BEHAVIOR ANALYSIS OF USERS ON FACEBOOK

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ABSTRACT. *Behavior in social media is defined as the way users interact with each other. These interactions include: content creation and posting by individuals and sharing it with friends, re-sharing content shared by others, submit comments or just click on like on what is posted by friends. The analysis of this behavior may allow us to predict the next actions that can make users and their influence on others.The aim of our work is to analyze the behavior of users on Facebook. Analyzing the activities of these users and emphasizing the participation and the sharing of information are two important characteristics that will enable us to achieve our analysis. In this paper we present a study conducted on a sample of 60 individuals of different age and sex. We used a survey that includes different activities which allowed us to obtain highly relevant information that tells us the nature of the activities of Internet users on Facebook by gender and age group.*
Keywords: Behavioral Analysis, Social Media, Users Activities.

1. **Introduction.** Facebook created a parallel world where people are forced to spend time. Some of them use it just to update their profile, others to add the most recent photos of them and their families. Each individual may find in Facebook a useful tool for himself [1][2].

On the other hand, with the growing phenomenon of Facebook there are advantages but also several drawbacks. We must ensure that the content we put on it is decent, the information not too personal, and if that is not the case we must be aware that Facebook owns all the content that we put on our pages. In summary Facebook enables its users to talk, play, read, listen to music, study and everything behind a screen and through the net, that's why we should study and analyze the activities of the users and draw the right insights.Social network analysis [3] [4] is applied to study human relationships and connections by providing systematic methods for an efficient evaluation of social media efforts based on scientific evidence. It is also used for purposes other than scientific research, especially by consultant in professional relationships or for commercial purposes. Research topics in network analysis are multiple, and vary from family ties, to labor relations, to companionship, etc...

In this paper we want to analyze the user behavior on Facebook, in order to identify what brings together different users from different environments. It is important here to note that the participation and sharing of information from different users are two important features in this analysis. The following is a non exhaustive list of activities of users on Facebook [5][6]:

- Submit and share photos and videos.
- Participate in events.
- Play on Facebook.
- Access to applications on Facebook.
- Browse Friends list messages, invitations.
- Join groups.
- Exchange messages (instant discussing).

- Participate in groups, forums....
- Browse friends' profiles.
- Comment on interests of friends (on their videos, photos ....).
- Make universal search (profile, forums, another person ...).
- Exchange information with your friends.
- Expand your personal network with new people.
- Submit a status.
- Make comments.
- Click on like
-

2. **Methodology and sampling.** Random sampling is the most preferred mode of investigation [7]. Here the sample is a subset taken from a universe from which we want to study certain characteristics. To be valid, a sample must be representative of the population studied. This requirement arises firstly, the problem of the size of the sample, and on the other hand the problem of choosing individuals.

3. **Internet Surveys (Online Surveys).** In recent years, online surveys [8] have taken an ever more important place on the World Wide Web essentially because of these advantages:
- The questionnaire is available from a large number of respondents simultaneously around the world at any time of the day and night.
- Treatment of the results can be achieved in almost real time.

This is why we have chosen this method to accomplish our survey and in the following sub-paragraphs we will describe the survey content and identity.

3.1. **Survey Content.** Short questions were proposed, they are easily understood by all users. We used closed single choice questions (QCS), as they are simple and rapidly administrated and treated.
Each question is numbered (Q1, Q2, etc...) in order to facilitate the understanding of the responses during the processing of the questionnaire, Figure 1.
The questionnaire consists of 14 multiple-choice questions. The Survey respondents will give basic information regarding to their Facebook activities [9], they will also specify their sex and age. Based on the literature and theories the following questionnaire, Figure 1. was proposed to guide users respond correctly:

3.2. **Survey Identity.** Our survey was conducted on a random sample of 60 users gathered in the Cyberspace of Setif (Setif is a city situated in the east of Algeria). This Cyberspace is located in the down town on a three-storey building. It is equipped with high quality equipment and it has a high speed internet connection. It has a capacity of 200 seats and uses Wi-Fi technology. It contains spaces reserved to children, supervised by fire – walls, and others for professionals as well as for blind people whose computers are equipped with speech synthesis software. It also has a library with a direct link to the city of Paris and other cities in USA. It is a unique achievement in the region and it gives the users the opportunity to surf over the world in a very comfortable way.

Online Questionnaire

(Check the box corresponding to the correct answer)

Personal Information

Q1: What's your gender?.

- ● Male
- ○ Female

Q2: What's your age?.

- ○ From 13 to 21 years.
- ● From 22 to 34 years.
- ○ 35 years and +

What are your activities on Facebook?

Q3: Post and share photos.

- ● Often
- ○ Quite often
- ○ Never

Q4: Post and share videos.

- ○ Often
- ● Quite often
- ○ Never

Q5: Browse friends list, messages, invitations.

- ● Certainly
- ○ Sometimes
- ○ Not necessarily

Q6: Post comments.

- ● Certainly
- ○ Sometimes
- ○ Not necessarily

Q7: Do a universal search (profiles, forums, other...)

- ○ No
- ● Sometimes
- ○ Always

Q8: Comment on friends' posts.

- ○ No
- ● Sometimes
- ○ Always

Q9: Browse your friends' profiles.

- ○ No
- ● Sometimes
- ○ Always

Q10: Play games on Facebook.

- ○ Yes
- ● No

Q11: Access apllications.

- ○ Yes
- ● No

Q12: Attend events.

- ● Yes
- ○ No

Q13: Participate in groups and forums...

- ● Yes
- ○ No

Q14: Join groups.

- ● Yes
- ○ No

Submit

Online Q

Figure 1. Online Questionnaire

4. **Findings.**

4.1. **Graphical representations by gender and age.**

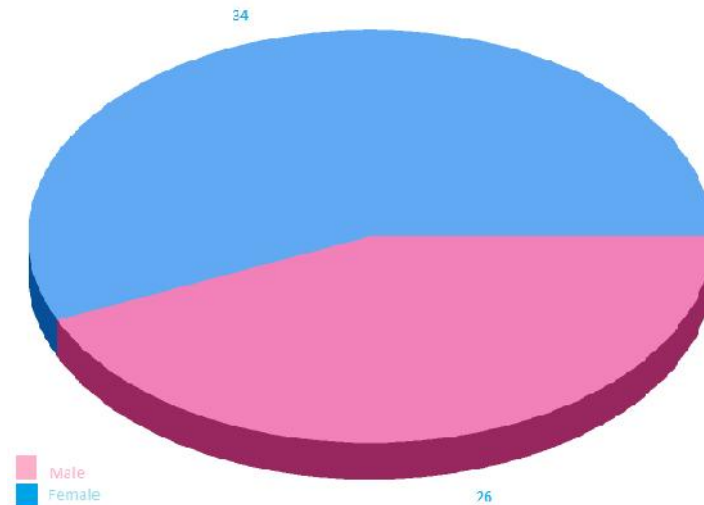4.1.2 **Graphical representation by gender.**

Figure 2. Graphical representation by gender

Findings:
After analyzing the data collected in the cyberspace and regarding to Figure 2. we noticed the following:
- 56.67% of the Facebook users were women (34 women).
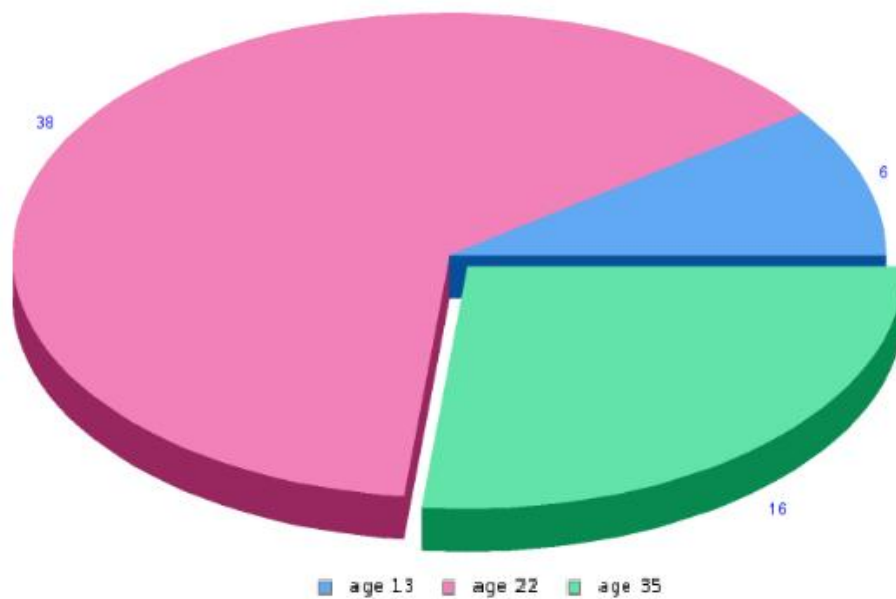- 43.33% were men (26 men).

Figure 3. Graphical representation by age

4.1.3 Graphical representation by age.

Findings: Regarding Figure 3. we noticed the following:
- 63.33% were young adults.
- 26.67% were mature adults.
- While 10.00% were teenagers.

4.2. Graphical representations for the different activities on Facebook.
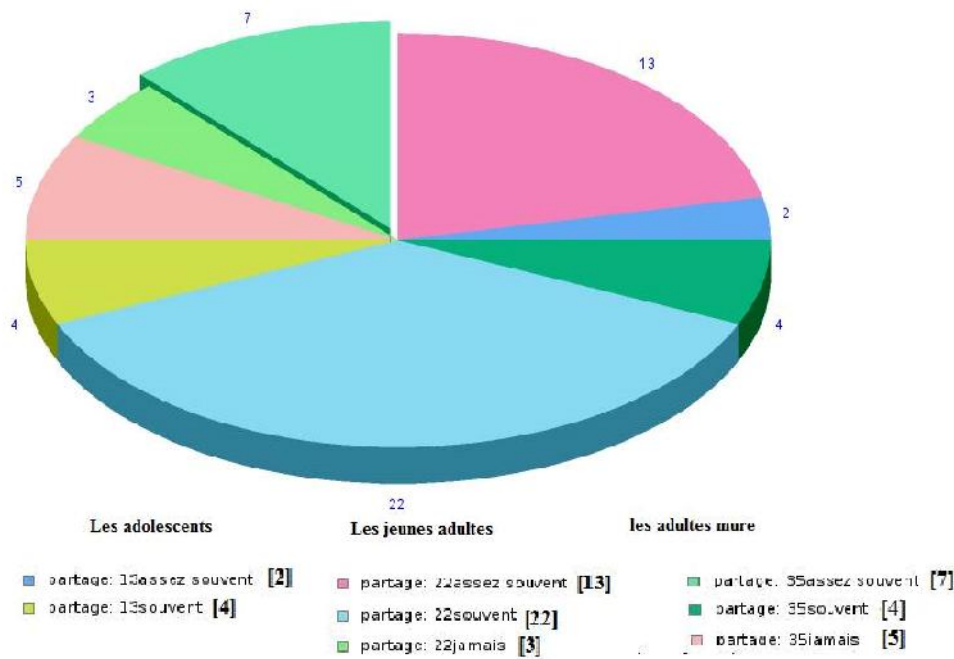### 4.2.1 Graphical representation for sharing videos and photos.

Figure 4. Sharing videos and photos

Findings: Regarding Figure 4. we noticed the following:
- 100% of teenagers (6/6 teenager) share videos and photos.
- 92.10% of Young adults (35/38) share videos and photos.
- 68.75% of mature adults (11/16) share videos and photos.

4.2.2 Graphical representation for playing.

Findings: Regarding Figure 5. we noticed the following:
- 100% of youth (6/6) play on Facebook.
- 52.63% of young adults (20/38) play on Facebook.
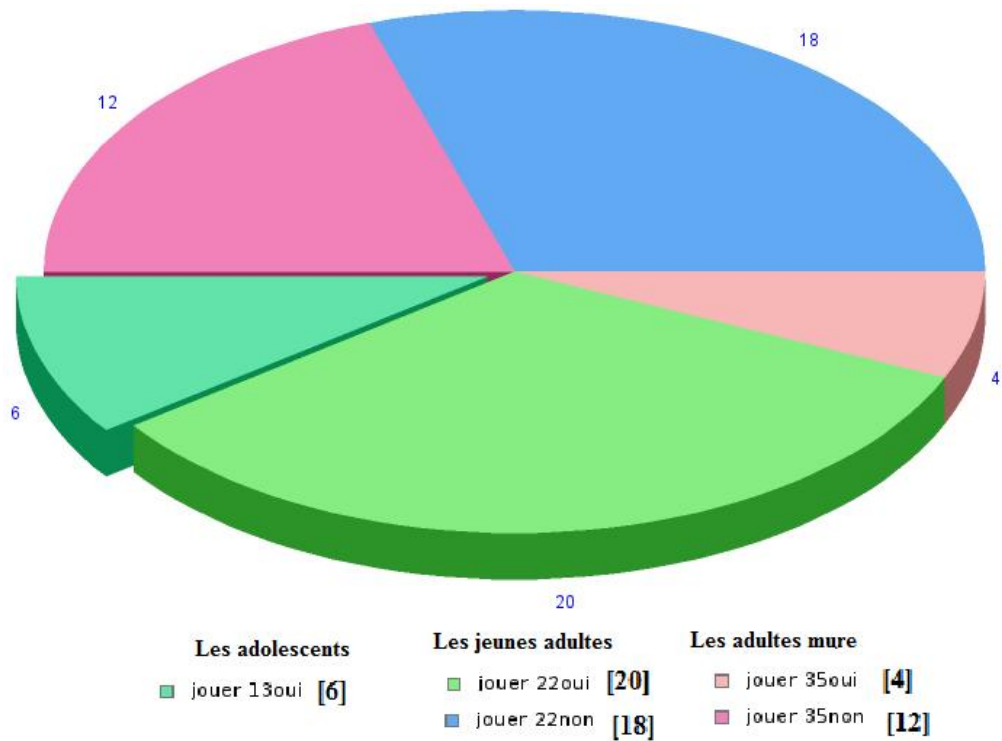- 25% of mature Adults (4/16) play on Facebook.

Figure 5. Playing on Facebook

4.2.3 Graphical representation for posting comments on Facebook.
Findings: Regarding Figure 6. we noticed the following:
- 83, 33% of youth (5/6) make comments on Facebook.
- 65, 78% of young adults (25/38) make comments on Facebook.
- 18, 75% of mature Adults (3/16) make comments on Facebook.

4.2.4 **Graphical representation for access to applications from Facebook.**
Findings: Regarding Figure 7. we noticed the following:
- 83, 33% of youth (5/6) make comments on Facebook.
- 71, 05% of young adults (27/38) make comments on Facebook.
- 31, 25% of mature Adults (5/16) make comments on Facebook.

4.2.5 **Graphical representation for browsing for information from Facebook.**
Findings: Regarding Figure 8. we noticed the following:
- 83.33% of youth (5/6) browses daily on Facebook.
- 71.05% of young adults (27/38) browses daily on Facebook.
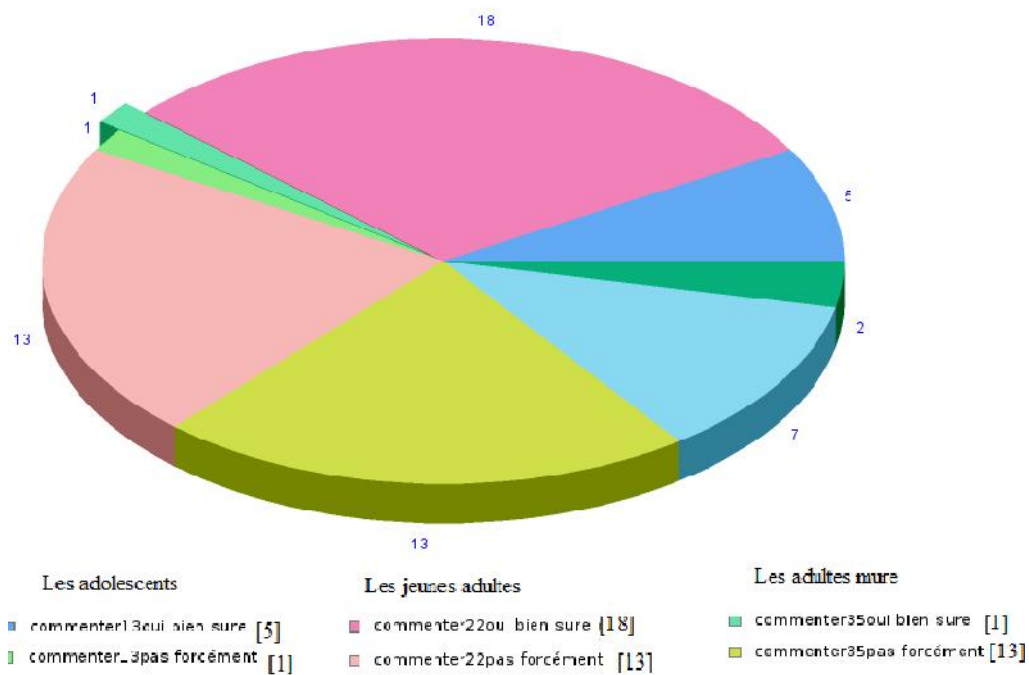- 31.25% of mature Adults (5/16) browses daily on Facebook.

Les adolescents

- commenter13oui bien sure [5]
- commenter_3pas forcément [1]

Les jeunes adultes

- commente22ou bien sure [18]
- commente22pas forcément [13]

Les adultes mure

- commenter35oui bien sure [1]
- commenter35pas forcément [13]

Figure 6. Posting comments on Facebook

Les adolescents

- acceder_applications 13oui [5]
- acceder_applications 13non [1]

Les jeunes adultes

- acceder_applications 22oui [27]
- acceder_applications 22non [11]

Les adultes mure

- acceder_applications 35oui [5]
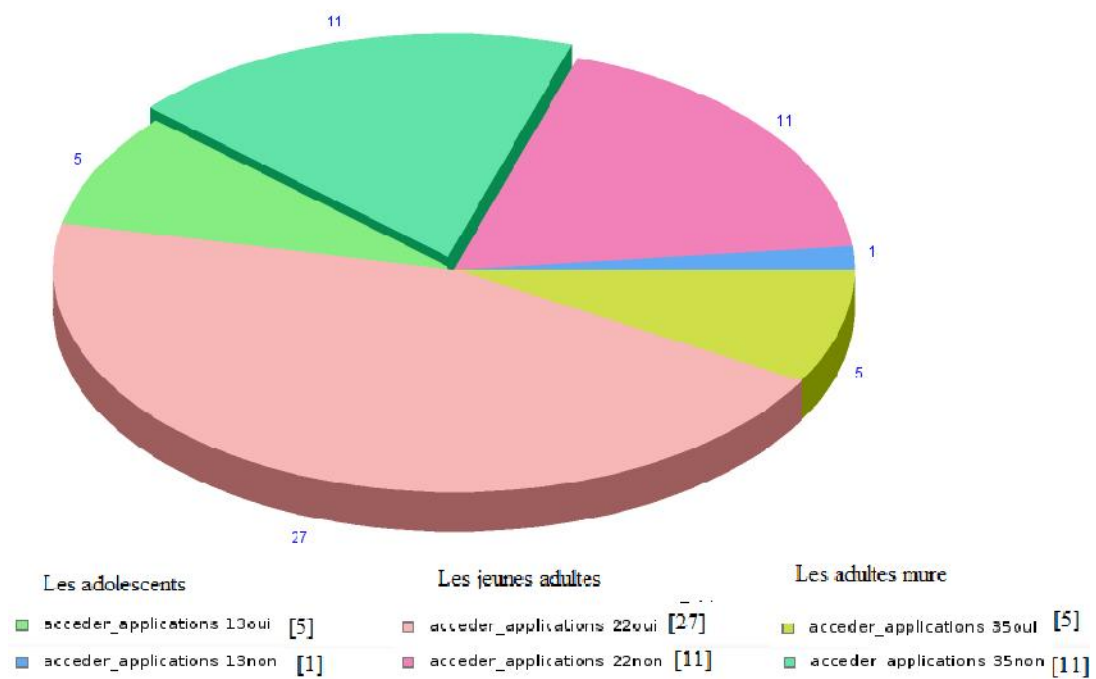- acceder_applications 35non [11]

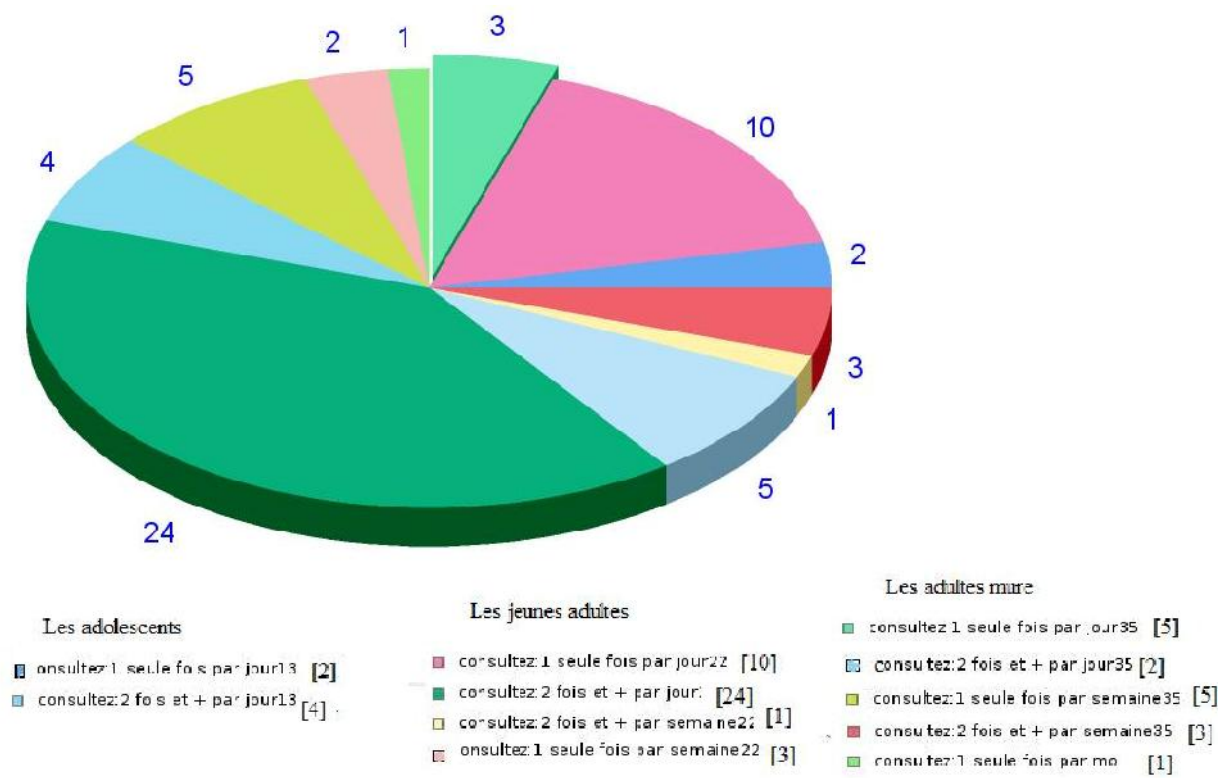**Figure 7. Access to applications from Facebook**

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Figure 8. Browsing for information from Facebook

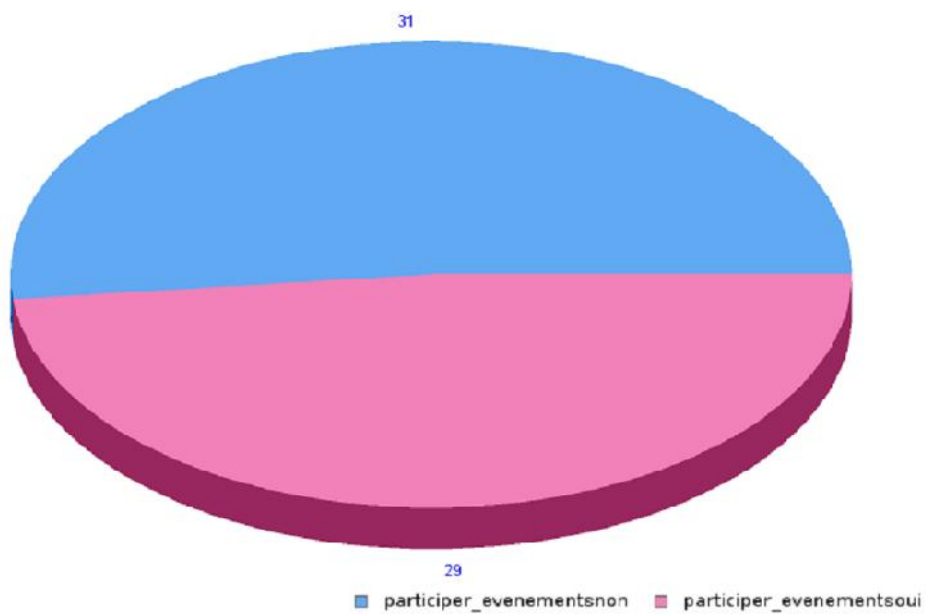4.2.6 **Graphical representation for attending events.**

Figure 9. Attending events from

Findings: Regarding Figure 9, we noticed the following:

- The majority of users responded by no to the question do they attend events on Facebook?

Finally we can state the following based on the activities above:

Teenagers and young adults take the first place with respect to the activities on Facebook (share, play, comment…) because they spend a lot of time on the net, unlike adults who have other interests.

5. **Conclusion**. The social network Facebook is a new way of communication free and easy to use. It seems that users from age range (13 years to 34 years old) which corresponds to teenagers and young adults are more active compared to mature users.

Teenagers and young adults have more activities on Facebook (games, sharing photos videos consultation etc..) which gives them the opportunity to be more open to the world and meet a multitude of points of view; while mature adults are more interested by the professional side (job ad, research and contact with customers, advertisement for a business ... etc..).

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