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Analysis of human resources needs in the outpatient registration unit using the Analisis Beban Kerja Kesehatan (ABK Kes) method

Atika Mima Amalin, Ari Susanti, Nuke Amalia, Devia Rosa Fauzan

Sekolah Tinggi Ilmu Kesehatan Hang Tuah Surabaya, Surabaya, Indonesia

Corresponding author: Ari Susanti, Sekolah Tinggi Ilmu Kesehatan Hang Tuah Surabaya, Surabaya, Indonesia.

E-mail: arisusanti@stikeshangtuah-sby.ac.id

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Abstract

Excessive workloads for medical record staff can lead to both physical and mental fatigue, while insufficient workloads may result in boredom. The outpatient registration unit at the hospital faces challenges in the registration process due to a high volume of patient registrations, leading to long queues. This study aimed to analyze the human resource needs of the medical record staff in the outpatient registration unit using the Analisis Beban Kerja Kesehatan (ABK Kes) method. The ABK Kes method involves calculating labor needs based on the workload associated with each type of task performed by staff at health service facilities, aligning with their primary duties and functions. The chosen method for this study was qualitative descriptive. Data collection was conducted through observation and interviews involving five subjects, all of whom were medical record staff in the outpatient unit. The results indicate that, based on the calculations, the human resource needs in the patient registration unit should include seven people, requiring an additional two staff

members. The waiting time during registration significantly influences patients' perceptions of hospital service assessments. The addition of two staff members, in accordance with the calculated needs, is expected to enhance the productivity of the registration officers.

Introduction

Every hospital must be able to provide minimum services to improve the quality of services and facilities provided to patients.[1] The purpose of medical records is to support the achievement of orderly administration of health services to improve quality and maintain hospital service standards.[2] An important factor in organizing optimal medical records must be supported by adequate and competent human resources in their fields in quantity and quality so that they can provide maximum service.[3] The work assigned to medical record officers will affect their performance, so officers must be highly motivated to carry out their work.[4] Medical record officers who are following the workload greatly affect the level of work efficiency and productivity because heavy workloads can affect performance. Additionally, it can cause effects in the form of fatigue, both physically and mentally,[5] while too little workload will cause boredom and monotony.[6,7] Workload is any form of work given to human resources and completed within a predetermined period.[8]

Based on observations at Surabaya "X" Hospital, it was found that there were obstacles in the registration process in the registration unit. The obstacle is seen from the large number of patients who register, causing long queues at the registration counter. This results in services at registration taking a long time. The quality of hospital services is a determining factor for patient satisfaction and affects the image and reputation of the hospital.[9] If the waiting time for registration is too long, it will affect the patient's overall medical service time, which will

then affect patient satisfaction.[10] Other research shows that one of the causes of long waiting times for registration is a lack of staff in the registration department.[11] Service waiting time is one dimension of health service quality.[12] Some studies state that the waiting time at registration is a maximum of 10 minutes.[11,13] However, other studies found that waiting times of more than 10 minutes were almost 70%.[14] Therefore, good and sufficient human resource planning is needed to determine the quality of management and the success of the hospital in providing services to patients appropriately and efficiently.

A crucial aspect of effective human resource planning within the hospital's medical records unit involves analyzing the specific human resource needs.[15] Currently, the workload presents a dual challenge - there is a substantial amount of data that requires processing, resulting in reports being inaccurately reported and delayed. This situation impedes officers from executing their duties in alignment with their defined responsibilities and functions.[16] To address these challenges, a human resource needs analysis becomes instrumental in determining the optimal number of staff required based on the workload. In the context of medical record staff in outpatient registration, the Analisis Beban Kerja Kesehatan (ABK Kes) method, or the health workload analysis method in English, serves as a valuable human resource tool.[17] The ABK Kes method involves calculating labor needs according to the workload assigned to each type of labor within a health service facility, considering their primary duties and functions.[16]

Given this, the objective of this study was to analyze the labor needs within the registration unit at Hospital "X" in Surabaya, utilizing the ABK Kes method. This analysis aimed to provide insights into optimizing human resources to enhance the efficiency and effectiveness of the registration process.

Materials and Methods

Design

This research was a qualitative descriptive study, focusing on events or phenomena related to human resource planning at "X" Hospital. Descriptive research methods were employed to identify independent variables, examining single or multiple variables without direct comparisons, and exploring relationships with other variables.

Study participants and data collection

The research involved five subjects, all of whom were registration staff. Data were collected through interviews, observations, and documentation studies. Unstructured interviews with patient registration officers were conducted to understand the duration of each activity, supplemented by observational data. Observations were made in real time to assess the registration process and the time allocated to each step. Researchers used timers during each activity to record the time spent by registration officers, and observations were conducted during each officer's shift.

Data analysis

Data analysis utilized the ABK Kes calculation method. The time required for each activity in the registration section was calculated using a formula to determine each component of the overall calculation. The resulting data illustrated the human resource needs in the registration section.

Ethical clearance

This research obtained ethical approval from the Health Research Ethics Committee of Sekolah Tinggi Ilmu Kesehatan Hang Tuah Surabaya, Indonesia, granted under ethical certificate number PE/133/III/2023/KEP/SHT.

Results

Characteristics of respondents

Table 1 reveals that among the 5 respondents, 4 (80%) were female, and 1 (20%) was male.

The age distribution indicates that 3 (60%) respondents fell within the 36-45 years age group,

while 2 (40%) were aged between 26-35 years. Furthermore, the educational background of

the respondents shows that 3 (60%) have a high school education, and 2 (40%) hold a 3-year

diploma. In terms of work experience, 3 (60%) respondents had 1-5 years of experience,

while 2 (40%) had more than 5 years of work experience.

Based on Table 2, it is evident that there were 195,330 (76.26%) registered patients from the

outpatient unit at X Hospital out of a total of 256,115 patients.

Calculation of human resources using the ABK Kes method

The steps in calculating Human Resources using the ABK Kes method are as follows: i)

determine health facilities and types of health human resources - the type of health facility in

this study is a hospital, the workforce under investigation includes Medical Record and

Health Information Personnel (PMIK), the unit section examined is the registration unit for

outpatients; ii) set available work time - according to Regulation of the Minister for

Administrative Reform and Bureaucratic Reform No. 26 of 2011, this is 1200 hours per year

or 72,000 minutes per year (either working 5 days or 6 days every week); iii) define workload

components and time standard. Based on observations, the average time required is

determined by the workload component of the medical record officer in the outpatient

registration work unit, as described in Table 3.

Firstly, we calculate the workload standard and standard of support tasks. The standard

workload for main activities is calculated based on the time required to complete each

activity. Greater time spent on work implies a higher workload, leading to inefficiency in work time. The standard workload for each main work component is calculated by dividing the work time per year by the average time spent on each activity. To calculate the standard for supporting tasks, the value of the supporting task factor must be determined ((activity time / work time per year) x 100%). The formula for calculating the standard of supporting tasks is = (1 / (1 - factor of supporting tasks / 100)). In this study, the number of supporting task factors was 0 as there were no other supporting task factors in the outpatient registration unit, resulting in a standard of supporting tasks equal to 1. Secondly, we calculate health human resource needs. The final step in calculating ABK Kes involves determining the need for health human resources in the outpatient registration unit. The calculation of human resource needs is derived from the total number of patients per year divided by the standard workload. Table 4 describes the calculation of all steps in the human resource requirements analysis.

The results of the ABK Kes calculation indicate that 7 personnel are required in the outpatient registration unit. Based on the standard calculation of human resource needs, it is necessary to add 2 officers to the existing outpatient registration counter, as the current number of officers is only 5 people.

Discussions

The workload assigned to officers significantly influences the efficiency and productivity of their work.[18,19] An excessive workload can lead to fatigue and work stress, as demonstrated by research conducted by Triyadin (2021), which highlights the impact of workload on employee productivity.[20] The calculation of employees or human resources using the ABK Kes method involves coherent steps, including determining the place and unit to be

calculated, calculating available working time, establishing the time norm for each main task, determining the workload standard, calculating the supporting task factor and supporting task standard, and finally obtaining the final calculation of human resource requirements.

The calculation of available working time in this study adheres to the regulations of the State Personnel Agency Number 19 of 2011, providing general guidelines for preparing civil servant needs, and Regulation of the Minister for Administrative Reform and Bureaucratic Reform No. 26 of 2011, which stipulates effective working hours of 1200 hours per year or 72000 minutes per year for either 5 (five) working days or 6 (six) working days. Our interviews and observations reveal that the registration unit is open from 07:00 to 12:00 for 5 working days a week. Each officer works for 5 hours daily, and on average, 751 patients register at the old patient registration counter. Consequently, each officer has the task of registering 150 patients in just 5 hours. Our observations indicate that the officer's workload increases not only due to the high number of registering patients but also because system downtime hampers officer productivity.[21] The standard value of supporting tasks is 1 because the supporting task factor has a value of zero (0), and there are no supporting tasks for registration officers, according to our interviews.

Research conducted in the outpatient registration unit of "X" Hospital indicates that each workload component takes an average time of less than 10 minutes. This aligns with Minister of Health Regulation No. 129 of 2008, which sets the standard for providing medical records in outpatient services as less than 10 minutes. Workload components refer to the types and descriptions of tasks carried out in practice. The average time for each task component, also known as the time norm, is necessary for an HRK to perform activities following the applicable service standards in health services.[17]

Based on the results of the calculation of Health Human Resources needs using the ABK Kes method, it is determined that medical record officers, especially in the old patient registration

unit at Surabaya City Hospital "X," require 7 registration officers. Consequently, Hospital "X" in Surabaya must add 2 officers to achieve an ideal workload for each officer, ensuring performance productivity and improved quality of hospital services. Proper and accurate human resource planning becomes achievable when understanding how human resources align with the needs of an effective and efficient organization.[22] Insufficient human resources can elevate the workload of medical record officers,[23] and an increase in patient visits can contribute to a heightened workload and reduced work productivity.[24]

Balancing human resources in the medical records unit is pivotal for enhancing service quality at "X" Hospital. The current shortage of staff in the medical records unit can intensify the workload of medical records staff, potentially causing service disruptions for patients.[25] Human resource planning with ABK Kes is anticipated to organize positions and tasks within the medical records work unit at "X" hospital, aligning with their main duties and functions.[14,26] A well-qualified workforce significantly influences the quality of service in the medical records work unit. Qualified medical record personnel and their competencies are vital in health services for delivering quality medical records.[27] The number of workers and workload must be appropriately balanced to ensure quality service.[28] A shortage of human resources in "X" Hospital could increase the workload of officers. Conversely, an excess of human resources may lead to inefficiency in the workload of medical record officers and reduced work productivity. Therefore, well-organized human resource planning is essential to match the quality of hospital services.[26]

Conclusions

After analyzing human resource needs at "X" hospital using the ABK Kes method, it's concluded that adding 2 medical record officers is necessary for optimal functioning of the outpatient registration unit. This integration is expected to create a well-balanced medical

records workforce, enhancing service quality. The recommendation for more officers is based on the understanding that strategically expanding the workforce can ease workload pressures and streamline processes. This aligns with the goal of improving overall service quality. Additionally, for future research, a comparative study between the ABK Kes method and alternative approaches for calculating human resource needs is suggested. This analysis aims to provide insights into the accuracy and efficacy of different methods in determining staffing requirements, contributing valuable knowledge to refine human resource planning in healthcare settings.

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Table 1. Characteristics of respondents at "X" hospital (n=5).

Variable	Frequency (%)
Sex	
Female	4 (80)
Male	1 (20)
Age	
26-35	2 (40)
36-45	3 (60)
Qualification	
Senior High School	3 (60)
3-year diploma	2 (40)
Length of work	
1-5 years	3 (60)
>5 years	2 (40)

Table 2. Number of patient visits in "X" Hospital in 2022.

Unit	Number of patient visits
Emergency Room	14,626
Outpatient for a registered patient	195,330
Outpatient for new patient	20,381
Inpatient	25,778
Total	**256,115**

Table 3. Define workload components and time standards.

Main task	Time (minutes)
Call the patient according to the queue number	0.25
Check patient referrals and ask about the patient's needs	1
Enter patient data according to the referral date on the computer	0.25
Print participant eligibility letters	0.5
Provide referral letters and eligibility letters to patients	0.5

Table 4. Define workload standards and human resource requirements.

Main task	Time	Work time/year	Workload standard	Total patient/year	Human resource requirement
Call the patient according to the queue number	0.25	72,000	288,000	195,330	195,330/288,000=0.6
Check patient referrals and ask about the patient's needs	1	72,000	72,000	195,330	195,330/72,000=2.7
Enter patient data according to the referral date on the computer	0.25	72,000	288,000	195,330	195,330/288,000=0.6
Print participant eligibility letters	0.5	72,000	144,000	195,330	195,330/144,000=1.3
Provide referral letters and eligibility letters to patients	0.5	72,000	144,000	195,330	195,330/144,000=1.3
Human resource requirements (main task)					7
Supporting duties					1
Total human resource requirements (main task x supporting duties)					7x1=7