significant
10	X52	0.65	5.61	Significant
11	X61	0.54	8.56	Significant
12	X62	0.50	6.41	Significant
13	X71	0.61	6.51	Significant
14	X72	0.52	7.45	Significant
15	X81	0.64	4.56	Significant
16	X82	0.62	3.22	Significant
17	X91	0.59	9.39	Significant
18	X92	0.52	6.42	Significant
19	X101	0.59	5.69	Significant
20	X102	0.61	4.61	Significant
21	X111	0.54	4.61	Significant
22	X112	0.54	6.34	Significant
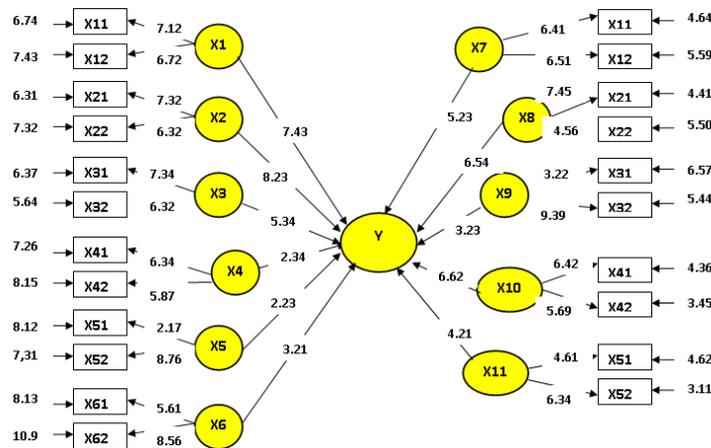
Figure 3.t-Value Factor Confirmatory Factor Analysis Publication Inhibition

The second level of analysis is carried out from the latent construct to its aspect construct. Based on the test results above shows that the factor loading values are all> 0.5 and all the calculated t values needed to test the significance of the factor loading values are greater than 1.96. The summary of the results of the analysis can be seen in the following table.

Table 5 . Variables Construct Validity Analysis

No	Indicators	Loading Factor	t-Value	Remark
1	X1-Negative Result Reviewer	0.58	7.12	Significant
2	X2 – Lack of Funding	0.52	6.72	Significant
3	X3 – Long Respon Time	0.59	7.32	Significant
4	X4 – Low English Skill	0.54	6.32	Significant
5	X5 – Lack of Time	0.55	7.34	Significant
6	X6 – Limiting Writing Skill	0.64	6.32	Significant
7	X7 – Limiting Submision Skill	0.58	6.34	Significant
8	X8 – High Publication Fee	0.63	5.87	Significant
9	X9 – Inadequate Facilities	0.53	2.17	Significant
10	X10 – Limited Reference	0.59	8.76	Significant
11	X11 – Limited Technology Skill	0.65	5.61	Significant

These results indicate that 11 variables are valid and significant to measure the latent variables Constraints. The validity results are also supported by the value of Chi Square (r) which produces p value of 180.04 with a p-value of 0.134 (p> 0.05). Based on the formula of construct reliability calculation, the results of CR = 0.94 and VE = 0.46, which means that Constraints have good reliability. Hair, et al., (2010) state that constructs have good reliability if the value of Construct Reliability (CR) $\geq$ 0.07 and the Variance Extracted value (VE) $\geq$ 0.40.

Furthermore, for the suitability of the model (model fit), in general it is good. As for the criteria for the model fit is as in the following table.

Table 6. Model Fit Criteria

No	Index Fit	Value	Value Standard	Remark
1	Chi Square p	180.04	> 0.05	Fit
2	RMSEA	0.052	< 0.080	Fit
3	NFI	0.96	> 0.90	Fit
4	NNFI	0.94	> 0.90	Fit
5	CFI	0.92	> 0.90	Fit
6	IFI	0.91	> 0.90	Fit
7	GFI	0.92	> 0.90	Fit
8	AGFI	0.86	> 0.90	Not Fit

Table 7. Indicators Construct Reliability Analysis

No	Indicators	Loading Factor	Error	CR	VE
1	X11	0.58	0.60		
2	X12	0.52	0.53		
3	X21	0.59	0.61		
4	X22	0.54	0.65		
5	X31	0.55	0.57		
6	X32	0.64	0.34		
7	X41	0.58	0.46		
8	X42	0.63	0.65		
9	X51	0.53	0.52		
10	X52	0.59	0.51		
11	X61	0.65	0.53		
12	X62	0.54	0.49		
13	X71	0.50	0.34	**0.94**	**0.46**
14	X72	0.61	0.53		
15	X81	0.52	0.41		
16	X82	0.64	0.35		
17	X91	0.62	0.47		
18	X92	0.59	0.44		
19	X101	0.52	0.36		
20	X102	0.59	0.45		
21	X111	0.61	0.62		
22	X112	0.54	0.41		

Based on the analysis results it is known that 7 out of 8 index fit states that the model is fit. These results indicate that the Constraints (Y) variable model is fit with empirical data. Based on the results of the analysis of the construct validity and the construct reliability then all aspects and items that make up the Constraints (Y) are valid and reliable. The equation model for the

relationship between dependent variable publication inhibition and independent variable is obtained as follows:

Y = 0.58 X1 + 0.52 X2 + 0.59 X3 + 0.54 X4 + 0. 55 X5 + 0.64 X6 + 0.58 X7 + 0.63 X8 + 0.53 X9 + 0.59 X10 + 0.65 X11 + C and R square 0.95.

The R square is 0.95 mean the independent variable X1-Negative Result Reviewers, X2 - Lack of Time, X3 - Long Response Time, X4 - Low English Skill, X5 - Lack of Time, X6 - Limiting Writing Skill, X7 - Limiting Submission Skill, X8 - High Publication Fee, X9 - Inadequate Facilities, X10 - Limited Reference, X11 - Limited Technology Skill affects the dependent variable by 95% while 5% is influenced by other factors.

DISCUSSION

Based on the qualitative analysis of 7 participants, it can be concluded that the negative result of the reviewer variable is 5 participants, Lack of Funding is 5 participants, Long Response time is 5 participants, Skills in English is 4 participants, Lack of time to write is 5 participants, Limiting writing skills are 6 participants, Limiting submission skills are 4 participants, High Publication Fee is 7 participants, Inadequate Facilities are 5 participants Limited references were 4 participants, Limited Technology skills were 5 participants. These results complement and strengthen research with qualitative research conducted by Parsojo et al (2019) who found that the factors preventing students from publishing in reputable international journals were lack of funding, long response time, low skills in foreign languages, inadequate of time to write and limiting submission skills. According to Julianto et al (2018) that the factors preventing students from publishing in reputable international journals are low skills in foreign languages, Low Collaborative Networks, Limited references and Limited Technology skills. According to Sihiteet all (2020) who found that factors preventing students from publishing in reputable international journals were lack of funding, low skills in foreign languages, inadequate facilities. Based on data analysis using quantitative methods the following results are obtained:

H1: Negative result reviewer (X1) has positive and significant effects on Publication Constraints (Y).

The relationship between independent variables X1-Negative Result Reviewer with Public Constraints (Y) obtained loading factor value of 0.58 and t-value of 7.12 so that it can be concluded that the Negative result reviewer has a positive and significant effect on Public Constraints. These results are the same as the results of research with a quantitative method conducted by Duracinsky et all (2017), Garnet et all (2012) ,Okoduwa et al (2018) and Julianto et al (2018) who found that the Negative result reviewer has a positive and significant effect on Public Constraints.

H2: Lack of Funding (X2) has a positive and significant effect on Publication Constraints (Y).

The relationship between independent variables Lack of Funding (X2) with Public Constraints (Y) obtained loading factor value of 0.52 and t-value of 6.72 so that it can be concluded that Lack of Funding has a positive and significant effect on Publication Constraints. These results are the same as the results of research with a quantitative method conducted by Pardjono et al (2017) and Mokhtariet all (2020) who found that the Lack of Funding has a positive and significant effect on Public Constraints.

H3: Long Response time (X3) has a positive and significant effect on Publication Constraints (Y).

The relationship between independent variables Long Response time (X3) with Public Constraints (Y) obtained loading factor value of 0.59 and t-value of 7.32 so that it can be concluded that Long Response time has a positive and significant effect on Public Constraints. These results are the same as the results of research using quantitative methods conducted by

Duracinsky et all (2017), Garnet et all (2012) ,Noorelahi et all (2015) and Osman et all (2016) who found that Long Response time has a positive and significant effect on Public Constraints.

H4: Low skills in English (X4) have a positive and significant effect on Publication Constraints (Y).

The relationship between independent variables Low skills in English (X4) with Public Constraints (Y) obtained loading factor value of 0.54 and t-value of 6.32 so that it can be concluded that Low skills in English has a positive and significant effect on Publication Constraints. These results are the same as the results of research using quantitative methods conducted by Julianto et al (2018) and Pardjono et al (2017) who found that Low skills in English has a positive and significant effect on Public Constraints.

H5: Lack of time to write (X5) has a positive and significant effect on Publication Constraints (Y).

The relationship between independent variables Lack of time to write (X5) with Public Constraints (Y) obtained loading factor value of 0.55 and t-value of 7.34 so it can be concluded that Lack of time to write has a positive and significant effect on Publication Constraints. These results are the same as the results of research using quantitative methods conducted by Mokhtari et al (2020), Noorelahiet all (2015) and Osman et al (2016) who found that Lack of time to write has positive and significant effects on Public Constraints.

H6: Limiting writing skills (X6) have a positive and significant effect on Public Constraints (Y).

The relationship between the independent variable Limiting writing skills (X6) and Publication Constraints (Y) obtained a loading factor value of 0.64 and t-value of 6.32 so that it can be concluded that Limiting writing skills have a positive and significant effect on Publication Constraints. These results are the same as the results of research with quantitative methods conducted by Duracinsky et all (2017), Garnet et all (2012) ,Noorelahi et all (2015), Osman et all (2016) and Dadipool et all (2020) who found that Limiting writing skills have positive and significant effects on Publication Constraints.

H7: Limiting submission skills (X7) have a positive and significant effect on Publication Constraints (Y).

The relationship between independent variable Limiting submission skills with Publication Constraints (Y) obtained loading factor values of 0.58 and t-value of 6.34 so it can be concluded that Limiting submission skills have a positive and significant effect on Publication Constraints. These results are the same as the results of research using quantitative methods conducted by Julianto et al (2018), Pardjono et al (2017) and Mokhtariet all (2020) who found that limiting submission skills have positive and significant effects on Public Constraints.

H8: High Publication Fee (X8) has a positive and significant effect on Publication Constraints (Y).

The relationship between the independent variable High Publication Fee and Publication Constraints (Y) obtained loading factor value of 0.63 and t-value of 5.87 so that it can be concluded that the High Publication Fee has a positive and significant effect on Publication Constraints. These results are the same as the results of research using quantitative methods conducted by Noorelahiet all (2015), Osman et all (2016) and Dadipool et all (2020) who found that the High Publication Fee has a positive and significant effect on Public Constraints.

H9: Inadequate Facilities (X9) has a positive and significant effect on Publication Constraints (Y).

The relationship between independent variables Inadequate Facilities and Publication Constraints (Y) obtained loading factor values of 0.53 and t-value of 2.17 so that it can be concluded that Inadequate Facilities have a positive and significant effect on Public Constraints. These results are the same as the results of research using quantitative methods conducted by Okoduwa et al (2018), Juliantoet all (2018) and Pardjono et al (2017) who found that Inadequate Facilities has a positive and significant effect on Public Constraints.

H10: Limited reference (X10) has a positive and significant effect on Publication Constraints (Y).
The relationship between independent limited reference variables with Publication Constraints (Y) obtained a loading factor value of 0.59 and t-value of 8.76 so it can be concluded that the Limited reference has a positive and significant effect on Public Constraints. These results are the same as the results of research using quantitative methods conducted by Julianto et al (2018), Pardjono et al (2017) and Mokhtariet all (2020) who found that Limited reference has a positive and significant effect on Publication Constraints.

H 11: Limited Technology skill (X11) has a positive and significant effect on Publication Constraints (Y).
The relationship between the independent variable Limited Technology skill with Publication Constraints (Y) obtained loading factor value of 0.65 and t-value of 5.61 so that it can be concluded that the Limited Technology skill has a positive and significant effect on Publication Constraints. These results are the same as the results of research using quantitative methods by Okoduwa et al (2018), Julianto et all (2018), Pardjono et al (2017), Mokhtari et all (2020), Noorelahi et all (2015), Osman et all (2015) 2016) and Dadipool et all (2020) who found that Limited Technology skills had a positive and significant effect on Publication Constraints.

CONCLUSION
The results of qualitative analysis of this research indicate that doctoral student respondents have had several constrains to publish in journals international reputation such as follows negative result reviewer, lack of Funding, long Response time, low skills in English, lack of time to write, limiting writing skills, limiting submission skills, high publication fees, inadequate facilities, limited references, limited technology skills, limited destinations journal. Based on quantitative analysis found that the most influential variables are high publication fees, limiting writing skills and limited technology skills.Novelty of this research is the first research of the publication of doctoral students in Indonesia with the Exploratory Sequential Mixed Methods method with the scope in a country region. This research will be a new reference for similar topic of research, and subsequent research can be conducted in other countries.This research produces novelty which is a new model that is the relationship between the factors that inhibit publication with publication constraints so that it can be an additional reference and can be used as a new reference for further research. Some recommended recommendations are doctoral students can find scholarships, sponsors or donors to overcome the problem of high publication costs and attend paper training to improve competence so that writing skills and technology skills increase. This study has several limitations namely the number of participants for qualitative analysis only 7 students and the number of respondents for quantitative analysis is only 110 students and for further research can increase the number of participants and the number of respondents. For further research, you can continue this research in other countries or other regions with different participants and respondents.

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