Introduction

Extension of metropolitan Tehran and focus of businesses centers in inner city has lead bulk of the trips within the city in these areas. Sharp increase in population and traffic in these areas has led to problems. And displacement of citizens with municipal vehicles requires having enough parking spaces and a lot of traction in the metropolitan area. Today, with advances in modern technology, most of the investments were in line rail transportation. The advantages of rail transport compared to other methods of transportation can be more secure, less energy consumption and environmental foundations. Terminals and stations, as one of the most important areas of rail transport with the cohesion and integration of urban spaces and public life are of particular importance. Stations due to new requirements appropriate to their characteristics, are as one of the most important issues in architecture and urban planning.

Tehran Metro has greatly effective in reducing traffic problems in the organization of public transport within the city plays a major role. Given the importance of achieving sustainable urban transport, the satisfaction of passengers traveling by train as a criterion in determining the success of the system is remarkable. Hence, the aim of this paper is to investigate the factors influencing architecture and the satisfaction of its priorities is to travel by train.

Materials and methods

The most important issue that is discussed in this study to identify and assess the factors affecting the quality of user satisfaction is the metro station environment. This factor also needs to be functional, in good physical and mental characteristics of man he needs to be coordinated. In this case, the result will be a subway trip to the satisfaction of the users. In this regard, the main question of this study is that what are the architectural elements and factors influencing satisfaction of passengers and how are the priorities for traveling by train?

In this research, we first review the pertinent literature and the subjects of library records were collected. The factors affecting the satisfaction of a subway trip was extracted from relevant sources. These factors are then modified and completed by experts and professors. In order to compare and prioritize these factors, questioning techniques were used. On this basis, the architecture of the main factors influencing factors for passenger satisfaction (based on studies and interviews and expert opinions) was determined from the subway trip.

Next, in order to compare and determine the priorities of these, 146 questionnaires were used and were distributed as evaluation criteria in Tehran, and after removing 6 confounding questionnaire, were analyzed. An independent random sample survey among users of the metro stations of Tehran and Suburbs was selected. All Polls are done days through a week in the month of February 19 to 25 February 1389 and on different hours between 10 am to 6 pm on Surface and Underground stations, including stations 1,2 lines. Questionnaires were distributed among stations on Line 1 to Imam Khomeini to Tehran Imam Khomeini's line between the two stations, the stations of Line 4 and Line 5 door shemiran Revolution Square and the station was conducted. After conducting field studies to compare and prioritize maintenance of the techniques Likert scale was used. Based on the results, satisfactory solutions to enhance the architectural features provided on the Tehran metro areas.

Finding and results

In this section, data obtained from a survey of metro areas, are analyzed. The analysis is performed based on a Likert scale are examined. Interpretation of the obtained data for analyzing the factors affecting the satisfaction of passengers traveling by train is performed.

Factors influencing satisfaction with train travel: At this stage, the users are asked to express their opinion about the importance of architecture criteria on their extent of satisfaction. In order to answer questions based on a Likert five options were collected. In Table 1 the frequency and percentage of comments about each of them has been determined. The results of Table 1 confirm that respondents consider many factors greatly influence the satisfaction they travel by metro. See an average 2/46% of respondents have very high impact factors. On the other hand, one sixth of the opposite effect and only 1% of them were quite the opposite. The placement of the station with 8/67 of the most influential and represents strongly agree strongly agree 30% with minimal impact on social interaction is introduced. At this stage of the analysis framework based on the findings of the survey listed four factors which influence user satisfaction of metro passengers with are shown in Table 2. The item states that a particular phenomenon is measured as the item is equal to the value measured at a distance of offers. Respondents' rate their agreement with each statement on a rating scale from one to five usually shows up. Subjects then each item in terms of the number (rank) are valued. The sum of the numerical values of the subjects' scores on this scale is achieved. Experts agree 3 or more in each of the categories in terms of the psychological, functional, and aesthetic and safety is considered.

Table 1. Quality indicators from the perspective of space experts subway stations, (authors)

Interpersonal interactions, social interactions, attractive space, wideness of space, clarity and legibility of space, sound, air conditioning, lighting, art stations, symbols, characters and concepts, and point of view and perspectives, social security, location of stations	Psychological indicators
Interpersonal interactions, social interactions, attractive space, wideness of space, directions and accessibility, transparency and legibility of space, noise, air, light, temperature, design and furniture layout, symbols, characters and concepts, visual aesthetics and landscape safety, social, station location	Performance indicators
Largeness of space, clarity and legibility of space, light, design and layout furniture, art stations, symbols and concepts, visual aesthetics and landscape,	Aesthetic indicators
And access roads, lighting, furniture design and layout, social security, location of stations	Safety Indicators

Architectural factors affecting satisfaction with the train journey based on the data from Table 1 are weighted and analyzed. Based on Likert scale ratings for each operating numerous totally agree with the 2 +, 1 + favor, 0 abstentions, against the 1 - and 2 opposed - and then their total weight was 140 (total) was divided. Based on user feedback, placement of stations in the city with 542/1 has the greatest impact on satisfaction of passengers traveling by train. And access routes with the 442/1 are another important factor in this context. Finding shows that the ease and speed of access to the metro station of the main factors in the satisfaction of citizens. In addition to monitoring the safety of the station, with 421/1 on the factors such as illumination (392/1) Temperature (328/1), clarity and readability Space (171/1) are very important in this respect. Another attractive feature space as a space (157/1) furniture design and layout (142/1), symbols, characters and concepts (085/1), any artwork in station (042/1), interpersonal interactions (007 / 1), sound, and air conditioning (007/1), social (842/0) and saw the landscape and the landscape outside the station (642/0) of each spatial qualities are influenced by the environment.

Conclusions

Several factors influence the satisfaction level of the users travel by metro. Consider these factors and efforts to improve the quality of the space station can greatly enhance users' satisfaction with train travel is effective. The results of this study are based on the opinions of experts and users, the factors influencing the satisfaction and affect following order of priority as follows:

1 - The location of the station;

2 - Directions and access;

3 - Social security, attendance and supervision;

4 - Lighting and lighting;

5 - Temperature (comfort);

6 - Largeness of space (spatial proportions);

7 - Space clarity and readability;

8 - Space attraction, mental relaxation;

9 - Design and layout of furniture;

10 - Symbols, Signs and concepts;

11 - Artworks in the stations;

12 - Personal interactions;

13 - Noise and air conditioning;

14 - Social interactions and

15 - View and terms and perspectives outside the station.

Based on the results of the research station in town location, directions and accessibility, safety, and broad social and architectural lighting control and the architecture of the main factors influencing the satisfaction of passengers traveling by train is a subway station. The results show that the weighted space station in the 542/1 is of particular importance for users. Light, temperature, noise, and air conditioning as well as other factors those are very effective in improving the quality of the station space. In terms of comfort, safety, environmental and psychological factors enhancing tolerance and nerve. Due to the largeness of space and clarity, readability and user satisfaction in order to ensure the quality of the spaces created are impressive. Taking advantage of these factors can lead to a sense of space and dynamics and its charm. Also, the use of signs, concepts and Artworks for the subway stations to promote effective coordination and interaction with the environment. It is an

indicator of the influence of technical factors, planning, implementation and management of the space station in passenger satisfaction, but the specific purpose of this study is to investigate the factors affecting satisfaction in the architecture. It is recommend for subway stations, to pay attention to the quality of the architectural design space subway stations, thereby increasing user satisfaction and consequently reduce crimes, social (social sustainability), and the sense of space and protect public property as they goal of sustainable urban transport. In addition, factors influencing satisfaction with train travel in 4 general categories of psychological, functional, aesthetic and safety are in place. Based on the results of research related to the safety of the user's view of Tehran metro stations weighted 387/1 is of great importance and this shows the importance of the safety issue is mentally and physically in subway stations. Factors affecting the utilization of architectural legibility and ease of access, monitor and control the behavior patterns of passengers and dynamic environment and catchy enough to be important. Performance indicators weighted by the amount of 167/1, and psychological indicators of 124/1 in the second and third priorities are important. It is also recommended with particular attention to the factors influencing the design aesthetic of the space station index, Trying to create spaces that improve the quality and taste of the audience members have.