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## RESEARCH ARTICLE

# Self-Reported Empathy among Nursing Students at a University in Jordan

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### Abstract:

#### **Background:**

Empathy is recognized as a highly valued professional characteristic in the nurse-patient relationship. Undergraduate nursing students are taught the importance of empathic relationships. Studies have been undertaken to explore the concept of empathy among nursing students, but there have been no investigations in Jordan or in the Arab world.

#### **Purpose:**

The aim of this study is to assess the level of self-reported empathy in undergraduate nursing students at Mutah University.

#### **Research Design:**

A cross-sectional study was undertaken using a paper-based version of the Jefferson Scale of Empathy. A convenience sample of 202 students was recruited from first, second, third and fourth year.

#### **Results:**

The mean score was 92.9, lower than scores reported in other studies. Results showed that female students' empathy scores were significantly higher than male students, and there was a significant increase in empathy scores by study year.

#### **Conclusion:**

There is an urgent need for reforming the nursing curriculum with a focus on empathy skills.

**Keywords:** Empathy, Nursing Education, Undergraduate Curriculum, Arab world, Nurse-patient relationship, Jefferson scale of empathy.

## 1. INTRODUCTION

### 1.1. Literature Review

Empathy is one of the most frequently used concepts in the profession of nursing. It has been recognized as a highly valued professional characteristic and a cornerstone of the nurse-patient relationship [1]. Inpatient care empathy is defined as “a predominantly cognitive (rather than an effective or emotional) attribute that involves an understanding (rather than feeling) of experiences, concerns and perspectives of the patient, combined with a capacity to communicate this understanding, and an intention to help” [2].

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Empathy is an essential skill for proficient nursing care. It allows for a more accurate needs assessment of the client and a more thorough plan of care. Empathic interactions result in increased satisfaction and compliance, better patient outcomes [3], plus enhancements in pain control, respiratory and pulse rates [4]. After conducting a systematic review, Yu and Kirk concluded that patients experience lower levels of anxiety and distress when cared for by nurses who show expression of empathy; at the same time, the characteristic of empathy among nurses allows the perceived needs of patients to be understood [5]. For these reasons empathy continues to be integrated into nursing education; undergraduate nursing students are taught the basic communication skills and the importance of an empathic relationship with patients [6].

The majority of studies that explored nursing students' empathy in different countries showed a good level of empathy, such as in studies conducted in Australia [7 - 10], USA [11, 12], and United Kingdom [13]. Moderate levels of empathy were reported in the Ouzouni & Nakakis study in Greece [14]. Some studies reported that the mean empathy scores for male nursing students were lower than those for female nursing students [7, 9, 11 - 15]. The literature showed inconsistency in results relating to empathy as to whether empathy increases or decreases as students progress through a program. Lovan & Wilson (2012) compared mean empathy scores in nursing students at the beginning of nursing courses and at graduation and found no significant difference [16]. Other studies reported significant decreases in empathy scores from the beginning to the end of the curriculum [3, 6, 13, 17]. On the other hand, several studies suggested opposite results with student mean empathy scores increasing through nursing programs [7, 14, 15, 18].

Despite the fact that studies have been undertaken to explore the concept of empathy among nursing students in a number of countries, there have been no investigations in Jordan or anywhere in the Arab world. Findings of studies from other countries do not necessarily represent nursing students in Jordan; this may possibly be attributed to worldwide differences in terms of cultural values and beliefs as well as differences in nursing education systems. This indicates a need to examine empathy among nursing students in Jordan whose behaviors and beliefs may differ from those of nurses and nursing students in other countries where studies have been undertaken.

## **1.2. Aims Of The Study**

- To assess the level of self-reported empathy in undergraduate nursing students at Mutah University.
- To explore variables influencing undergraduate nursing students' empathy ability.

## **1.3. Significance of the Study**

Besides being the first study of empathy among undergraduate nursing students in Jordan, the findings of this study provide important information for educators in reforming the nursing curriculum. In addition, it may assist in developing strategies to enhance the capacity of students to care for patients and families with empathy.

## **2. METHODOLOGY**

### **2.1. Design**

A cross-sectional study was undertaken using a paper-based version of the Jefferson Scale of Empathy (JSE- HP-S)

### **2.2. Setting**

The study took place at the Faculty of Nursing at Mutah University, the first governmental faculty established in Karak City in South Jordan. The faculty has about 500 students, most of whom are female.

### **2.3. Sample**

A convenience sample of undergraduate nursing students was recruited from the School of Nursing at Mutah University. We used a G.power software version 3.0.10 with a medium effect size of 0.25, power of 0.9, alpha of 0.05, and 4 groups; the minimum desired sample size was 232 [19]. Eligibility criteria included: full-time undergraduate nursing student at the School of Nursing at Mutah University with age not less than 18 years and not more than 30 years old.

## 2.4. Instrument

The study used a standardized self-reporting questionnaire consisting of two sections. The first section of the questionnaire consisted of demographic questions with respect to gender, age, year of nursing school and Current Grade Point Average (GPA) rank. The participants were additionally asked extra questions (*i.e.* if they underwent the course of “communication skills” at the faculty, if their preference was to study nursing and if they have the intention to work as a nurse after graduation and about the preferred ward in which they wished to work).

In the second section, students were asked to complete the “Jefferson Scale of Empathy – Health Profession – Student version” (JSE-HP-S), which is a self-report measure of attitudes or feelings relating to empathy. It was developed by Mohammadreza Hojat and colleagues in 2001 [20]. This 20-item survey employs a 7-point Likert-scale (1 =strongly disagree and 7 = strongly agree) with 10 items scored in reverse. Results range from a minimum of 20 through to a maximum of 140. Higher scores reflect a higher participant level of empathy. The JSE-HP-S in English language has proven reliability and validity, with a coefficient of alpha reported as 0.80 [12]. Researchers obtained permission to use the JSE-HP-S from the original authors. For this study the scale was translated from English to Arabic by the researchers and two independent bilingual nursing faculty members. Two bilingual nursing faculty members then translated the questionnaire back into English; they had not seen the original version. Finally, to ensure the scale was consistent with the Arabic language and its meanings, and that key concepts were retained, the researchers and the two other bilingual nursing faculty members compared the original English version with the back translated version to identify variations and resolve any inconsistency.

## 2.5. Data Collection

A convenience sample of 245 undergraduate students was recruited from first, second, third and fourth year at the School of Nursing at Mutah University. During a scheduled lecture with each year level group, one of the research team members explained the research purpose and the benefits of carrying out the study. Interested students were presented with a questionnaire to complete and told that all responses would be confidential, and unseen by anyone other than the research team. Students were advised that their participation was entirely voluntary and that they could withdraw at any point in the study without impact on their own studies. Completion of the survey meant that the participant had consented to be part of the study. The study was conducted between June and August 2017.

## 2.6. Statistical Analysis

The Statistical Package for Social Sciences (SPSS Version 17.0, Chicago, IL, USA) was used for data storage, tabulation and the generation of descriptive statistics. Means, t-tests and one-way analysis of variance (ANOVA) tests were used to assess differences between genders, age groups and year of study and other variables. Results were considered statistically significant if the P-value was less than 0.05.

## 3. Results

### 3.1. Sociodemographic Characteristics of the Sample

Of the total 245 participants, forty-three [43] questionnaires were excluded because of missing data. Completed forms were returned by 202 students; as a result, the statistical power of this study was achieved as 0.84. Of the total 202 students, 149 (73.7%) were females and 53 (26.2%) were males. Approximately 62% were under 21 years of age and approximately one-third (32.3%) were between 22 and 24 years of age. Among the total of 202 students, 40 (19.8%) were first-year students, 34 (16.8%) were second-year, 69 (34.2%) were third-year, and 59 (29.2%) were fourth-year students. Most students (72%) had taken a communication skills course and 44% had a good grade point average (GPA). Sixty-seven percent of participants stated that they preferred nursing as a profession. Eighty percent reported the intention to work as nurses after graduation. When asked about their specialty of choice, 33.2% of students chose “People-oriented” specialties and 44.1% preferred one of the “Technology- oriented” specialties. Table 1 shows the demographic characteristics of the sample.

**Table 1. Percentage and frequency of demographic characteristics of participants. n = (202).**

|     | Frequency (n) | Percent (%) |
|-----|---------------|-------------|
| Age |               |             |
| <19 | 13            | 6.5         |

(Table 1) contd....

|   | Frequency (n) | Percent (%) |
|---|---------------|-------------|
| –   |               |             |
| <b>Age</b>  |               |             |
| 19-21   | 111           | 55.2        |
| 22-24   | 65            | 32.3        |
| 25-27   | 9             | 4.5         |
| 31-33   | 1             | 0.5         |
| >33   | 1             | 0.5         |
| <b>Gender</b>                                     |               |             |
| Female  | 149           | 73.7        |
| Male  | 53            | 26.2        |
| <b>Year</b>                                       |               |             |
| First year  | 40            | 19.8        |
| Second year                                       | 34            | 16.8        |
| Third year  | 69            | 34.2        |
| Fourth year                                       | 59            | 29.2        |
| > Fourth year                                     | 0             | 0           |
| <b>Preferred nursing as a profession</b>          |               |             |
| yes   | 135           | 66.8        |
| no  | 67            | 33.2        |
| <b>Intent to work as a nurse after graduation</b> |               |             |
| yes   | 161           | 79.7        |
| no  | 41            | 20.3        |
| <b>Preferred practice area</b>                    |               |             |
| People oriented specialties                       | 67            | 33.2        |
| Technology oriented specialties                   | 89            | 44.1        |
| Not decided                                       | 46            | 22.7        |
| <b>Communication course</b>                       |               |             |
| yes   | 145           | 71.8        |
| no  | 57            | 28.2        |
| <b>GPA</b>  |               |             |
| average   | 18            | 9.0         |
| good  | 89            | 44.3        |
| very good   | 72            | 35.8        |
| excellent   | 22            | 10.9        |

### 3.2. Empathy Scores

As can be seen from Table 2 Empathy scores ranged from 50 to 134. The mean score was  $92.9 \pm 16.40$ , more than two-thirds of the students (67.3%) believed that empathy is an important factor in the treatment of patients, and reported that a health care provider's sense of humor contributes to a better clinical outcome. About 48% of students agreed that because people are different, it may be difficult to see things from patients' perspectives. Table 3 shows the differences between empathy score means according to sociodemographic characteristics of participants. Female students' empathy scores were significantly higher than that of their male counterparts ( $95.33$  vs  $87.67$ ,  $p < 0.00$ ). There was a significant increase in empathy scores by study year; the mean score of empathy among first-year students was  $87.53 \pm 12.74$ , among second-year students it was  $89.29 \pm 14.32$ , among third-year students it was  $94.78 \pm 16.99$ , and among fourth-year students the mean score was  $96.44 \pm 17.98$ . Post hoc comparisons using the Tukey HSD test indicated that there was a significant difference in empathy scores between first and fourth-year students. No other significant differences were detected in empathy scores related to age, grade point average, preferred practice area, preference of nursing as a profession, intention to work as a nurse after graduation, or even attending a communication course.

**Table 2. Mean, SD, minimum and maximum scores of JSE-HP-S and the frequency of items responses (n=202).**

| Items   | Mean  | SD   | minimum | maximum | Agree% | Disagree% |
|---|-------|------|---------|---------|--------|-----------|
| 1. Health care providers' understanding of their patients' feelings and the feelings of their patients' families does not influence treatment outcome | *4.84 | 2.13 | 1       | 7       | 30.2   | 60.9      |
| 2. Patients feel better when their health care providers understand their feelings  | 4.92  | 2.02 | 1       | 7       | 60.9   | 28.2      |
| 3. It is difficult for a health care provider to view things from patients' perspectives  | *4.17 | 1.66 | 1       | 7       | 29.7   | 43.6      |

(Table 2) contd....

| Items   | Mean        | SD           | minimum   | maximum    | Agree% | Disagree% |
|---|-------------|--------------|-----------|------------|--------|-----------|
| 4. Understanding body language is as important as verbal communication in health care provider - patient relationships.   | 4.64        | 1.93         | 1         | 7          | 56.9   | 29.2      |
| 5. A health care provider's sense of humor contributes to a better clinical outcome   | 4.99        | 1.93         | 1         | 7          | 67.3   | 21.3      |
| 6. Because people are different, it is difficult to see things from patients' perspectives  | *3.70       | 1.96         | 1         | 7          | 48.0   | 35.1      |
| 7. Attention to patients' emotions is not important in patient interview  | *5.16       | 2.09         | 1         | 7          | 23.3   | 63.9      |
| 8. Attentiveness to patients' personal experiences does not influence treatment outcomes  | *4.67       | 1.98         | 1         | 7          | 30.2   | 56.9      |
| 9. Health care providers should try to stand in their patients' shoes when providing care to them   | 5.08        | 1.94         | 1         | 7          | 64.9   | 22.8      |
| 10. Patients value a health care provider's understanding of their feelings which is therapeutic in its own right.  | 4.65        | 1.91         | 1         | 7          | 53.5   | 27.7      |
| 11. Patients' illnesses can be cured only by targeted treatment; therefore, health care providers' emotional ties with their patients do not have a significant influence in treatment outcomes     | *4.81       | 2.19         | 1         | 7          | 30.7   | 59.9      |
| 12. Asking patients about what is happening in their personal lives is not helpful in understanding their physical complaints   | *4.66       | 1.88         | 1         | 7          | 30.2   | 55.9      |
| 13. Health care providers should try to understand what is going on in their patients' minds by paying attention to their non-verbal cues and body language   | 4.53        | 1.77         | 1         | 7          | 49.5   | 29.2      |
| 14. I believe that emotion has no place in the treatment of medical illness   | *4.98       | 2.03         | 1         | 7          | 26.7   | 62.4      |
| 15. Empathy is a therapeutic skill without which a health care provider's success is limited.   | 4.55        | 1.82         | 1         | 7          | 50.0   | 29.2      |
| 16. Health care providers' understanding of the emotional status of their patients, as well as that of their families is one important component of the health care provider – patient relationship | 4.86        | 1.75         | 1         | 7          | 61.9   | 24.3      |
| 17. Health care providers should try to think like their patients in order to render better care  | 4.64        | 1.82         | 1         | 7          | 52.0   | 23.3      |
| 18. Health care providers should not allow themselves to be influenced by strong personal bonds between their patients and their family members   | *3.75       | 1.71         | 1         | 7          | 39.6   | 30.2      |
| 19. I do not enjoy reading non-medical literature or the arts   | *4.35       | 2.16         | 1         | 7          | 39.1   | 50.5      |
| 20. I believe that empathy is an important factor in patients' treatment  | 5.00        | 1.92         | 1         | 7          | 67.3   | 24.3      |
| <b>Total Empathy Score</b>  | <b>92.9</b> | <b>16.40</b> | <b>50</b> | <b>134</b> |        |           |

\*: reversely scored items (i.e., Strongly Agree=1...Strongly Disagree=7), while the other items are directly scored on their Likert weights (i.e., Strongly Disagree=1...Strongly Agree=7)

**Table 3. The differences between empathy means of sociodemographic characteristics of participants. n = (202).**

| Variables                       | Mean  | SD    | F     | p     | Tukey Post hoc test |  |
|---------------------------------|-------|-------|-------|-------|---------------------|--|
| <b>Age</b>                      |       |       |       |       |                     |  |
| <19                             | 87.31 | 14.70 | 0.79  | 0.57  |                     |  |
| 19-21                           | 92.94 | 16.44 |       |       |                     |  |
| 22-24                           | 94.02 | 16.95 |       |       |                     |  |
| 25-27                           | 88.67 | 14.81 |       |       |                     |  |
| <b>Year</b>                     |       |       |       |       |                     |  |
| First                           | 87.53 | 12.74 | 3.30  | .021  | *First < Fourth     |  |
| Second                          | 89.29 | 14.32 |       |       |                     |  |
| Third                           | 94.78 | 16.99 |       |       |                     |  |
| Fourth                          | 96.44 | 17.98 |       |       |                     |  |
| <b>GPA</b>                      |       |       |       |       |                     |  |
| Average                         | 90.89 | 18.60 | 0.12  | 0.94  |                     |  |
| Good                            | 92.84 | 16.53 |       |       |                     |  |
| Very good                       | 93.57 | 16.84 |       |       |                     |  |
| Excellent                       | 92.86 | 13.56 |       |       |                     |  |
| <b>Preferred practice area</b>  |       |       |       |       |                     |  |
| People oriented specialties     | 95.67 | 17.24 | 1.61  | 0.20  |                     |  |
| Technology oriented specialties | 90.93 | 16.43 |       |       |                     |  |
| Not decided                     | 92.70 | 14.78 |       |       |                     |  |
| <b>Gender</b>                   |       |       |       |       |                     |  |
| Male                            | 87.67 | 13.42 | -3.24 | 0.002 |                     |  |
| Female                          | 95.33 | 17.05 |       |       |                     |  |

(Table 3) *contd....*

| Variables                                | Mean  | SD    | F    | p    | Tukey Post hoc test |
|--|-------|-------|------|------|---------------------|
| <b>Preferred nursing as a profession</b> |       |       |      |      |                     |
| Yes                                      | 94.52 | 17.41 | 1.89 | 0.06 |                     |
| No                                       | 90.18 | 14.04 |      |      |                     |
| <b>Intent to work as a nurse</b>         |       |       |      |      |                     |
| Yes                                      | 93.28 | 16.91 | 0.22 | 0.82 |                     |
| No                                       | 92.63 | 14.80 |      |      |                     |
| <b>Underwent communication course</b>    |       |       |      |      |                     |
| Yes                                      | 93.73 | 16.60 | 0.90 | 0.36 |                     |
| No                                       | 91.33 | 16.02 |      |      |                     |

Note: Only significant comparisons of post hoc tests are presented. \*: significant difference between first and fourth year.

#### 4. DISCUSSION

The mean empathy score that we found among nursing students in Mutah University using JES-HP-S was 92.9 and this is significantly lower than that of nursing students in Western countries such as the USA, Australia and Europe [7, 8, 10 - 13] in which empathy scores were 104, 108.43, 107.34, 114, 111.5 and 104.96 respectively, as shown in Table 4. The reason for this discrepancy, which is relatively un-researched, could be related to cultural differences in behavior and expression. Degrees of empathy shown by health care providers toward their patients can be influenced by religious beliefs, racial and ethnic differences and sex stereotyping (2). Hsieh, Chang, Chou, & Chang (2008) have proposed that individuals from non-Western cultures express their feelings and emotions in a more restrained way. The result could be a failure by one person to interpret or understand the emotions of another [21]. A therapeutic one-to-one relationship between patient and nurse is fostered and tends to be the norm in the West. Patient preferences are considered, and feelings and experiences are discussed freely between patient and health care providers. However, within Arab culture individual autonomy and an open communication style with persons outside the family are not the norm [22]. Therefore, neither the client nor the nurse can communicate openly, and so it is difficult for the nurse to gather relevant information and/or express feelings of empathy with the client.

**Table 4. T-test comparing means of empathy score between the current study and selected other studies.**

| Study   | Number of Nursing Students | Empathy Mean Score | Standard Deviation | t-Value | P Value |
|---|----------------------------|--------------------|--------------------|---------|---------|
| Current study   | 202                        | 92.9               | 16.4               |         |         |
| Williams, Brown, Boyle, McKenna, Palermo, & Etherington.          | 411                        | 104                | 14.40              | -8.56   | 0.000   |
| Williams, Brown, McKenna, Boyle, Palermo, & Nestel, <i>et al.</i> | 247                        | 108.43             | 12.76              | -11.28  | 0.000   |
| McKenna, Boyle, Brown, Williams, Molloy, & Lewis, <i>et al.</i>   | 106                        | 107.34             | 13.74              | -7.74   | 0.000   |
| Ward, Schaal, Sullivan, Bowen, Erdmann, & Hojat.                  | 333                        | 114                | 11.50              | -17.45  | 0.000   |
| Fields, Mahan, Tillman, Harris, Maxwell, & Hojat.                 | 285                        | 111.5              | 12.20              | -14.34  | 0.000   |
| Wilson, Prescott, & Becket.                                       | 96                         | 104.96             | 13.40              | -6.27   | 0.000   |

Another reason might be related to nursing education itself. For example; contrary to expectations, this study did not find a significant difference in empathy scores between students who underwent the communication course and those who did not. It seems that the nursing curriculum in general and the communication course in specific do not sufficiently include an emphasis on interpersonal skills (*e.g.* empathy and listening to others). Thus a lack of interpersonal skills can make it difficult or impossible to identify and or respond to emotions of others [10]. Many studies argue that empathy is a teachable skill that can be developed and improved by training and educational programs. Williams and his co-authors (2015) found that nursing students' self-reported empathy levels had been improved following a DVD simulation-based workshop at four Australian universities [9]. A similar result was obtained from the Ozcan, Oflaz, and Bakir, 2012 study in Turkey; their results showed that a course of ten hours of lectures pertaining to communication skills which included an emphasis on developing empathic behaviors had a positive impact on nursing and medical students [23]. Cunico and his co-authors reported significant increases in mean empathy scores after educational interventions among female nursing students at Verona University in Italy [15]. Results from a recent study carried out in Australia showed that the incorporation of healthcare consumer interviews into a first-year nursing course significantly improved empathy in nursing students [24]. Faculties in Jordan need to adopt innovative and nontraditional ways of teaching empathy such as those mentioned above.

In this study, the higher level of empathy among female students was consistent with other studies [7, 9, 11 - 15]. It is widely accepted that females are most often seen as having more empathic and nurturing natures; males, on the other hand, are stereotyped as being less emotional and more inclined toward a cognitive view of the world. Furthermore, because of social expectations, depending upon cultural upbringing, there may be a reluctance by males to report their own experiences of empathy [25].

In the current study, empathy scores were raised significantly after the first year. In the second year, nursing students begin the practical element of their education at hospitals and other clinical settings and thus first-year students have not yet had clinical experience. It seems possible that the clinical courses have a positive impact with respect to levels of empathy among students because students are spending time interacting and communicating with patients, which may encourage the development of a sense of empathy. However, this finding is not consistent with other studies reporting a decline in empathy as students move through their coursework [3, 13, 17].

The reader should bear in mind that this study does not actually measure the students' behavior or actual empathy because it relies on a self-report questionnaire; thus, it merely provides an insight into the attitudes and tendencies of the students.

### **LIMITATIONS OF THE STUDY**

A number of important limitations need to be acknowledged. Firstly, the use of a cross-sectional design is not ideal for this type of study. More valuable information would be gained from the use of a longitudinal study design, targeting nursing students from the first semester with follow-up in the final year of study. Secondly, the use of a convenience sample is not entirely appropriate. Students were unevenly selected across different years and were confined to one university; results, therefore, are not generalizable. It would be useful to compare empathy levels between students from other universities in Jordan. Finally, the use of a self-report questionnaire that only measures behavioral intent and not actual empathy limits the conclusions that can be drawn from the research. Data from a self-report questionnaire can have more meaning if they are validated through triangulation or contrast methods. For example, this could be in conjunction with responses to video assessments, or the observing of actual behavior [26].

### **CONCLUSION**

It is of concern that the nursing students in this study had low scores on the empathy scale. Reform of the nursing curriculum to include courses to improve communication skills, particularly in developing the capacity for an empathic relationship between nursing students and patients, is necessary. The traditional communication skills course is no longer sufficient. Teaching of empathy skills in the nursing curriculum will require innovative and creative approaches, such as (but not limited to) simulation and role playing, storytelling, reflective discussion and listening directly from health care consumers.

The 'Agree' frequency was calculated by a combination of 5,6 and 7 responses for directly scored items and by combination of 1, 2 and 3 responses for reversely scored items.

The 'Disagree' frequency was calculated by a combination of 1, 2 and 3 responses for directly scored items and by a combination of 5, 6 and 7 responses for reversely scored items.

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### **ETHICS APPROVAL AND CONSENT TO PARTICIPATE:**

Ethical approval was obtained from the Scientific Research Committee at the Faculty of Nursing and the Institutional Review Board (IRB) at Mutah University.

### **HUMAN AND ANIMAL RIGHTS**

No animals/humans were used for studies that are the basis of this research.

### **CONSENT FOR PUBLICATION**

Informed consent was obtained from all the participants prior to publication.

## CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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Declared none.

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