

Hospital Pharmacists in Nigeria: Job Satisfaction and Its Predictors

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Abstract

Job satisfaction is a key indicator to evaluate health-care quality. Poor job satisfaction has been linked to poor healthcare delivery and also psychological problems have been associated with health-care professionals. The study assessed Nigerian hospital pharmacists' job satisfaction and factors that influence satisfaction with the job. A cross-sectional survey was conducted among consenting hospital pharmacists in Nigeria using a validated self-administered "American Hospital Pharmacist Job Satisfaction Survey" (AHPJSS) questionnaire. The data was collected from September 2019 to March 2020. To summarize the data, descriptive and inferential statistics were employed. SPSS version 23 was used to analyze the data. The statistical significance level was set at $p \leq 0.05$. Of the 572 respondents (response rate = 71.5%), 33.7 % of the hospital pharmacists were between 30 to 39 years of age and most of the pharmacists were male (51.0 %). Approximately 52% of Nigerian hospital pharmacists had job satisfaction. Job satisfaction was substantially related to age ($X^2(4) = 13.56, p = 0.009$) and working experiences ($X^2(1) = 6.70, p = 0.010$). The intrinsic factors that influenced job satisfaction among Nigerian hospital pharmacists were recognition from peers and the challenge of the job and extrinsic factors that influenced job satisfaction among Nigerian hospital pharmacists were staffing of the pharmacy department and feedback from supervisors. Most of the Nigerian hospital pharmacists were satisfied with their jobs. Predictors of job satisfaction were; recognition from co-workers, challenges the job provides, staffing, recognition from other co-workers, salary, and feedback from supervisor(s).

Keywords: Job satisfaction, Hospital, Pharmacists, Nigeria, Intrinsic factor, Extrinsic factor

INTRODUCTION

The goal of pharmacy practice is to help advance healthcare by assisting patients with health challenges in making the greatest use of their medications [1]. In Nigeria, as in other nations, pharmacy practice has shifted from a product-focused to a patient-centered approach. The quality of the health care system can be evaluated via the structure, process and outcome of health care. One of the quality service indicators widely used to measure the process aspect of health care is the level of professionals' job satisfaction. As a result, determining the level of job satisfaction among pharmacy professionals provides insight into the quality of pharmaceutical care.

Health workers in developing countries including Nigeria face challenges to provide high-quality care to increasing patient loads under increasingly difficult working conditions. According to Wuliji *et al.* (2009) Sub-Saharan Africa has a severe lack of pharmacists and high emigration rates as a result of inadequate compensation, ineffective management systems, and heavy workloads [2]. Nigeria has a pharmacist-to-population ratio of 1 to 10,000, which is lower than the recommended World Health Organization's (WHO) of ratio 1:1,000 [3]. Job satisfaction refers to a pleasurable emotional state brought on by a positive attitude toward one's job [4]. Job satisfaction represents the emotional well-being of a

person and influences behavior, which can affect how an organization functions [5]. Pharmacists' job satisfaction has been associated with fewer dispensing errors, a lower likelihood of leaving the profession, greater organizational engagement, and better patient outcomes [6-9]. According to "Herzberg's two-factor theory", factors impacting job satisfaction are classed as intrinsic or extrinsic. The intrinsic factor is a "motivator factor" that focuses on the substance and responsibilities of a job, as well as the possibility for self-expression afforded by the job [10]. Accountability, skill, autonomy, and opportunity for personal growth and

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How to cite this article: Anene-Okeke CG, Ubaka CM, Ukwue CV. Hospital Pharmacists in Nigeria: Job Satisfaction and Its Predictors. *Arch Pharm Pract.* 2025;16(1):27-33. <https://doi.org/10.51847/mnWHWfYn51>

development are among these attributes. The extrinsic component, on the other hand, refers to “Maintenance factors”, which are determined by external events or people and focus on the most apparent characteristics of a job, such as working conditions, co-workers’ relationships, salary, and job security [10]. Previous research has found varying levels of satisfaction with the job among hospital pharmacists; nevertheless, Maio *et al.* (2004) found that hospital pharmacists were content with their jobs [11]. Kerschen *et al.* (2006) observed that integrated and clinical hospital pharmacists had more satisfaction with their current jobs than staff hospital pharmacists, and their job satisfaction was closely connected to the number of clinical activities done [12]. Malaysian hospital pharmacists were contented with their jobs (52%), and autonomy, contribution, innovation, challenge (intrinsic factors), remuneration, job climate, and supervisor feedback (extrinsic factors) predicted their job satisfaction [13]. Pharmacists at Texas Medical Centre expressed high mean job satisfaction and felt the work they do is important, creative, and contributes considerably to the hospital's operation [14]. Job discontent has led to higher job turnover and a lower quality of life, which can have a significant impact on the mental, emotional, and physical health of healthcare providers because they spend the majority of their time at work [15]. Job discontent has been linked to poorly filled prescriptions, the inability to detect drug interaction, and poor patient counseling [16]. However, in Nigeria, the majority of job satisfaction studies focus on physicians, nurses, and other allied health-care professionals [17-20]. There have been few published studies on satisfaction with jobs among hospital pharmacists in Nigeria. The study aimed to assess job satisfaction and predictors that influence job satisfaction among hospital pharmacists.

MATERIALS AND METHODS

Study Design

This was a cross-sectional study conducted among hospital pharmacists from 25 hospitals in Nigeria.

Study Setting

Nigeria is the most populous black country in West Africa, located on the Gulf of Guinea, and has a population of approximately 196 million people. There are about 500 ethnic groups and languages spoken, with the biggest tribes being Igbo, Hausa, and Yoruba. Nigeria is made up of 36 states as well as the Federal Capital Territory (FCT) of Abuja. North-Central, North-East, North-West, South-East, South-West, and South-South are the six geopolitical zones of the country [21]. There are around 85 tertiary hospitals in the country [22]. Federal Medical Centres (FMCs) and Federal and State Teaching Hospitals are among the tertiary hospitals (FTHs). Three to four tertiary hospitals were conveniently selected from each geopolitical zone. The study locations include: (1) Nnamdi Azikiwe University Teaching Hospital (NAUTH) Nnewi, Anambra State, (2) University of Nigeria Teaching Hospital (UNTH) Enugu State, (3) Alex Ekwueme Federal

Teaching Hospital (AEFTH) Abakaliki, Ebonyi State, (4) Enugu State University Teaching Hospital (ESUTH), (5) Federal Medical Centre (FMC)-Umuahia, Abia State (South-East); (6) University College Hospital (UCH)-Ibadan, Oyo State, (7) Obafemi Awolowo University Teaching Hospital (OAUTH) Ile Ife, Osun State, (8) National Orthopaedic Hospital (NOH) Igbobi, Lagos State, (9) Federal Medical Centre (FMC)-Lagos (South-West); (10) Benin University Teaching Hospital (BUTH) Benin, Edo State, (11) University of Calabar Teaching Hospital (UCTH) Cross-River State, (12) Federal Medical Centre (FMC)-Asaba, Delta State (South-South); (13) Benue State University Teaching Hospital (BSUTH), (14) Federal Medical Centre (FMC)-Abuja, (15) Federal Medical Centre (FMC)-Makurdi, Benue State, (16) Federal Medical Centre (FMC)-Keffi, Nasarawa State (North-Central); (17) Federal Teaching Hospital (FTH) Gombe State, (18) Abubakar Tafawa Balewa University Teaching Hospital (ATBUTH) Bauchi State, (19) Federal Medical Centre (FMC)-Azare, Bauchi State (North-East); (20) Aminu Kano Teaching Hospital (AKTH) Kano State, (21) Barau Dikko Teaching Hospital (BDTH) Kaduna State, (22) National Ear Care Centre (NECC) Kaduna State, (23) Ahmadu Bello University Teaching Hospital (ABUTH) Shika Zaria, Kaduna State, (24) Usman Dan-Fodio University Teaching Hospital (UDUTH) Sokoto State, (25) Federal Medical Centre (FMC)-Birnin Kudu, Jigawa State (North-West). Tertiary hospitals were chosen because they employ more pharmacists than secondary, primary, and private hospitals in Nigeria.

Population and Sample Size

The total number of licensed hospital pharmacists was 1421. The Yamane sample size was used to determine the sample size.

$$n = \frac{N}{1 + N(e)^2} \quad (1)$$

Where n = sample size, N = population size, e = error term at 0.05

Hence, a minimum sample of 400 was obtained. However, 572 pharmacists were eventually included in the study to make up for non-respondent and adequate representation of the study population.

Study Instrument

The questionnaire was divided into two sections; the first captured socio-demographic information such as age and gender. The “American Society of Health-System Pharmacists (ASHP) hospital pharmacist job satisfaction survey” (AHPJSS), which measures job satisfaction exclusively for pharmacists, was used in section two. The AHPJSS includes 32 questions about intrinsic and extrinsic job satisfaction factors such as “autonomy”, “recognition from co-workers”, “contribution”, “influence on therapy”, “creativity”, “challenge”, “rewards”, “staffing”, “recognition from co-workers”, “salary”, “work schedule”, “job

atmosphere”, “workload”, “advancement”, and “supervision”. Finally, the respondents were asked ‘how satisfied are you with your job’ [23]. The responses were given on a “5-point Likert scale,” ranging from “strongly disagree” to “strongly agree”.

Data Collection

Eight hundred questionnaires was sent to the chief pharmacist or the nominated pharmacist with a cover letter to the selected hospitals. The questionnaires were distributed to individual pharmacists by the chief pharmacist or the nominated pharmacist of the selected hospital. To ensure a high response rate, a reminder e-mail was sent, followed by a personal phone call to the nominated pharmacists three weeks later. Completed questionnaires were collected by the designated pharmacist within the respective hospitals and returned to the researcher using self-addressed envelopes. The research was carried out between September 2019 and March 2020.

Data Analysis

Statistical Product and Service Solution (SPSS) for Windows, version 23.0”, was used to analyze the data (IBM Corp, Armonk, NY). The data obtained was first coded, then entered into the software and cleaned. The response options “Strongly disagree”-1, “Disagree”-2, and “Neutral” were classified as “Unsatisfied” whereas “Agree”- 4 and “Strongly agree”-5 were classified as “Satisfied” [13]. Demographic characteristics of hospital pharmacists were described using descriptive statistics (frequency, percentage). “Pearson chi-square” test was used to investigate the association between job satisfaction and demographic characteristics of hospital pharmacists. Logistic regression was used to identify characteristics (both intrinsic and extrinsic) that influenced hospital pharmacists' job satisfaction.

Ethical Approval

University of Nigeria Teaching Hospital, Ituku-ozalla, Enugu State (NHREC/05/01/2008B-FWA00002458-IRB00002323) and Ahmadu Bello University Teaching Hospital, Shika, Zaria, Kaduna State (ABUTHZ/HREC/W31/2019) Health Research Ethic Committee approved the study. All participants provided informed consent and were made aware that their participation was entirely voluntary. All information was kept private.

RESULTS AND DISCUSSION

Five hundred and seventy-two of the 800 questionnaires distributed were valid, giving response a rate of (71.5 %). Majority of respondents (51.0 %) were male and married (56.5 %). The majority of respondents (72.0 %) worked more than 50 hours each week and almost half had more than 5 years of job experience (49.7 %). **Table 1** shows the details. The question “Patients attempt to comply with the direction and counsel I provide them” had the highest satisfaction

(91%) whereas the question “There are more pharmacists on the job than needed” was rated the lowest (12.8 %) (**Table 2**).

Table 3 reveals no statistically significant relationship between gender and job satisfaction of pharmacists ($X^2 = 0.19$, $p=0.662$). Pharmacists’ age and working experience were significantly associated with job satisfaction ($X^2 = 13.50$, $p=0.009$, $X^2 = 6.70$, $p=0.010$).

The most important intrinsic characteristics influencing job satisfaction among hospital pharmacists were acknowledgment from colleagues (AOR =1.1517, 95 % CI [1.097-2.096], $p = 0.012$) and challenge (AOR = 1.236, 95 % CI [1.008-1.516], $p = 0.041$). Employee recognition (AOR = 1.261, 95 % CI [1.029-1.546], $p = 0.026$), salary (AOR = 1.177, 95 % CI [1.069-1.296], $p = 0.001$), staffing (AOR = 1.445, 95 % CI [1.179-1.772], $p = 0.0001$), and job atmosphere (AOR = 1.067, 95% CI [1.023-1.114], $p = 0.003$) (**Table 4**).

Table 1. Socio-demographic of hospital pharmacists (N=572)

Variable	Frequency	percentage
Sex		
Male	292	51.0
Female	280	49.0
Age in years		
20-29 years	234	40.9
30-39 years	193	33.7
40-49 years	107	18.7
50-59 years	34	5.9
60 and above	4	0.7
Marital Status		
Single	249	43.5
Married	323	56.5
widowed	3	0.5
Hours worked per week		
“<48 hours”	64	11.2
“49-60 hours”	412	72.0
61-72 hours	74	12.9
73-84 hours	22	3.8
Current working unit (in years)		
<1	312	54.5
>1	260	45.5
Working experience (in years)		
<5	288	50.3
>5	284	49.7
Dependents (Family)		
<5	194	33.9
>5	261	45.6

No response	117	79.5
Geo-political zone (participants)		
South	276	48.3
North	296	51.7
Monthly Income		
<200,000	416	72.7
200,000-400,000	54	9.4
>400,000	102	17.8

17. My work schedule leaves me adequate time for my family life.	69.7	30.3
18. The number of hours I work is excessive	56.9	43.0
19. My workload is excessive.	50.2	49.9
20. I am permitted to perform very many patient care duties.	47.4	52.6
21. My job does provide me with enough intellectual stimulation.	39.2	60.8
22. The size of my work space is sufficient to perform my duties	57.5	42.5
23. The physical arrangement of my practice setting facilitates quality patient care.	61.0	39.0
24. The physical arrangement of my practice setting facilitates work flow.	59.1	40.9
25. The physical arrangement of my practice setting facilitates communication between pharmacy personnel.	40.4	59.6
26. I have adequate access to computer resources	56.0	44.1
27. Pharmacists have access to the necessary equipment and technology required to perform their job.	72.4	27.6
28. During many hours of the day, there are more pharmacists on the job than needed.	87.2	12.8
29. My supervisor gives ample consideration to employee complaints.	45.1	54.9
30. Good working relationships exist between me and my supervisor.	18.2	81.8
31. My supervisor has an adequate knowledge of his/her job.	14.7	85.3
32. My supervisor provides competent supervision.	23.8	76.2
33. All things considered; I am satisfied with my current job	48.1	51.9

Table 2. Job satisfaction among hospital pharmacists (N=572)

Questions	Unsatisfied (%)	Satisfied (%)
1. I am allowed, a sufficient amount of freedom to decide how I do my work.	46.40	53.50
2. I determine the extent of time that I provide patient care.	47.7	52.3
3. I receive adequate recognition for work well done by physicians.	62.1	37.9
4. Good working relationships exist between me and physicians.	36.0	38.4
5. I am always being consulted by physicians on professional matters	61.5	38.4
6. It is easy to communicate with physicians with whom I share patients.	41.9	58.1
7. I receive support from physicians for my patient care recommendations.	50.1	49.8
8. Pharmacists and Pharmacy technicians pull together in my practice; we support and help each other.	24.4	75.5
9. Pharmacy technicians in my practice reliably carry out instructions.	27.4	72.5
10. I am satisfied with the on-the-job relationships I have with the Pharmacy technicians I work with.	26.9	72.5
11. In general, I find that patients attempt to comply with the directions and advice I give them.	8.9	91.0
12. I feel a strong personal connection with patients	21.9	78.0
13. My direct interactions with patients are professionally rewarding	16.9	83.0
14. Considering the kind of work, I do and the amount of responsibility I have, my pay is about right	72.2	27.8
15. My job offers a satisfactory salary.	73.1	27.0
16. I can take time off without feeling guilty.	76.1	23.9

Table 3. Association between level of job satisfaction and socio-demographic characteristics of hospital pharmacists (N=572)

Variables	Overall job satisfaction		X ² (df)	P-value
	Unsatisfied	Satisfied		
	Sex			
Male	143 (52.0)	149 (50.2)	0.192 (1)	0.662
Female	132 (48.0)	148 (49.8)		

Age in years					
20-29	105 (38.2)	129 (43.4)	13.559 (4)	0.009	
30-39	90 (32.7)	103 (34.7)			
40-49	67 (24.4)	40 (13.5)			
50-59	11 (4.0)	23 (7.7)			
>60	2 (0.7)	2 (0.7)			
Marital status					
Single	116 (42.2)	133 (44.8)	0.392 (1)	0.531	
Married	159 (57.8)	164 (55.2)			
Current working unit (years)					
< 1	146 (53.1)	166 (55.9)	0.452 (1)	0.501	
>1	129 (46.9)	131 (44.1)			
Working experience (years)					
< 5	123 (44.7)	165 (55.6)	6.697 (1)	0.010	
>5	152 (55.3)	132 (44.4)			
Number of dependents (n=455)					
< 5	83 (37.2)	111 (47.8)	5.248 (1)	0.022	
>5	140 (62.8)	121 (52.2)			
Working hours per week					
< 48	26 (9.5)	38 (12.8)	1.938 (3)	0.585	
49-60	200 (72.7)	212 (71.4)			
61-72	37 (13.5)	37 (12.5)			
73-84	12 (4.4)	10 (3.4)			
Monthly income (₦)					
<200,000	186 (67.6)	230 (77.4)	7.466 (2)	0.024	
200,000-400,000	33 (12.0)	21 (7.1)			
>400,000	56 (20.4)	46 (15.5)			
Geopolitical zone					
South	131 (47.6)	145 (48.8)	0.080 (1)	0.777	
North	144 (52.4)	152 (51.2)			

Table 4. Intrinsic and extrinsic factors that predict job satisfaction among hospital pharmacists (N=572)

Variable	95% C.I. for EXP(B)				
	Exp(B)	S.E.	Lower	Upper	Sig
Intrinsic factors					
autonomy	1.059	0.053	0.955	1.174	0.280
Recognition from co-worker	1.517	0.165	1.097	2.096	0.012
Contribution	1.022	0.034	0.956	1.092	0.527
Influence medication therapy	0.982	0.092	0.819	1.177	0.843
Creativity	1.134	0.137	0.866	1.485	0.360

Challenge	1.236	0.104	1.008	1.516	0.041
Extrinsic factors					
Rewards	0.948	0.125	0.742	1.213	0.672
Staffing	1.445	0.104	1.179	1.772	<0.0001
Recognition from other co-workers	1.261	0.104	1.029	1.546	0.026
Salary	1.177	0.049	1.069	1.296	0.001
Working hours	1.075	0.056	0.962	1.200	0.203
Workload	1.003	0.054	0.903	1.115	0.951
Job environment	1.067	0.022	1.023	1.114	0.003
Advancement	1.095	0.103	0.895	1.340	0.376
Feedback from the supervisors	1.195	0.064	1.054	1.354	0.005
Constant	0.000	1.118			0.000

This study examined satisfaction with the job as well as the factors (intrinsic and extrinsic) that influence job satisfaction among Nigerian hospital pharmacists. In this study, the overall level of job satisfaction was slightly higher than fifty percent and the mean score was (3.27 ±1.13) out of 5, indicating that the majority of pharmacists were contented with their jobs. Other studies have found higher levels of job satisfaction [13, 24-26], whereas, on the other hand, studies have reported lower levels of job satisfaction [27, 28].

In this current study, age was associated with pharmacists' satisfaction with the job. This finding is consistent with that reported in other studies [29-33]. A study conducted among hospital pharmacists in Eastern Ethiopia reported that; age is substantially predictive of hospital pharmacist job satisfaction [28]. Nonetheless, some studies [7, 32, 34, 35] found no link between age and job satisfaction. In this study, younger pharmacists aged 20-25 years were more satisfied with their job compared to the older pharmacists which is in contrast with other studies that reported younger pharmacists were dissatisfied with their job [13, 28]. Duan *et al.* (2012) reported that younger pharmacists aged less than 25 years were satisfied with their job in terms of working environment, supervisors, working competence, and promotion [36]. The job satisfaction of the younger pharmacists in this study could be that hospital pharmacy is their first job after graduating from pharmacy school and it met their needs and also the methodological variation.

Job satisfaction was associated with working experience. This result was consistent with that reported in other studies [13, 31, 33, 34]. This shows that job satisfaction increases with the number of years worked. Results from this study indicate that hospital pharmacists who had less than five years of working experience were more satisfied with their jobs than those who had more than five years of working

experience. This finding is not in concordance with that reported by Manan *et al.* (2015) that hospital pharmacists with more than 7 years of working experience had job satisfaction [13]. This disparity could be that most of the pharmacists who participated in the study were younger and had worked fewer years at the time of the study.

Monthly income was found to be related to satisfaction with the job. This finding is consistent with what has been reported among Thai pharmacists [37] and Saudi community pharmacists [32]. This indicates that a high income is related to job satisfaction which is a very important factor to note that the salary of the hospital pharmacists plays a major role in job satisfaction and might also increase the likelihood to stay in the current job.

In this study, the intrinsic factors of colleague recognition were found to influence job satisfaction. Pharmacists who received acknowledgment from colleagues were twice more likely to have job satisfaction than those who did not receive recognition from colleagues. This finding is consistent with that reported in other studies [14, 38]. However, Manan *et al.* (2015) reported that recognition from colleagues was not a predictor of job satisfaction among Malaysian hospital pharmacists [13]. Pharmacists who believed their work was challenging reported higher levels of job satisfaction than those who did not feel their work was challenging. This finding supports that reported in other studies [13, 14]. The unchallenging roles and functions of hospital pharmacists could lead to job dissatisfaction [39].

Staffing of hospital pharmacies was a statistically significant extrinsic predictor of job satisfaction in the current study, which is likely owing to the fact that the number of pharmacists employed by various hospitals is small and also the above mention ratio of pharmacists to population. According to the International Pharmaceutical Federation (FIP), the median density of hospital pharmacists in Africa in 2017 was 1.30 [40]. The lack of pharmacists in Nigeria is the result of pharmacists migrating to other developed countries in search of a better quality of life and professional growth [41].

Another important extrinsic factor influencing satisfaction with the job among Nigeria hospital pharmacists in this study is recognition from co-workers, the Federal Government of Nigeria recently institutionalized pharmaceutical care in Nigeria, granting accreditation and recognition to the West African Postgraduate College of Pharmacists (WAPCP) to stimulate interprofessional collaboration among other health professionals in the health care context. In contrast, studies have shown that co-worker recognition is not a predictor of pharmacist job satisfaction [13, 14]. The environment of the study setting and the practice of pharmacy, which varies from country to country, are likely to be the causes of this disparity.

Salary and job environment influenced hospital pharmacists' job satisfaction in this current study, indicating that

pharmacists with a high salary and a pleasant working environment were more satisfied. This finding is consistent with other studies [13, 14, 37]. When considering organizational satisfaction improvement, salary is an important variable that could be used to explain the variability of job satisfaction [37]. When evaluating working conditions, Arnolds *et al.* concluded that lighting, ventilation, hygiene, working hours, and resources are all factors to consider [42]. Pharmacists who work in bad conditions and earn low wages may have a negative attitude toward their jobs, leading to job dissatisfaction.

Supervision feedback increased work satisfaction among hospital pharmacists in Nigeria, indicating that pharmacists who received feedback from their supervisors were more satisfied with their jobs. Most hospital pharmacists work independently of their superiors, therefore supervisory influence may be seen as minor. This finding is consistent with prior studies [13, 37]. According to Plianbangchang, supervisor feedback had a substantial association with job satisfaction but did not predict job satisfaction among Thai pharmacists [37]. In this study, supervisors evaluated each pharmacist every three years, which could explain the association between supervision and job satisfaction. The disparity could be due to cultural variations or variances in pharmacy practice between countries.

The study's strength resides in the volume of respondents, the use of a validated questionnaire, and the representation of all six geopolitical zones in Nigeria. However, the study is limited by recollection bias and social desirability bias. Furthermore, because the study used cross-sectional methods, the causal relationship between variables could not be ascertained.

CONCLUSION

Hospital pharmacists were satisfied with their jobs. Challenges the job provides, acknowledgment from colleagues, staffing, recognition from co-workers, salary, job atmosphere, and supervision feedback are the intrinsic factors and extrinsic factors that influence Nigerian hospital pharmacists job satisfaction.

ACKNOWLEDGMENTS: We want to thank all the hospital pharmacists who took time from their busy schedules to participate in the study and Prof. JM Okota who was part of the study until his demise.

CONFLICT OF INTEREST: None

FINANCIAL SUPPORT: None

ETHICS STATEMENT: None

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