The Behavior of Specialist Towards Completeness of Medical Records

by Thinni Nurul Rochmah

The behavior of specialist towards completeness of medical records

Ernawaty Ernawaty, Thinni Nurul Rochmah, Widodo J. Pudjirahardjo & Mohammad Junaidi

Published online: 05 Sep 2019.

Submit your article to this journal ☐

Article views: 5

View related articles ☐

View Crossmark data ☐

Taylor & Francis
Taylor & Francis Group

Check for updates

The behavior of specialist towards completeness of medical records

Ernawaty Ernawaty[a], Thinni Nurul Rochmah[a], Widodo J. Pudjirahardjo[a] and Mohammad Junaidi[b]

[a]Faculty of Public Health, Universitas Airlangga, Surabaya, Indonesia; [b]General Hospital Dr. Soewandhie, Surabaya, Indonesia

ABSTRACT

This study aims to overview and identify how medical record is executed by specialists in undertaking their medical tasks. The study involves specialists at Dr. M. Soewandhie hospital. Based on the preliminary research, one of the problems in paper-based medical record is the incompleteness of medical record filling. The incompleteness is mostly caused by the specialists-in-charge who had not filled the form. Due to this, this study formulized a research problem on factors that influenced the compliance of specialist in completing the filling of paper-based medical records. This study applied a cross-sectional study with a descriptive analytic design. This study was conducted in patient units with the total of respondents of 35 full-time specialists along with 175 medical record files used as research data. This study resulted from 175 medical records, there are 97.1% completed medical records, and 0.029% incomplete medical records. It indirectly indicated a breach of specialist's duty to maintain complete medical records. This study concluded that voluntary and obligation factors were the two factors that affected the specialist to fill-in medical records completely, and it was tested by the regression test. Rather than out of a sense of responsibility, the medical records were actually the authority of the hospital director and monitoring-evaluation manager who has authority and high order for specialists to complete medical records.

Introduction

The Act of National Social Security System, which has been enacted since January 1, 2014, has affected the concept of health services in Indonesia ([1]:2). As a provider of advanced health services, hospitals, including those run by the local government of Surabaya, inevitably must follow significant changes in the National Health Insurance (NHI) era. One of the administrative problems in hospital is the incomplete medical records (paper-based medical records), whereas the completeness of medical records is one of the main requirements for processing patient's expense claim to the Social Security Agency. Based on the data of medical records collected in the preliminary research for two months in 2014, the incompleteness mostly because the specialists-in-charge had not filled in the following records: (1) medical resume (29%) (2) doctor's signature on patient admission sheet (15.2%) (3) the form of determination of doctor in charge (11.3%) (4) final written diagnosis (11.2%) (5) informed consent (8%).

According to the Regulation of the Minister of Health Indonesia Number 269 year 2008 concerning Medical Records (article 4 paragraph 2), medical records can be stated as complete if it contains at least patient's identity, pre-diagnosis and indications of patients treated, a summary of physical examination and investigation results, final diagnosis, treatment and a follow-up, as well as the name and signature of doctors or dentists who lead and perform health services [1]. Oksuzyan et al. [2] concluded that the completeness of medical records filled by doctors-in-charge was lower than the one filled by nurses. A research conducted by Andarini [3] has also shown that the most influential obligation factor for specialists-in-charge to complete medical records was peer support variable. But, Mosadeghrad clarified that medical service quality was influenced by individual, organizational, and environmental factors [4].

As an organization that to gain succession on medical record filling, the elements with high position should exercise a discipline in order for the elements with low and medium position could exemplify those with high position. It also means that obedience to the elements with high position and to the ruling concept should be well performed, especially concerns regarding the medical record fillings. In this case, obedience was interpreted in a few ways depending on the context. A research by Milgram [5] showed that someone tends to obey someone with an authority if the authority was morally or legally justified.

Obedience involved a hierarchy of power or of position. The commanding had a higher position than the commanded. Accordingly, it can be concluded that

CONTACT Ernawaty Ernawaty ✉ ernawaty@fkm.unair.ac.id 📧 Faculty of Public Health, Universitas Airlangga, Campus C, Mulyorejo, East Java, Surabaya 60155, Indonesia

obedience according to Milgram's theory is described as a situation in which an individual or a group shows an obedient behavior towards an instruction or a rule made by the official authority [5]. According to Milgram, a number of factors influenced the degree of obedience, such as (1) status and location of the organization, (2) peer-support, (3) status of the authoritative figure, (4) the proximity of authoritative figure, (5) the legitimacy of authoritative figure, and (6) personal responsibility.

Niven explained that the waywardness of patients was a serious issue for health professionals [6]. Therefore, it became important to recognize factors influencing waywardness and ways to increase compliance. According to Niven, some factors that influenced waywardness were: (1) comprehension towards instruction, (2) interaction quality, (3) social and familial isolation, (4) belief, (5) attitude, and (6) personality. Accordingly, it can be concluded that the difference between Milgram's and Niven's theory is that in Niven's theory, compliance is influenced by factors inside oneself and by social environment influence or voluntary. Relevance to this study, this study used Niven's theory to recognize factors influencing compliance from within the specialists, whereas Milgram's theory was used to recognize the specialists' obedience towards authorities. The word 'obedience' was frequently used to describe Milgram's theory, because being obedience is caused by the rule.

By this consideration, this study aimed to analyze the cause of high percentage of incompleteness in medical records filled by specialists. This study wanted to know the factual reasoning of medical records incompleteness by identifying several important key points within the implementation of medical records fillings, and to identify the effects of the medical records incompleteness on the quality of medical service. This study involved Dr. M. Soewandhie hospital as one of the education hospitals at Surabaya that still applied paper-based medical record and planned to develop it into an Electronic Medical Record (EMR). Hence, this study was expected to contribute an evaluative recommendation for the quality of medical service in hospital by executing the medical records and developing it into an EMR.

Methods

This research was descriptive cross-sectional study that aimed to investigate the factual reasoning of medical records incompleteness and effects of medical records incompleteness towards the quality of medical service. This research was conducted at Dr. M. Soewandhie hospital from March 2015 to April 2015 by involving 35 specialists as respondents. The specification and classification of medical records can be as follows [7]:

(a) Form 12: Medical Treatment, (b) Form 7: Agreement Form, and (c) Form 13: Discharge Against Medical Advice Form.

The data used in this research were collected through in-depth interviews with guided questionnaires distributed to 35 specialists as respondents. The questionnaire was then developed into two types of obedience indicator groups based on Niven's theory and Milgram's theory. To strengthen this, this research employed 175 medical records including the complete medical records written by 35 specialists as the secondary data.

After the data had been collected, Focus group discussions (FGDs) were conducted by involving all respondents along with the director and deputy directors of the hospital, the head of medical services, the section chief of medical services, and the representation of the medical committee. The FGDs were aimed to explore the causes of the incompleteness in medical record filling and to configure possible solutions cooperatively and consensually. Next, to manifest the result of the FGDs and questionnaires, the linear regression test with dependent variables of the completeness of medical record filling was applied to analyze their effects.

Results

The result of completeness and incompleteness of medical records forms

This study resulted that from the entire medical record files, there were only Integrated Patient Progress Notes (Form 6) filled completely by 34 of 35 respondents (97.1%). Meanwhile, there was none of the Patient Admission and Discharge Form (Form 1a), Medical Treatment Agreement Form (Form 12), and Discharge against Medical Advice Form (Form 13) completely filled by specialists (0%). From all the medical record files examined (175 files), Patient Admission and Discharge Form (Form 1a) was the mostly incomplete form, lacking the information required in nearly every item, except only on the final diagnosis (94.3% filled).

All respondents (100%) did not completely fill-in Form 1a. In the appointment of doctor specialist-in-charge (Form 4), the item often left blank was the identity of the doctor specialist-in-charge (54.3%). However, the signature of the doctor specialist-in-charge was mostly filled (91.4%). In total, there were only 62.9% of respondents filled out Form 4 completely. Generally, the Integrated Patient Progress Record (Form 6) was completely filled, except for the signature of the doctor specialist-in-charge. There were only 17.1% of the forms were signed by the doctor specialist and there were 34 respondents (97.1%) filling in the form completely (Figure 1).
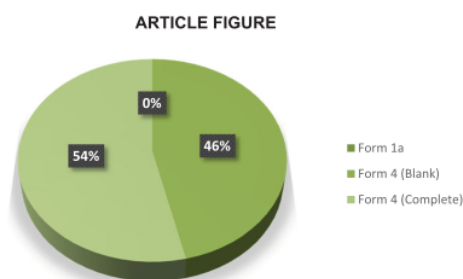
ARTICLE FIGURE

Figure 1. Percentage of complete and incomplete medical records filling. (Source: Primary Data).

In addition, in the Discharge Summary Card (Form 9), the item frequently left incompletely unfilled was the record of medications given to patients (88.6%). Meanwhile, the items mostly filled were patient's cause of death, proposed follow-up, and doctor specialist's signature (each at 97.1%). There were 71.4% of specialists, who filled out Form 9 completely. In Release of Information (Form 11), there was only 1 (one) specialist who completely filled the form, while 97.1% of respondents did not fill it completely. The most uncompleted item in Form 11 was the signature of the patient/guardian (only 28.6% filled). All respondents (100%) did not completely fill Medical Treatment Agreement Form (Form 12). The commonly uncompleted item in Form 12 was patient's identity (71.4%). Meanwhile, the item mostly filled was specialist's signature (82.9%). Similarly, 100% of the specialists also did not fully complete the Discharge against Medical Advice Form (Form 13) Table 1.

The most uncompleted item in Form 13 was the identity of the Discharge Against Medical Advice (DAMA) and the patient (48.6%). Meanwhile, the item mostly filled was the signature date (97.1%). The results of linear regression test on obligation factors towards the completeness of medical record filling showed that the legitimacy of the hospital director and the head of Monitoring Evaluation section ($P = 0.001$) as well as the Responsibility of doctor specialists had a significant influence ($P = 0.046$).

Tables 2–5 show cross-tabulation between the type of specialist, age, status of employee and sex with compliance. It was known that the group of specialist that was able to do surgery have better compliance than the other group of specialist. Specialist aged more than 40 years old have better compliance with the younger one. A female specialist has better compliance than the male one. Related to employment status, it showed that contract employee has better compliance than the government employee.

The result of linear regression test on obligation factors of medical records completeness

The results of linear regression test on obligation factors towards the completeness of medical records indicate that the most significant obligation factors were the only legitimacy of the hospital director and Monitoring- Evaluation manager ($P = 0.001$) and Specialist's sense of responsibility ($P = 0.046$). In this research, the legitimacy of the director and the head of Monitoring-Evaluation section refers to specialists' assessment on the credibility of the Director's and the Section Chief's authority in Monitoring-Evaluation. The majority of the respondents gave high score (84.3%) for the legitimacy of the director and the head of Monitoring Evaluation section. It signifies that the respondents mostly admitted that the director and the chief of the Monitoring-Evaluation section already had the appropriate authority (Table 6).

However, the results of the linear regression test showed that the value of ß produced was −0.578. This negative value indicated that the more the specialists admitted the legitimacy of the Director and the chief of the Monitoring-Evaluation section in Dr. M. Soewandhie Hospital, the lower the completeness of medical record filling. Generally, specialist's responsibility referred to specialists' assessment on their sincerity to carry out their obligation to fill medical records completely. The majority of the specialists had a high responsibility in completing the medical records in Dr. M. Soewandhie hospital (91.4%). Finally, the results

Table 1. The completeness of medical record filling based on item in the Dr. Mohammad Soewandhie Hospital of Surabaya in 2015.

Form	Items mostly filled		Item less filled		Number of Specialists filling completely ($n = 35$)	
	Items	%	Items	%	Total	%
1a	Final diagnosis	94.3	Identity of the patient and patient family in charge	100	0	0
4	Signature of doctor in charge	91.4	Identity of the doctor in charge	54.3	22	62.9
6			Signature of the doctor in charge	17.1	34	97.1
9	Cause of death, proposed follow-up, and doctor's signature	97.1.	Administered medication	88.6	25	71.4
11			Signature of the patient or guardian	28.6	1	2.9
12	Signature of the doctor in charge	82.9.	Patient's identity	71.4.	0	0
13	Signature date	97.1.	Identity of the signee of refusal consent and patient's identity	48.6	0	0

(Source: Primary Data).

Table 2. Cross-tabulation between type of specialist and compliance.

		Compliance					
		Fair		Good		Amount	
No.	Type of specialist	N	%	n	%	n	%
1.	Specialist group that doing surgery	13	65.0	7	35.0	20	100.0
2.	Other specialist	13	86.7	2	13.4	15	1000

(Source: Primary Data).

Table 3. Cross-tabulation between age and compliance.

		Compliance					
		Fair		Good		Amount	
No.	Age (Years)	N	%	n	%	N	%
1.	18–40	10	76.9	3	23.1	13	100.0
2.	41–60	16	72.7	6	27.3	22	100.0

(Source: Primary Data).

Table 4. Cross-tabulation between sex and compliance.

		Compliance					
		Fair		Good		Amount	
No.	Sex	n	%	n	%	N	%
1.	Male	20	76.9	6	23.1	26	100.0
2.	Female	6	66.7	3	33.3	9	100.0

(Source: Primary Data).

Table 5. Cross-tabulation between employee status and compliance.

		Compliance					
		Fair		Good		Amount	
No.	Employee Status	n	%	n	%	N	%
1.	Civil servant	24	75.0	8	25.0	32	100.0
2.	Contract employee	2	66.7	1	33.3	3	100.0

(Source: Primary Data).

of linear regression test on voluntary factors towards the completeness of medical record filling have shown that only the variable of understanding instruction had a significant effect ($P = 0.013$) to the completeness of medical record filling in the hospital. In other words, the better understanding of instructions for completing medical records and the higher percentage of the obedience to complete medical records are essentially two factors influencing medical service quality.

Discussion

Several previous research actually have discussed the cause of incompleteness of medical record filling in several hospitals in Indonesia [5–7]. This research revealed that obligation factors, especially the legitimacy of the Director and the head of Monitoring-Evaluation section variable had a significant influence on the completeness of medical record filling. It was the same finding as Boonstra et al that the physicians should also have a full support on medical record fillings [8]. However, the value of ß was negative (−0.578). It indicated that specialist high recognition for the legitimacy of the Director and the Chief in Monitoring-Evaluation Section had not caused the completeness of medical record filling. This result that was proved by the result of FGD, the recognition for the Director and the Chief in Monitoring-Evaluation Section had not been able to encourage specialists to complete filling in the medical record, whereas the medical director has a responsibility on medical supervision and overall regulations include medical records [9]. This condition mostly was caused by the perception of the specialists that they had heavy workload.

Similarly, the results of a research conducted by Pamungkas et al. [10] have shown that the incompleteness of medical record filling is due to specialists' perception that they had heavy workload, so they did not have much time. Time limitation according to Nadya et al. [11], was also considered as one of the factors that caused the incompleteness of medical record filling. Specialists can be assumed to have already understood that they had responsibility for the completeness of medical record filling. But, the results of linear regression test have also shown that the sense of responsibility, as an obligation factor, had a significant effect on the completeness of medical record filling. As a voluntary factor, the variable of understanding instruction had a significant influence on the completeness of medical record fillings ($P = 0.013$).

Table 6. Recapitulation of linier regression test.

No.	Variables	sig. P	B	Note
1.	*Obligation* Factors (Milgram's Theory)			
	a. Hospital Status	0.748	0.050	Not significant
	b. Status of the Director and the chief of Monitoring-Evaluation section	0.578	0.109	Not significant
	c. Legitimacy of the Director and the chief of Monitoring-Evaluation section	0.001	−0.578	Significant
	d. Specialist' responsibility	0.046	0.327	Significant
	e. *Peer Support*	0.052	0.312	Not significant
	f. Proximity of the Director and the section chief in Monitoring-Evaluation	0.860	0.030	Not significant
2.	*Voluntary* Factors (Niven's Theory)			
	a. Understanding of instructions	0.013	0.414	Significant
	b. Quality of interactions	0.971	−0.006	Not significant
	c. Confidence	0.406	−0.145	Not significant
	d. Attitudes	0.811	0.043	Not significant
	e. Personality	0.382	0.155	Not significant
	f. Social isolation	0.089	−0.277	Not significant

(Source: Primary Data).

Nevertheless, there were 20% of specialist doctors, who still had low understanding of how to fill out medical records. Similarly, the results of some researchers conducted by Sugiyanto [12] and Indar et al. [13] have shown that there was a significant correlation between specialists' knowledge and the completeness of the Discharge Summary card on medical record files. In completing medical records, specialists actually had two responsibilities: autonomous and institutional [2,5]. Based on the results of the FGDs, the incompleteness of medical record filling was also caused by the status of the director of the hospital who had not been definitive, yet it was still considered as acting director.

Related to other research variables, some descriptive analysis results indicated the incompleteness of medical record filling. As many as 51.4% of respondents pointed at the low involvement of specialists in an effort to improve the quality of medical records as well as the lack of appreciation for specialists in completing medical records. Logically, if they were not addressed, then the possibility of their work performance would not be good. In addition, this study raised concern over the attitude of specialists since 48.7% of them never or rarely read the instructions regarding medical record filling, whereas medical record as an impediment to an effective delivery of high quality healthcare [14]. As a result, the filling of medical records still was not done thoroughly. In this case, there were also 20% of respondents, who had not fully understood the instructions of medical record filling.

The results of the linear regression test have shown that understanding of these instructions serves as a significant variable that affected the completeness of medical record filling. There were 42.9% of respondents who claimed lack of support among specialists for completing medical records. Nevertheless, completing medical records actually had been supported by fellow specialists in Dr. M. Soewandhie. Most of them were motivated to complete medical records after seeing a performance of another specialist in completing the medical record. The support can also be seen from mutual relation among specialists in completing medical records. The existence of the peer-support could evidently encourage specialists to be more active in filling out medical records [12]. In this case, there were 25.7% respondents who did not agree that they had a distinct honor for working in this hospital.

Those findings indicated the incompleteness of medical record filling by specialists was due to both obligation and voluntary factors. The obligation factors, especially leadership legitimacy and responsibility were two variables that affected the completeness of medical record filling. Meanwhile, voluntary factors, especially understanding instruction was considered as the most influential variable. Moreover, the research data obtained showed that the responsibility of specialists to complete medical records was high. However, there were still 20% of specialists who had a low understanding of the significance of completing medical records. This research also revealed a finding from FGD that the perception of specialists concerning their heavy workload had caused the incompleteness of medical record filling. This phenomenon was strengthened by Zhang [15] that understanding was needed to standardize the management of computer-used medical records. Hence, this research also recommended to strengthen basic training to maintain the completeness and quality of the medical records.

Conclusion

The incomplete medical records at Dr. M. Soewandhie hospital was caused by obligation and voluntary factors. The obligation factors which showed significant influence towards the behavior of specialist to fill in medical records completely were the legitimacy of the Director, the chief of Monitoring-Evaluation section, and Specialists' responsibility, while the voluntary factor which showed a significant influence was the specialist understanding of Instructions. Besides, most of the specialists stated that they felt their workload was already too much and they did not have enough time to completely fill in all the items in the medical records. This study also found that too much workload was the basic reason for the incompleteness of medical records filling.

These following recommendations are offered as the implications of the results of this research: (1) Completeness of medical record filling should be used as an indicator of performance in hospital. Director's regulations, good socialization, and regulation enforcement are necessary to be implemented. (2) Analysis of workload on each specialist must be conducted to reveal the real workload. (3) Functional Medical Staff (FMS) groups and Medical Committee as representatives of specialists must be involved in arranging improvement and periodic evaluation of medical record files. (4) Sustainable evaluation and socialization on the contents of Mutual Handbook for Medical Record Filling must be performed as a reference for filling medical records. (5) The Mutual Handbook for Medical Record filling must be copied for all specialists, and put in all rooms. (6) The hospital should immediately create an EMR system to enhance the supervision of completion and purpose quality of medical record filling. Electronic medical records can be considered as an advancement in consumer health informatics. E-medical records have been adopted in many nations, whereas other countries are planning to adopt this technology.

Disclosure statement

References

[1] Khariza HA. Program Jaminan Kesehatan Nasional: Studi Deskriptif tentang Faktor-Faktor yang Dapat Mempengaruhi Keberhasilan Implementasi Program Jaminan Kesehatan Nasional di Rumah Sakit Jiwa Menur Surabaya. Kebijakan dan Manajemen Publik. 2015;3(1):1–7.

[2] Indonesian Ministry of Health. Peraturan Menteri Kesehatan Republik Indonesia Nomor 269/MENKES/PER/III/2008 tentang Rekam Medis.

[3] Oksuzyan A, Demirchyan A, Thompson ME. Evaluation of Medical Records Completeness In The Adult Cardiology Clinic At Nork Marash Medical Center. AUA/ NMMC Project, Armenia: American University of Armenia Center for Health Services Research and Development Nork Marash Medical Center; 2003. http://auachsr.com/UserFiles/File/Anahit/Evaluation%20of%20SEF%20Completen ess_Eng.PDF. Viewed 1 September 2016.

[4] Andarini NKS. Analisis Tingkat Kepatuhan Dokter Spesialis Dalam Kelengkapan Pengisian Berkas Rekam Medis Di Instalasi Rawat Inap Rumah Sakit Daerah dr Soebandi Jember.[Master Thesis], Surabaya: Universitas Airlangga; 2015.

[5] Mosadeghrad AM. Factors affecting medical service quality. Iran J Public Health. 2014;43(2):210–220.

[6] Milgram S. Obedience to authority: an experimental view. New York: Harper & Row; 1974.

[7] Kesehatan NNP. Pengantar untuk Perawat dan Profesional Kesehatan Lain. Alih Bahasa Agung Waluyo; Editor: Monica Ester. Edisi 2. Jakarta: EGC; 2002.

[8] Kurniawati D, Sugiarti I. Tinjauan Pengisian Resume Keluar Rawat Inap Ruang Teratai Triwulan IV di RSUD Kabupaten Ciamis Tahun 2012. Jurnal Manajemen Informasi Kesehatan Indonesia. 2014;2:26–31.

[9] Boonstra A, Broekhuis M. Barriers to the acceptance of electronic medical records by physicians from systematic review to taxonomy and interventions. BMC Health Serv Res. 2010;10(6):10–231.

[10] Kossaify A, Rasputin B, Lahoud JC. The function of a medical director in healthcare institutions: a master or a servant. Health Serv Insight. 2013;6(14):105–110.

[11] Pamungkas TW, Marwati T, Solikhah S. Analisis Ketidaklengkapan Pengisian Berkas Rekam Medis di Rumah Sakit PKU Muhammadiyah Yogyakarta. KES MAS. 2010;4:17–28.

[12] Nadya FT. Kelengkapan Pengisian Berkas Rekam Medis Pelayanan Medik Rawat Jalan dan Patient Safety di RSGMP UMY. [Master Thesis], Yogyakarta: Universitas Muhammadiyah; 2014.

[13] Sugiyanto Z. Analisis Perilaku Dokter dalam Mengisi Kelengkapan Data Rekam Medis Lembar Resume Rawat Inap di RS Ungaran tahun 2005. [Master Thesis]. Semarang: Universitas Diponegoro; 2006.

[14] Indar I, Indar I, Naiem MF. Faktor yang Berhubungan dengan Kelengkapan Rekam Medis di RSUD H. Padjonga DG Ngale Takalar. Jurnal AKK. 2013;2:10–18.

[15] Ballweg R, Sullivan E, Brown D, Vetrosky D. Physician assustance: a guide to clinical pratice. 4th edAmsterdam: Elsevier Health Science; 2008.

The Behavior of Specialist Towards Completeness of Medical Records

8% SIMILARITY INDEX **7**% INTERNET SOURCES **5**% PUBLICATIONS **4**% STUDENT PAPERS

1	vulms.vu.edu.pk Internet Source	**1**%
2	Ratnawati Ratnawati. "Analysis The Level of Compliance of Hospital Human Resources in Writing The Status of Inpatient Medical Record Dr Sayidiman Hospital and The Influences Factors", Journal for Quality in Public Health, 2020 Publication	**1**%
3	www.researchgate.net Internet Source	**1**%
4	Submitted to University of Maryland, University College Student Paper	**1**%
5	kanazawa-u.repo.nii.ac.jp Internet Source	**1**%
6	www.semanticscholar.org Internet Source	**1**%
7	www.lib.unair.ac.id	

Internet Source

1%

8 eudl.eu
Internet Source

1%

9 mafiadoc.com
Internet Source

<1%

10 jyx.jyu.fi
Internet Source

<1%

11 www.e-journal.unair.ac.id
Internet Source

<1%

12 Bruno de Sousa Lopes. "Ecological interactions and diversity of insects on Fabaceae species in the Brazilian Cerrado", Universidade de Sao Paulo, Agencia USP de Gestao da Informacao Academica (AGUIA), 2020
Publication

<1%

13 assets.researchsquare.com
Internet Source

<1%

14 eprints.kmu.ac.ir
Internet Source

<1%

Exclude quotes   On   Exclude matches   < 5 words
Exclude bibliography   On