This study aims to investigate the need for designing an App for capturing the emotions of citizens based on their stories that are connected to different places in cities.

**Methodology**

…

**Results**

The first stages in the analysis of the questionnaire design in respect of attitude measurement are the assessment of reliability. This stage is significant in designing effective and valid empirical research in order to ensure that findings are accurate and to be able to discuss further implications for attitude and intention-based research. The findings of the reliability of the questionnaire is reported in Table 1. The alpha values range from .93, which is highly reliable. The reliability score exceeded the minimum stan­dard (.80) suggested by Nunnally (1978). The high level of reliability score indicates that the sampling domain has adequately been captured.

Table 1. Results of reliability analysis

|  |  |  |
| --- | --- | --- |
| **Tend to express your emotions about the following categories?** | **Mean** | **Std. Deviation** |
| [sports in the city] | 3.77 | 0.99 |
| [plant & nature in the city] | 4.34 | 0.77 |
| food & drink in the city] | 4.59 | 0.62 |
| [travel & places in the city] | 4.64 | 0.62 |
| [transport in the city] | 4.29 | 0.81 |
| [weather in the city] | 4.24 | 0.84 |
| [arts & crafts in the city] | 3.96 | 1.00 |
| country] | 4.42 | 0.82 |
| **Preferences used to express emotions** |  |  |
| emojis] | 4.15 | 1.01 |
| stickers] | 3.92 | 1.06 |
| hashtags] | 3.71 | 1.20 |
| stories] | 4.28 | 0.95 |
| **Preferences for telling stories about the city while using the app** |  |  |
| Text] | 3.86 | 1.04 |
| Photo] | 4.67 | 0.64 |
| Audio] | 3.17 | 1.17 |
| short video] | 4.18 | 0.95 |
| **Rewards for your contribution, comments, and stories** |  |  |
| open badges] | 3.89 | 1.08 |
| certificates] | 3.99 | 1.11 |
| points] | 4.06 | 1.00 |
| **Preferences for user that the App allows** |  |  |
| to share your profile (visited places, emotion, etc.) with your friends/other users on this app] | 4.15 | 0.91 |
| to publish your stories on your social media accounts?] | 4.27 | 0.87 |
| to interact with other people’s stories] | 4.23 | 0.84 |
| to facilitate a real event with the help of the app (not a virtual event)] | 4.22 | 0.83 |
| to have a real connection with people in the same place at the same moment] | 4.11 | 0.93 |
| to visualize a map with emotions expressed by others] | 4.22 | 0.80 |
| to consult a thematic map to understand better the personal and, emotional relationship that people currently have in the city] | 4.26 | 0.83 |
| **Interests in visiting/learning about places (in the city) that triggers those emotions in you.** |  |  |
| [extreme negative emotions connected to you?] | 2.89 | 1.23 |
| [extreme positive emotions connected to you?] | 4.55 | 0.68 |
| **Probability to visit a new location in the city** |  |  |
| [Social media post] | 4.30 | 0.78 |
| [Media mention] | 3.91 | 0.99 |
| [Recommendation of a friend] | 4.42 | 0.71 |
| [Recommendation by a family member] | 4.43 | 0.78 |
| [Advertisement] | 3.48 | 1.02 |
| [Trying something new] | 4.50 | 0.69 |
| [An event is happening there] | 4.35 | 0.74 |
| [Capturing/Experiencing new emotions] | 4.43 | 0.71 |

Cronbach's Alpha=.93

An exploratory factor analysis was performed. Bartlett’s test of sphericity (with a value of XXX, *p* < .001) and a calculated Kaiser- Meyer-Olkin statistic of . XX. This indicates that data seemed suitable for factor analysis. Variables with loadings equal to or greater than .40 were included in a given factor to decrease the probability of misclassification. A total of 21 satisfaction items from the factor analysis resulted in three factor groupings and explained 63.25% of the variance. Most of the factor loadings were greater than .60, indicating good correlations between the items and the factor groupings. A Cronbach’s alpha test was used to determine the internal consistency. The coefficients ranged from .62 (Factor 3) to 94 (Factor 1), indicating that variables were considered to be internally consistent. Factor 1, negative emotions, refers to 10 items indicating feeling boredom, uncomfortable, fear, worried, ashamed etc. Factor 2, positive emotions 1, was composed of eight statements specifically on feeling happy, peaceful, relaxed, nostalgic etc. Factor 3 is the second group on positive emotions addressing three statements such as feeling proud, hopeful and romantic. The results of the factor analysis are presented in Table 2.

In the next stage, we run a series of regression analysis to better indicate how a group of independent variables, namely positive or negative emotions etc, is likely to have an impact over another group of dependent variables such as the need for developing an App, intentions for playing a game based on personal stories and emotions shared in the App, intentions of sharing stories, emotions etc.

As indicated in Table 3, the expression of users’ positive emotions has a strong positive influence on the perceived importance of developing an application that lets people express their emotions about the cities. Such positive emotions include feeling happy, peaceful, joyful, hopeful, romantic or proud. These positive emotions also have a strong influence on the users’ intentions of playing a game based on personal stories and emotions shared in the Apps (see Table 4).

Table 3. The influence of positive emotions on the users’ intentions of playing a game based on personal stories and emotions shared in the App.

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Standardized Coefficients | t | Sig. |
| (Constant)  Factor 3 (Positive emotions 2)  Factor 2 (Positive emotions 1) |  | 76.29 | .000 |
| 0.18 | 3.99 | .000 |
| 0.17 | 3.96 | .000 |

Multiple R = .247; adjusted R2 = .057; R2 = .061; F = 15.792; sig. F = .0000.

Table 4. the influence of the expression of positive emotions on the need of developing an application that lets people express their emotions about the city

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Variable | Standardized Coefficients | t | Sig |
| (Constant)  Factor 2 (Positive emotions 1)  Factor 3 (Positive emotions 2) | |  | 163.00 | .000 |
| .37 | 8.87 | .000 |
| .14 | 3.25 | .001 |

Multiple R = .369; adjustedR2 = .134; R2 = .136; F = 77,100; sig. F = .0000.

Table 5 indicates that both positive and negative emotions convey a strong influence on the users’ concerns that the different types of emotions connected to a specific place in the city arouse their curiosity to explore the stories and places. This means that, regardless of the directions of emotions, users become curious in exploring the stories and places in a certain city. Furthermore, positive emotions are highly associated with the users’ intentions of sharing stories, videos, pictures and interacting through an App. This leads the users to connect themselves to the city visited or is supposed to be visited (Table 6).

Table 5. The influence of emotions on the users’ concerns that the different types of emotions connected to a specific place in the city arouse their curiosity to explore the stories and places

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Standardized Coefficients | t | Sig. |
| (Constant)  Factor 2 (Positive emotions 1)  Factor 1 (Negative emotions) |  | 133.87 | .000 |
| 0.32 | 7.54 | .000 |
| 0.10 | 2.23 | .026 |

Multiple R = .335; adjusted R2 = .109; R2 = .112; F = 30.880; sig. F = .0000.

Table 6. The influence of positive emotions on the intentions of sharing stories, videos, pictures and interacting through an App.

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Standardized Coefficients | t | Sig. |
| (Constant)  Factor 2 (Positive emotions 1)  Factor 3 (Positive emotions 2) |  | 109.05 | .000 |
| 0.24 | 5.45 | .000 |
| 0.16 | 3.77 | .000 |

Multiple R = .287; adjusted R2 = .079; R2 = .082; F = 21.919; sig. F = .0000.

The following three tables offers the empirical evidence suggesting that the expression of emotions about the city is likely to change the users’ emotions and perceptions about the same city. The expression of emotions about a certain city is possible through sharing stories, videos, pictures or interacting through an App. As suggested in these tables, the expression of positive emotions also has a positive influence on changes in their emotions (Table 7), their perceptions in general (Table 8), and their image perceptions of the city (Table 9). This means that the more the users convey positive emotions about the city the more they hold more positive emotions and perceptions about the city and perceive its image more positive.

Table 7. The influence of the expression of emotions on the users’ emotions about the city

|  |  |  |  |
| --- | --- | --- | --- |
| Variables | Standardized Coefficients | t | Sig. |
| (Constant)  Factor 2 (Positive emotions 1)  Factor 3 (Positive emotions 2) |  | 107.08 | .000 |
| 0.20 | 4.54 | .000 |
| 0.10 | 2.28 | .023 |

Multiple R = .224; adjusted R2 = .046; R2 = .050; F = 21.919; sig. F = .0000.

Table 8. The influence of the expression of the emotions on the users’ perceptions about the city in general.

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Standardized Coefficients | t | Sig. |
| (Constant)  Factor 2 (Positive emotions 1)  Factor 3 (Positive emotions 2) |  | 113.17 | .000 |
| 0.30 | 6.89 | .000 |
| 0.12 | 2.67 | .008 |

Multiple R = .317; adjusted R2 = .097; R2 = .101; F = 27.291; sig. F = .0000.

Table 9. The influence of emotions about the city on its image.

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Standardized Coefficients | t | Sig. |
| (Constant)  Factor 2 (Positive emotions 1) |  | 109.49 | .000 |
| .23 | 5.31 | .000 |

Multiple R = .233; adjusted R2 = .053; R2 = .054; F = 28.184; sig. F = .0000.

In the second part of this study, we tried to assess how the intentions of telling stories about the city while using an App has been influential on the need of developing an App and playing a game. Both photos and audios appear to be the most convenient instruments for the users to tell about their stories on the need of developing an App that will allow the users to express their emotions about the city (Table 10. Despite their changing positions and the inclusion of texts as the third item, there are three influential factors on the users’ intentions of playing a game based on personal stories and emotions shared in the App (Table 11).

Table 10. The influence of telling stories about the city on the need of developing an App.

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Standardized Coefficients | t | Sig. |
| Constant  Photo  Audio |  | 12.97 | .000 |
| 0.31 | 7.12 | .000 |
| 0.10 | 2.33 | .020 |

Multiple R = .330; adjusted R2 = .105; R2 = 109; F = 29.807; sig. F = .0000.

Table 11. The influence of telling stories about the city on playing a game based on personal stories and emotions shared in the App

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Standardized Coefficients | t | Sig. |
| Constant  Audio  Photo  Text |  | 3.84 | .000 |
| 0.18 | 3.94 | .000 |
| 0.16 | 3.69 | .000 |
| 0.09 | 1.97 | .050 |

Multiple R = .299; adjusted R2 = .084; R2 = .090; F = 15.984; sig. F = .0000.

Moreover, the feedback from the respondents suggests that they also would like to be rewarded for their sharing contribution, comments or stories. The instruments of such a procedure include obtaining points and certificates. The need for obtaining these two instruments has a positive influence on the need for developing an App (Table 12) and also the intention for playing a game based on personal stories and emotions shared in the App (Table 13).

Table 12. The influence of the intentions of getting rewarded over the need for developing an App.

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Standardized Coefficients | t | Sig. |
| (Constant)  [points]  [certificates] |  | 28.58 | .000 |
| 0.13 | 2.58 | .010 |
| 0.13 | 2.58 | .010 |

Multiple R = .223; adjusted R2 = .046; R2 = .050; F = 12.736; sig. F = .0000.

Table 13. The influence of the intentions of getting rewarded over playing a game based on personal stories and emotions shared in the App

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Standardized Coefficients | t | Sig. |
| (Constant)  [points]  [certificates] |  | 9.60 | .000 |
| 0.21 | 4.27 | .000 |
| 0.17 | 3.50 | .001 |

Multiple R = . 326; adjusted R2 = .103; R2 = .106; F = 29.037; sig. F = .0000.

As we know, individuals usually express their emotions by using various ways, methods or platforms. In our study, the respondents hold the intentions to share their emotions about the food and drink in the city, the country in general, and the sport activities in the city. In the same order, these three factors are the most influential on the need for developing an App about the city (Table 14) whereas the sport activities in the city has emerged as the only single factor on the users’ intentions of playing a game based on their personal stories and emotions shared in the App (Table 15).

Table 14. The influence of the users’ intentions to share their emotions over the need for developing an App.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Standardized Coefficients | t | Sig. |
| Constant  food & drink in the city  country in general  sports in the city |  | 11.27 | .000 |
| 0.16 | 3.67 | .000 |
| 0.13 | 2.91 | .004 |
| 0.13 | 2.88 | .004 |

Multiple R = .276; adjusted R2 = .070; R2 = .076; F = 13,370; sig. F = .0000.

Table 15. The influence of the users’ intentions to share their emotions over their intentions of

playing a game based on personal stories and emotions shared in App

|  |  |  |  |
| --- | --- | --- | --- |
| Constant  Sports in the city | Standardized Coefficients | t | Sig |
|  | 14.47 | .000 |
| 0.22 | 5.00 | .000 |

Multiple R = .220; adjusted R2 = .047; R2 = .049; F = 24.980; sig. F = .0000.

Practically, there are also different options for the users to express their emotions while using different forms of Apps or social media outlets. The respondents appear to be using stories, hashtags, stickers, emojis etc. In this study, using stories has become the most influential single factor over the need for developing an App (Table 16). However, four factors, namely hashtags, stickers, stories, and emojis, are the most influential elements on the users’ intentions of playing a game (Table 17). Only the emojis has a negative influence meaning that using more emojis may result in less intentions of playing a game.

Table 16. The influence of using different options to express emotions over the need for developing an App.

|  |  |  |  |
| --- | --- | --- | --- |
| Constant  Stories | Standardized Coefficients | t | Sig |
|  | 27.67 | .000 |
| 0.26 | 6.01 | .000 |

Multiple R = .262; adjusted R2 = .067; R2 = .069; F = 36.161; sig. F = .0000.

Table 17. The influence of using different options to express emotions over their intentions of

playing a game based on personal stories and emotions shared in App

|  |  |  |  |
| --- | --- | --- | --- |
|  | Standardized Coefficients | t | Sig. |
| Constant  Hashtags  Stickers  Stories  Emojis |  | 7.91 | .000 |
| 0.21 | 3.98 | .000 |
| 0.23 | 4.12 | .000 |
| 0.13 | 2.67 | .008 |
| -0.14 | -2.42 | .016 |

Multiple R = .371; adjusted R2 = .130; R2 = .137; F = 19.346; sig. F = .0000.

**Discussion**

**Conclusion and implications**

**References**