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RESEARCH

Physician wellbeing in a national rehabilitation hospital, a qualitative study utilizing Maslow's hierarchy of needs as a framework for analysis

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Abstract

Background Globally, healthcare systems are experiencing a workforce crisis which has been exacerbated by the COVID19 pandemic. Numerous reports have documented the deterioration of healthcare professional wellbeing with burnout being called the new pandemic. Rehabilitation Medicine Physicians are among the most likely specialties to experience burnout. There is a strong association between staff and patient experience and global and national policies and strategies have recognized the importance of ensuring staff wellbeing in healthcare organisations.

Although there have been many publications on interventions focusing on wellbeing, these have been directed mainly at personal rather than organisational factors. Maslow's hierarchy of needs, an integrated hierarchy of human needs, has been utilised as a framework to assess wellbeing in doctors but not heretofore in Rehabilitation Medicine. This study aimed to explore Rehabilitation Medicine Physician wellbeing in a complex specialist rehabilitation setting.

Methods Qualitative deductive content analysis (an approach to reanalyzing existing data in a new context) was the approach used. Maslow's hierarchy of needs was used as the categorization matrix. Qualitative data from three different data sources were systematically analysed.

Results Using Maslow's five needs (psychological, safety, social, esteem, and self-actualisation needs), the analysis demonstrated that Rehabilitation Medicine Consultants' needs were not being met at any of the five levels. The data revealed what constitutes relative deprivation and organisational injustice.

Conclusions In order to enable the flourishing of the Rehabilitation Medicine Consultants, the organisation needs to focus on satisfying not just basic needs but creating the conditions for them to function at the highest level. The adapted Maslow framework provides a scaffolding for interventions to support such flourishing.

Keywords Physician, Wellbeing, Burnout, Maslow, Qualitative content analysis, Organisational injustice

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Background

Globally, healthcare systems are experiencing a workforce crisis [1] which has been exacerbated by the COVID19 pandemic. Numerous reports have documented the deterioration of healthcare professional wellbeing with burnout being called the new pandemic [2–4]. Poor wellbeing in doctors negatively impacts on

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patient experience, doctor retention and doctors' own health [3, 5]. The wellbeing of healthcare workers has been identified as vital for the effective performance of health systems and there is a strong association between staff experience and patient satisfaction [6]. Research has shown that it is healthcare staff experience that shapes patient experience of care positively or negatively and not vice versa [7, 8].

Research performed with Irish doctors has shown that almost 1 in 3 doctors met the criteria for being burnt-out [9, 10]. Defined as a state of exhaustion caused by chronic organizational stress, it is characterized by work-related fatigue, depersonalization, and a diminished sense of personal accomplishment [11]. There is an accumulating body of evidence internationally, that Rehabilitation Medicine Physicians are among the most likely specialties to experience burnout, with more than half of Rehabilitation physicians experiencing burnout, with system and institutional factors being identified as the main drivers of burnout [11–14]. According to Shanafelt and colleagues (2005) the concept of well-being extends beyond merely the absence of distress, encompassing a sense of being challenged, thriving, and achieving success across different dimensions of personal and professional life [14].

In recognition of the burnout problem, the WHO designated 2021 as the International Year of Health and Care Workers and the 73rd session of the WHO Regional Committee for Europe in Astana, Kazakhstan, unanimously adopted a resolution in support of a Framework for action on the health and care workforce in the WHO European Region 2023−2030 which emphasises the importance of ensuring health and care workers' physical and mental health and well-being [15]. In Ireland, the all-party National Healthcare Strategy, Sláintecare, has a workstream dedicated to planning, building, and supporting a health and social care workforce including the creation of a supportive work environment [16]. More locally, at the time of this research, the hospital was transitioning to a new facility. Transitioning to a new hospital is a rare and complex process, posing significant challenges for staff and operations and can negatively impact staff satisfaction.

Despite a clear recognition of the need to address wellbeing and burnout [17], the literature is vague on definition and concepts [18]. Brady and colleagues sought to address this in their 2018 systematic review. They found that most (86%) of included papers failed to provide a definition of the construct [19]. Improving our understanding of wellbeing is important if we are to identify effective interventions.

There have been many publications on interventions aimed at improving healthcare professional health and wellbeing but most have concentrated on individual factors rather than organisational factors [17, 20]. Whilst individual factors are important, improved understanding of organisational factors is an under researched area. [21, 22].

In 1943, Abraham Maslow published "*A Theory of Human Motivation*" which included the hierarchy of needs theory, an integrated hierarchy of human needs. He hypothesized that, within each human being, there is a hierarchy of five needs [23]. These include psychological, safety, social, esteem, and self-actualisation needs. Building on Maslow's theory, Robbins wrote that in order to enable human flourishing, organisations need to understand what level of the hierarchy employees are on and focus on satisfying those needs at or above that level [24]. Although Maslow's theory has received criticism for lacking an empiric basis with many proposed modifications and amendments [25, 26], it remains a frequently used theory in publications from many areas including education, management, psychology and healthcare. It is generally accepted as having continued relevance in the twenty-first century [27, 28] with Tulchinsky and Varavikova (2014) arguing that Maslow's theory is especially valuable for planning and managing health systems [29]. Adaptations of Maslow's hierarchy have been used in a number of publications as a framework to assess wellbeing in doctors [30, 31].

In the data generation phase of a broader co-operative inquiry (CI) project on leadership in complexity, conducted by the lead author for a DBA with co-authors as supervisors, physician wellbeing emerged as a notable subtheme that the authors felt warranted a deeper exploration. This was done through reexamining previously collected data for a more focused examination of the data through secondary analysis. This study, therefore, set out to examine how well an organisation was meeting the needs of Rehabilitation Medicine Consultants, using Maslow's hierarchy as a framework for secondary analysis of the CI generated data. This research sought to contribute to the field by exploring the organisational factors that contribute to physician wellbeing.

Methodology

In order to explore the theme of wellbeing in more depth, a qualitative secondary data analysis (QSA) using qualitative deductive content analysis (QDCA) using data that had been obtained from a co-operative inquiry (CI) was the approach used in this study. The original study was a co-operative inquiry exploring medical leadership in a time of transition. Both the primary study and the QSA received approval from the institutional ethics committee. Data collection was conducted by the lead author. Qualitative Content Analysis is a research methodology

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for the systematic analysis and interpretation of contents of texts, images or any other reality [32, 33]. In deductive content analysis, a device, which Mayring refers to as a coding agenda, guides the data collection and analysis [33]. QDCA is used where a researcher wishes to reanalyse existing data in a new context [32] and it allows valid inferences to the context of their use.

A critical review of the existing data set is an important first step in determining whether the primary data fit the secondary question and on review, this secondary study was in keeping with the original purpose of the CI research. Secondary qualitative data analysis offers a powerful approach for generating new insights by re-examining existing data with fresh perspectives, enabling researchers to uncover additional layers of meaning, address new research questions, or validate previous findings [32]. Guided by Mayring [33], the research question was: *What are medical consultants' perceptions of how their professional and personal needs are being supported by the organisation in which they are employed*?

Following Elo [32], QDCA consists of three main phases: preparation, organisation, and reporting. The flow chart for the phases is shown in Fig. 1.

To enhance trustworthiness in the data analysis, we followed the checklist developed by Elo and colleagues which assists in identifying important elements to address in each phase. Each phase of the analysis involved reflexive critical thinking by the lead author.

Following the recommendations by Cheong (2023) and Chatfield (2020) for the secondary analysis of qualitative data [34, 35], the preparation phase involved the collection of suitable data for analysis, making sense of the data, and selecting the unit of analysis. Data were obtained from the following data that were collected for the primary CI study: 1) full transcripts from in-depth individual interviews with PMR consultants ($n=10$), performed during the pre-step (context and purpose) of the CI 2) full transcripts from six co-operative inquiry (CI) sessions with PMR consultants ($n=6$) and 3) 3 micro narratives obtained from PMR consultants during the pre-step of the CI, using Sensemaker©, a web-based data visualization software that captures, analyses, and reports qualitative data in real time [36]. Ensuring primary data quality is vital for secondary qualitative analysis. The lead author assessed the original study's rigor, relevance, and documentation and addressed potential limitations, like incomplete context or biases, through reflexivity and triangulation to ensure analytical validity.

The organisation phase involved the development of a structured categorization matrix, theoretically defining the main categories based on Maslow's hierarchy, determining coding rules for the main categories and pre-testing the categorisation matrix with sample text from one CI session transcript. The lead author returned to the text and performed reanalysis after the initial coding process. All transcripts and micronarratives were collated and reviewed for content. Manifest (text) and latent (interpretation of underlying meaning between the lines in the text) content was analysed and coded for correspondence to and exemplification of the identified categories [32, 33]. Only aspects of the data that fitted the matrix of analysis were chosen from the data. The lead author conducted 2 rounds of coding to assess the quality of categorization matrix, which produced the same results.
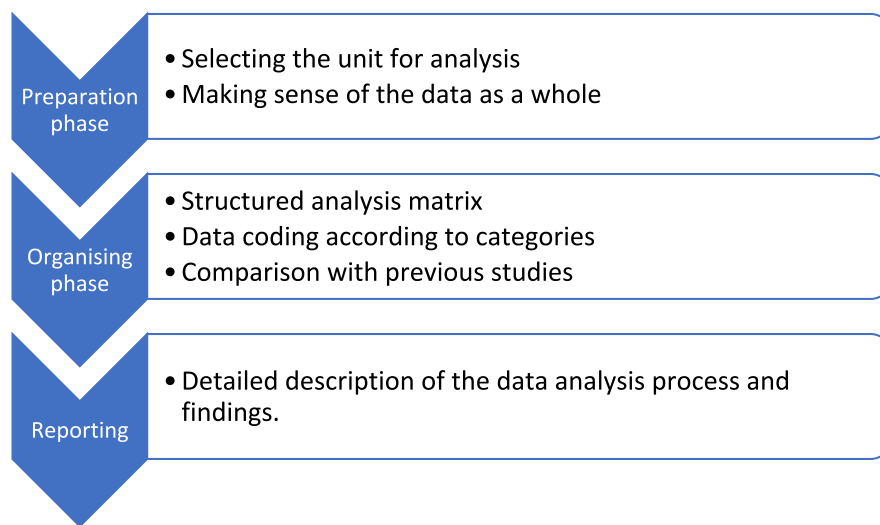

Fig. 1 Three phases of Qualitative deductive content analysis

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In the reporting phase, findings are presented through category content that describes the phenomenon, following a deductive approach.

As an insider action researcher, the lead author maintained an informed reflexive awareness of positionality and how it may influence data interpretation (assessed as point 2 on the Herr and Anderson continuum [37]; 'Insider in collaboration with outsiders'). Interpretation of the data was further shaped collaboratively by all authors and the participants of the cooperative inquiry during analysis thus enhancing trustworthiness [38]. Participants were invited to review the research findings to make sure that they are true to their experiences.

Setting
A Complex Specialist Rehabilitation Facility.

Participants
In the primary study, the participants were a purposive sample of Consultants in Rehabilitation Medicine employed in a full-time capacity in an Irish public complex specialist rehabilitation hospital. These informants have the best knowledge concerning the phenomenon of interest.

Ethics
Ethical approval was obtained from Henley Business School Research Ethics Committee and informed consent to participate was obtained from all of the participants in the study. The research met the seven requirements for evaluating the ethics of a research project as described by Emanuel [39]. In addition, informants are not identifiable by quotes from the data with a nonidentifying variable (P1, P2 etc.) assigned to each informant.

Findings
A coding framework was developed using Maslow's hierarchy of needs interpreted to a hospital environment (Table 1).

In total, 65 quotations were extracted that related to the categories in the matrix. The following sections contain representative quotations to exemplify the categories and subcategories and create a clear link between data and results.

Level 1: Physiologic needs
According to Maslow, the most basic human needs are physiologic, that is, air, nutrition, shelter, and rest. For medical consultants in a work environment, this was interpreted as having a suitable physical environment, such as an office, tools and equipment for doing the job. It was apparent on reviewing the data that basic requirements such as provision of office space and equipment was not available as exemplified by the following quote:
P3 (CI session 4; reflecting on a conversation with the Clinical Nurse Manager, Occupational Health): "...she said again well, do you have lockers? We don't no no. And do you have do you have actual office space? And X and I

Table 1 Coding framework

Maslow's level of needs	Interpretation of needs to a hospital context (main categories)	Subcategories
Physiologic	Workspace	Workspace Furniture Supplies Technology Essential resources to do job
Safety	Security and stability	Job security Organisational and team stability A safe work environment free from threats of physical or emotional harm
Love/belonging	Team camaraderie	Collegiality Connection Positive workplace relationships Trust Psychological safety
Esteem	Appreciation	Pride Self-esteem Confidence Sense of contribution to the greater whole
Self-actualisation	Engagement and flourishing	Empowerment Autonomy Embracing one's role in a way that allows true potential to be achieved

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share an office right? Why is that? Why are we scrambling around to find room here in the new hospital and we-well, no, we actually don't have the basics. We are not recognized as needing offices or changing space or and we're actually very poorly off compared to the rest of the departments, and she said, well, I think you certainly have a case there, yeah. And so why should we be footsing around about it? You know? And yeah these are basic things that people should have, yeah."

The data revealed that informants felt there should be space to connect: *P7 (CI session 1): "there has to be some way of people being able to meet and communicate. I mean this is the first time I think I've set eyes on X and X in I don't know how long. Seriously, you know? …it's easy to do in other hospitals because they have dedicated consultant meeting rooms. So, X Hospital would have had that, X Hospital have that. All other hospitals would have that. But here meeting with another consultant, takes organisation and in fact, it takes a formal meeting"* and *P3 (CI session 1): " if we can find a space where we can meet and talk, then that will improve communication, team working and clarifying who's doing what".*

The data suggested that during the planning for a new hospital building, the plans had omitted an on-call doctors' room: *P8 (CI session 3) "I don't even know all of the details around this, but we all know that the hospital was built without an on-call room for the doctor"* and *P6 (CI session 3): "I think it's particularly bad here. If they can't believe …they should plan for where Doctor get to sleep like. I mean, that's a poor reflection on the organisation."*

The data also identified the need for good technology to facilitate work: *P4 (CI session 2): "I see that the* (physical) *disconnection from the hospital board level and the executive level Is actually worse and our technology is not good enough to connect us up. And I don't think that that is recognized"* and *P1 (CI session 4): "the technology also leaves a lot to be desired. One would expect state of the art IT in the new building, but alas, this isn't."*

Level 2: Safety needs

The second of Maslow's needs is safety from physical threat. This was interpreted to include personal and financial security. The data revealed that some informants were on temporary locum contracts, and this was felt to put them at a disadvantage: P7 (CI session 3): *"Why the hell is that? Just …because she's a locum and part time you don't get your own office? Is that crazy?."* A lack of permanency was seen to have negative impact on how staff were regarded: P6 (CI session 3):*" I think there's always been a bottom of the rung kind of view of NCHDs* (Doctors in training) *because they're not permanent, they kind of often have just six-month contracts… so that lack*

of permanency kind makes them kind of not considered part of any proper planning".

Level 3: Love/belonging needs

In the third level of need in Maslow's hierarchy, Maslow believed that good relationships and relating to a particular group were essential human needs. In this study, this was interpreted to reflect team camaraderie and include collegiality, connection, a positive workplace relationships, trust and psychological safety. Data analysis revealed that informants expressed feelings of isolation, detachment, and loneliness. As informants described: P1 (CI session 3): *"I think we were disconnected and distant before, but we are even more so now"* and Sensemaker© micronarrative 1: *"Over the last few days I have heard several stories about how colleagues feel distanced not only physically from the new building but also from the team"* and P2 (CI session 3): *"It's very lonely over there yeah, and I certainly value any opportunities to come together with colleagues"* and P1 (CI session 3): *"It already it feels here like we are miles from the epicenter and it's like a ghost town in this corner now".*

The data revealed the importance of a physical space to facilitate collaborative teamwork: P8 (CI session 5): *"I didn't feel that there was a group of colleagues … that I could trust well enough to have an open and trusting relationship"* and P6 (CI session 3): *"I think we've been very, very much less effective or disenfranchised or perhaps not the collegiality or respect that we could have brought to the plate".* Wellbeing was also identified as important: P3(CI session 4): *"There's a lot of discussion on, especially on social media with medics and health and social care professionals, about the challenge of knowing that you need to take care of yourself but also the pressure that we put on one another to, you know, to come in when you're sick and to come in or take your leave. So, I wonder, do we always enable each other to look after each other?"* and P4 (CI session 5): *"wellbeing as a staff member or as a patient is really important".*

Level 4: Esteem needs

The fourth level of Maslow's needs is esteem, which was interpreted in this context, as individual achievement with pride, self-esteem, confidence and sense of contribution to the greater whole.

It was clear from the data that informants lacked self-esteem and a sense of contributing: *P10 (CI session 1): "And the thing is about trying to interact with management. I haven't spoken to X (Senior leader) probably in about three or four years"* and P5 (CI session 5): *"there's very little real time communication or decision making. And sort of just in in my very limited exposure to unit*

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x (where senior management and administration are based*) it's all about having meetings where actions that have been decided by a very small group in a sort of echo chamber that are retrospectively communicated without the input of stakeholders who are involved".*

A sense of an unsupportive organisational culture was also reflected in the data: P1 (CI session 2): *"there hasn't been that* (necessary) *cultural change, but now with an even greater physical distance, I feel the Consultants are feeling it. I feel it"* and P1 (CI session 5): *"Sometimes I have suggested ways of working to try to overcome these challenges or I have asked questions of what we are doing/ how we are doing certain tasks—but I am either oppressed or I am criticised for questioning".*

Level 5: Self actualisation needs

Maslow's fifth need is the need to pursue and fulfil an individual's potential. This need was interpreted to mean engagement, empowerment and the ability to innovate. The data revealed a lack of empowerment, ownership and ability to achieve full potential: P7 (CI session 2): *"How can we have no input into how decisions are taken? I don't understand that, and it doesn't make any sense to me and it's clearly having an impact on colleagues"* and P10 (CI session 4): *"one of the things was about, you know, no sense of say and of influence".*

The data also suggested that being involved in decision making was seen as important in influencing and effecting change and there was a perceived power inequality: P4 (CI session 5): *"when it comes to the next big decision perhaps it would be a good idea to try and get somebody involved in the same fashion as the other disciplines do"* and P1 (CI session 2 feedback sheet) *"I am frustrated with x management not wanting to rock the boat. It has got us nowhere."* In addition, P3 (CI session 1): *"I am tired of apologizing to colleagues and staff and patients in the acute hospitals for our unresponsiveness even though it's not my fault. I feel like I'm fighting with everyone all the time"* and P5 (CI session 3) *"things will continue to get worse... we will retire, and things will get worse".*

Discussion

In this study we sought to gain a more in depth understanding of the organisational factors that contribute to physician wellbeing through a secondary qualitative deductive content analysis of qualitative data generated though a cooperative inquiry.

This qualitative deductive content analysis has revealed that consultants' needs were not being met in accordance with national or global policy [40, 41]. The content analysis revealed a striking absence of positive quotations from the interviews, indicating a primarily critical perspective among participants. This lack of affirmative

feedback suggests unmet needs, dissatisfaction, or systemic challenges within their professional environment. The focus on negative experiences highlights areas needing improvement and suggests a need for interventions to address these underlying issues. Using Maslow's hierarchy of needs as an analytical framework, the organisation was found to be failing to meet consultants' needs at every level of need. Physiological needs were not being met as informants were not being provided with collaborative or individual workspace or a comfortable working environment or the information technology resources to do their work. Roles were unclear and informants did not know what was expected of them. From a safety point of view, some informants could meet the criteria for burnout in that they expressed views and feelings that indicated emotional exhaustion, depersonalization, and a loss of personal accomplishment [42, 43]. In addition, the data revealed that three informants were on temporary contracts which created uncertainty for them. From a social perspective, there were few opportunities for team building or social activities as informants were so busy. Informants felt lonely and isolated. Self-esteem was poor and informants did not feel appreciated by management. There was very little opportunity for informants to develop ideas or feel fulfilled or flourish and the data show that participants felt their needs were not being addressed in the same way as colleagues from other departments [42].

The concepts of organisational justice and relative deprivation are closely linked to employee burnout, wellbeing, and flourishing. Relative deprivation, as described by Smith et al. [44], arises from perceptions of disadvantage relative to a standard, often leading to feelings of anger and resentment. Similarly, organisational injustice occurs when employees perceive workplace procedures, interactions, or outcomes as unfair, encompassing distributive, procedural, and interactional dimensions [45–47]. The data suggest that consultants perceived inequities in space, voice, decision-making, and control, reflecting these dimensions of organisational injustice. Moreover, the lack of adequate physical, psychological, and social supports hindered their ability to flourish, violating the principles of fairness, equality, and ethics essential for employee engagement [48]. Research has demonstrated that organisational injustice is associated with adverse health outcomes, including cardiovascular diseases, cognitive impairment, and psychiatric disorders, as well as poor wellbeing [49–53]. Addressing organisational justice is thus essential for promoting physician wellbeing and preventing burnout.

Using Maslow's hierarchy of needs, this research has identified areas that could be used by organisations as a framework to organise and prioritise interventions to

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enhance physician wellbeing moving forward. Maslow's hierarchy was found to be a useful framework to define need, which has been identified by Harrison and colleagues as a pivotal concept in health systems that requires further elucidation [42]. This is also similar to the findings of Hale and colleagues and Shapiro and colleagues [30, 31] who suggested that a research agenda grounded in Maslow's hierarchy could significantly enhance its relevance as a modern framework for promoting professional wellbeing. As Shapiro [31] suggests, such an agenda might include exploring the added value of multipronged approaches over single strategies and conducting comparative effectiveness studies of higher-level interventions versus those addressing basic needs. Key metrics should encompass sustained effects and long-term outcomes to assess true impact [31].

As this was secondary data analysis of existing data that was not collected for the purpose of this study, the data may be deemed not to have adequately fulfilled the research objectives of the new study [54]. However, the full transcripts from the original research, performed by the corresponding author, was available and complete although demographic details were not. The lead authors' familiarity with the data, and their ability to assess the fit between the data and the new research question, eliminated the epistemological and ethical concerns that can be associated with the interpretation of data created by other researchers and participants [55]. The trustworthiness of this research process has been demonstrated by a thorough description of the three phases of preparation, organisation, and reporting as described by Elo [32] and also by detailing how the categories were developed and data interpreted [32, 34, 55, 56].

This data and analysis has been shared with the organisation and an initial exploration by the senior management team has begun to explore the issues raised.

Conclusion

This study offers a critical examination of the organisational factors affecting physician wellbeing, highlighting substantial unmet needs among consultants across all levels of Maslow's hierarchy. The absence of positive feedback and the prevalence of unmet needs reveal systemic issues within the organisation, including a lack of basic resources, unclear roles, social isolation, and low self-esteem among physicians. These findings suggest a perception of relative deprivation and organisational injustice, with consultants feeling deprived of fair treatment, equitable input, and support for personal and professional growth.

Applying Maslow's hierarchy as a framework proved valuable in identifying specific needs and potential interventions that could meaningfully improve physician wellbeing. This aligns with recent literature advocating for a research agenda based on Maslow's model to support holistic, multi-level interventions that address both immediate and long-term needs. While secondary data analysis presented some limitations, such as the initial purpose of the data not fully aligning with this study's objectives, the rigorous analysis and the researchers' familiarity with the data contributed to trustworthy and relevant findings.

These results have been shared with the organisation's senior management, initiating a process to address these significant concerns. Prioritizing organisational justice and supporting physician wellbeing should be central goals, as evidence increasingly connects these factors with better health, engagement, and overall organisational performance.

Declarations

Ethics approval and consent to participate
Ethical approval was obtained from Henley Business School Research Ethics Committee and informed consent to participate was obtained from all of the participants in the study. The study adhered to the Declaration of Helsinki.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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