

THE PSYCHOLOGICAL AND BEHAVIOURAL ANTECEDENTS OF FACEBOOK ADDICTION

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ABSTRACT

This paper aims to study the case of addiction to the social network Facebook which is a phenomenon that is spreading more and more in the world with the popularization of the internet and following the rapid development of computer and communications technologies. We have in this case tried to determine the antecedents of this fact through psychological and behavioural variables. To do so we interviewed 405 internet users with a Facebook account, (52.6%) women (47.4%) men and 57.8% of the sample are aged between 20 is 29 years old. Results shows that hedonic motivation, involvement and two dimensions of peer attachment and trust are antecedents of Facebook addiction.

Keywords: Facebook Addiction, Antecedents, Hedonic Motivation, Involvement, Peer Attachment.

INTRODUCTION

Facebook continues to gain ground and to be renowned following the democratization of the internet as well as the remarkable growth of social media networks, total users went over the 2.5 Billion persons as of the fourth quarter of 2019 (Clement, 2020) The excessive use may cause addiction. According to Goodman (1990); addiction is considered as an impulse control disorder it has two types: (1) the addiction to substances such as drugs, alcohol, smoking; (2) the behavioural addiction relates to the addiction of gambling, internet and social networks including Facebook.

Recently, the use of Social Networking Sites (SNS) has grown to the point that the latter has become an integral part of teens' everyday lives According to Turel (2015) the reliance on the Facebook site is a major public health problem that is growing day by day with the development of technology. Addiction is usually studied at the level of clinical psychology and psychiatry. Facebook has gained a lot of popularity and has generated more researches (Satici Saricali et al., 2014).

Since the emergence of this social network, research has focused on determining the reasons of this addiction. Reasons that revolve around personality disorders, low self-esteem, anxiety and depression. Our work feeds on a break to find other variables that explain addiction to the Facebook site that are mostly drawn from the marketing literature. This allowed us to offer a new angle of analysis of the question of addiction. We have classified these antecedents into two types: psychological, linked to consumer behavior.

The remainder of this paper is organized as follows: section 2 discusses the literature review and hypothesis development, while section 3 discusses the research methodology. Section 4 shows the results of the study, section 5 is about the discussion of results and finally section 6 the conclusion.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Facebook Addiction

The use of social networking sites is increasing rapidly day by day as billions of people frequently use their sites to communicate with other users and follow the news and play online games (Pontes et al., 2016). Ryan et al. (2014) define social network addiction to Facebook as a set of motivations, a use that is habitual, excessive or provoked by a persistent desire to connect to this site.

Griffiths (2012) shows that Facebook 'addicts usually suffers from a mood disorder because they use it excessively to escape from their problems. Indeed, Facebook has several advantages, particularly open access, facilitating communication and the sharing of personal information. However, excessive use of this social network can cause, abuse, addiction and addiction. Internet addiction, as a concept, has appeared in new versions of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) since this addiction is considered a disorder that requires great concern. Facebook is a classic form of social media that causes the phenomenon of addiction that affects people's lifestyles (Wu et al., 2015). According to (Patesson, 2015) Facebook, YouTube and Instagram are sites that attract more and more young people and create dependency. As reported by Tang et al. (2016) Facebook addiction is defined as a subtype of Internet addiction.

Addiction to Facebook can be created through activities that a person can do on this site, for example (talking with friends, playing games), as well as other activities offered by the site (Griffiths, 2012). Facebook subscribers can abuse its use. This abuse is subsequently transformed into dependency among some of them, which reinforces the idea that addiction is not due to chance, it is usually provoked (Błachnio et al., 2016).

Loneliness

Heinrich and Gullone (2006) define the loneliness is an emotionally an unpleasant experience. According to authors, it requires a perception of social relations that are not up to certain expectations and it gives signals that its personal relationships are in some way inadequate. Clayton et al. (2013) show that Facebook is a source of connection between people online, and people who have high levels of perception of loneliness, use it to connect with others. While loneliness encourages people to connect with others on Facebook, loneliness has not predicted an emotional connection to Facebook.

Lou et al. (2012) study on the intensity of the use of Facebook (excessive use of the social network Facebook) proves that loneliness may be an explanatory factor of Facebook addiction. From their part, Ayas and Horzum (2013) demonstrate that the positive relationship between internet addiction and loneliness stems from the need for communication between different types of individuals.

Then, we assume that loneliness is an antecedent of addiction to Facebook.

H₁: Loneliness is an antecedent of addiction to Facebook.

Hedonic Motivation

Holbrook and Hirschman (1982) show that the concept of hedonic motivation refers to consumer behaviour in search of happiness, fantasy, awakening, sensuality and pleasure. Hedonic motivation is a search for pleasure. Fenouillet (2012) defines hedonism as a psychological concept that is related to the happiness and psychological well-being of the individuals. Ernst (2015) confirms the previous studies. He found a positive impact of Social Networking Sites (SNS) on the behavioural intent.

Foddy and Savulescu (2010) define addiction as a strong appetite that leads to rewarding, repetitive behavior that temporarily provides pleasure. Goodman (1990) defines addiction as a recurrent failure to resist impulses to engage specific behaviour. Hedonic motivation and addiction come together in the search for pleasure. We then assume that hedonic motivation is an antecedent of addiction to Facebook.

H₂: Hedonic motivation is an antecedent of addiction to Facebook.

The Involvement

Mittal and Lee (1989) define involvement as a motivational state of mind of a person with respect to an object or activity. Rothschild (1984) defined involvement as a state of motivation, excitement or interest, which exists in a process. The implication is motivated by internal variables (lasting, central values, ego) as well as external variables (product, communications and the situation). Its consequences are types of research, treatment and decision making. Evrard and Aurier (1996) argue that during the 1990s, involvement became an unavoidable theme in the search for consumer behaviour, affecting a multitude of diverse subjects, the object of which may be linked to the act purchasing, product consumption and communication.

Chak and Leung (2004) based on the research of Young (1999) who finds a high level of involvement and excessive use of the Net, presenting a loophole for the user to forget the problems or for relieve a dysphoric mood, such as feelings of hopelessness, guilt, anxiety and depression. The research of Bergmark et al. (2011) on the problems related to a pathological use of the internet among the Swedish population has shown or its problems are related to a strong involvement of the users to the Internet. Then, a high level of involvement can create an addiction to the Net. Błachnio et al. (2016) examined the nature of the behaviour of users of the social network Facebook and identified that a high level of involvement causes in most cases a problematic use of this site. Based on previous studies, we find that the involvement can create an addiction to Facebook from which we then assume that the involvement and one of the antecedents of social network addiction Facebook.

H₃: Involvement is an antecedent of addiction to Facebook

The involvement in products in a particular way, admits a positive relation with the hedonic and commercial motivation cited by (Pattipeilohy & Rofiaty 2013). On the other hand, Pattipeilohy and Rofiaty (2013) rely on the article by Park et al. (2006) who find that the involvement of fashion can influence trends in hedonic consumption, as well as increase positive emotions. Schwartz and Chen (2012) rely on the article by Bloch and Richins (1983) who agree that hedonic motivation is often associated with a high level of client involvement. We notice in this case a relation between involvement and hedonic motivation.

H₄: *The involvement is in relation with the hedonic motivation.*

Attachment to Peers

Nickerson and Nagle (2005) find that attachment behaviour is essentially based on a refuge function of turning to the attachment figure for comfort, support, and comfort in coping with a threat or danger, the attachment is applied originally to infants and young children. They are essentially based on the search for proximity, staying close to and in contact with the figure of attachment. Peer attachment is made up of three dimensions: communication, trust and alienation.

Shapiro and Margolin (2014) draw on the research of Brown and Larson (2009) who find that the literature that discusses the relationship between SNS and adolescents has allowed them to delve into relationships among them and expand their fields of social contact and considering that childhood friendships that are rooted in shared interests and activities. Teenage friendships involve trust, self-disclosure, and loyalty. SRSs potentially offer additional support and communication opportunities for the development of adolescent relationships. Ross (2008) draw on the research of McKenna et al. (2002), who find many online relationships that end up being translated into real contact on social networking sites. The process of meeting an online contact is often marked by a series of steps where trust and comfort are built. Griffiths (1998) revealed that internet addicts usually hide their computers in order to chat with other people. These users suffer from a lack of social activities and have problems with self-confidence, which leads to greater isolation and lack of interpersonal relationships and less interaction with others in real world. This explains a relationship between trust and Facebook addiction.

H_{5(a)}: *Trust is an antecedent of addiction to Facebook*

Pempek et al. (2009) claim that social networking sites and instant messaging are tools that facilitate communication and are a means of interaction with peers (chats and instant comments). Its sites allow the development of identity, friendships and romantic relationships. A study conducted by Barker (2009) evaluated the reasons for SNS used, group membership, collective self-esteem. Communication with peer group members is the most important motivation for using SNS. Participants with a high level of self-esteem were strongly motivated to communicate with peer groups via social networking sites. Women were more likely to report positive self-esteem and use more social networking sites to communicate with their peers. Hong et al. (2014) admit that the social network Facebook is known for its only option compared to other social networking sites is that it allows the communication of a functionally different community compared to other sites. This explains a relationship between communication and addiction to the social network Facebook.

H_{5(b)}: *Communication is an antecedent of addiction to Facebook*

The work of Kim and Kim (2002) deal with the case of Internet addiction from the point of view of consumer studies in South Korea. The latter, explains the reasons of Internet addiction focusing on alienation, in addition to the personality and demographic factors. Based on these descriptions and analyses, alienation and shyness are significantly and positively correlated with internet addiction. According to O'Brien (2010) the clinicians of the DSM committee decided to name the disorder "addiction" or "addictive disorder", while non-clinicians claim that the word "addiction" was derogatory and would lead to the alienation of suffering. Kemp (2012) finds that

addiction is linked to behaviors (taking, drinking, doing certain things, etc.). Addiction takes its identity from alienation and ambivalence. The addict feels foreign, uncertain and still completely determined to find satisfaction through repetition.

H_{5(c)}: Alienation and an antecedent of addiction to Facebook

Figure 1 presents the conceptual model of the psychological and behavioural antecedents of addiction to Facebook.

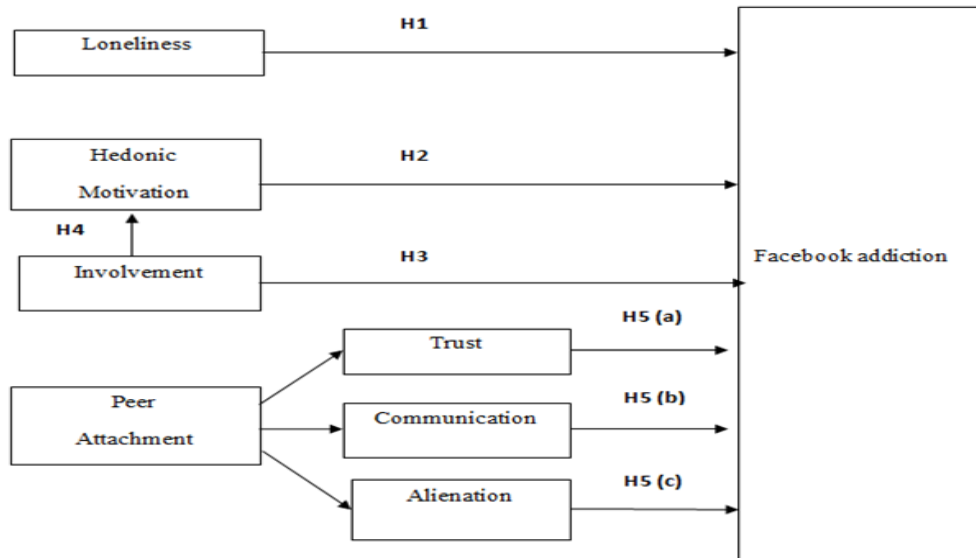


FIGURE 1
PSYCHOLOGICAL AND BEHAVIOURAL ANTECEDENTS OF ADDICTION TO FACEBOOK

METHODOLOGY

Participants and Procedure

The target population is made up of Tunisian citizens (men and women) of different ages with a Facebook account. Individuals who do not have a Facebook account were excluded from the samples. Through a questionnaire created on Google doc software and sent to friends on messenger (Facebook) and then sent to their friends. The sampling method adopted is the "snowball" method, which is non-probabilistic but consists in using people originally selected for the sample as intermediaries to locate other persons with the necessary characteristics that make them eligible for the Sample (Penrod et al., 2003)

All respondents agreed to participate in our online survey. Verbal and formal consent was taken before the survey began and the ethical standards of the University's Research Ethics Board and with the 1975 Helsinki Declaration, regarding the study were respected for all the participants.

We opted for the Likert scale of seven points in order to obtain more relevant and more accurate results. We all first used a pre-test to measure the reliability and assess the

effectiveness of the assimilation and acceptability of the questions by the respondent. We questioned in face-to-face 30 individuals in the period from April 20 to 27, 2016. This mode of interrogation allowed us to detect some difficulties in understanding some concepts that we explained.

The final sample consists of 405 respondents who were arrested online through the social network in the period of April 2017 in Facebook. It is made up of 52.6% women and 47.4% men, 57.8% are aged between 20 is 29 years old.

Measures

We have used five scales, (1) Facebook addiction: Bergen Facebook Addiction Scale (BFAS) (Andreessen et al., 2012), (2) Loneliness: UCLA loneliness scale version 3 (Russel, 1996), (3) Involvement: Personal Involvement Inventory (Zaichkovsky, 1985), (4) Hedonic motivation: Hedonic and Utilitarian motivations and impulsive buying (Babin, 1994) and (5) Peer attachment: The Inventory of Parent and Peer Attachment (Armesden & Greenberg, 1987), To note, all participants had full data on all variables gathered.

Facebook addiction

We used the Bergen Facebook Addiction Scale (BFAS) (Andreessen et al., 2012) which is an unidimensional scale with 6 items on a Likert scale ranging from very rarely to very often. The scale is widely used because it measures the level of addiction to the social network Facebook and his impact on users (eg: 'You spend a lot of time thinking about Facebook or planning how to use it'). Total scores are obtained by summing participant ratings of each item ranging from 6 to 30. The higher the score obtained on the scale, the higher the degree of Facebook addiction. The reliability of the scale was ($\alpha=0.83$) (Andreessen et al., 2012). In our sample, reliability was acceptable ($\alpha=0.82$)

Loneliness

We used the UCLA loneliness scale version 3 (Russel, 1996), this scale is unidimensional with 20 items on a Likert scale ranging from (1= never to 4 = always). The purpose of this scale is to measure the degree of loneliness of the respondents, (eg: 'I fell completely alone'). The total score on the UCLA version (3) ranges from 20 to 80, with higher scores indicating heightened degree of loneliness. The reliability of the scale was ranging from 0.89 to 0.94 (Russel, 1996). In our sample, reliability was acceptable ($\alpha=0.88$).

Involvement

We used the Personal Involvement Inventory (Zaichkovsky, 1985), this scale is unidimensional with 20-item scale is a 7-point bipolar differential semantic scale on the left are marked (1) low involvement until (7) strong involvement. It was developed to capture the concept of product involvement. Measure of personal involvement scores ranges from 20 to 140. The scale successfully met the standards for internal reliability, reliability over time, constant validity, review validity and construct validity. The Cronbach alpha ranged from 0.95 to 0.97 (Zaichkovsky, 1985). In our sample, reliability was acceptable ($\alpha=0.92$).

Hedonic Motivation

We used the Hedonic and Utilitarian motivations and impulsive buying (Babin, 1994). The dimension of hedonic motivation consists of 11 items while the dimension of utilitarian motivation consists of 4 items. In our case we used the hedonic motivation scale; this scale measures the consumption experience of shopping (eg: 'This shopping trip was truly a joy'). This scale is unidimensional with a five-point Likert scale. The cronbach alpha is 0.93 (Babin, 1994). In our sample, reliability was acceptable ($\alpha=0.92$)

Peer Attachment

The Inventory of Parent and Peer Attachment (Armesden and Greenberg, 1987), with 25 items and a five-point Likert scale from (1= Almost Never or Never True to 5= Almost Always or Always True). The Peer Attachment Scale is made up of three dimensions which are: trust (eg: 'My friends accept me as I am'), communication (eg: 'When we discuss things, my friends care about my point of view') and alienation (eg: 'Talking over my problems with friends makes me feel ashamed or foolish'). The total score of the inventory ranges from 32 to 102. The reliability of the scale was, Communication (8 items; $\alpha = 0.88$, Trust (10 items; $\alpha = 0.83$), and alienation (7 items; $\alpha = 0.73$) (Armesden and Greenberg, 1987). In our sample, reliability was acceptable: communication ($\alpha =0.775$), confidence ($\alpha =0.774$) and alienation ($\alpha =0.775$).

Data Analysis

The model that will be tested integrates the dependent variable: Facebook addiction and the independent variables: involvement, hedonic motivation, attachment to peers and loneliness. Respectively, their dimensionality, reliability and validity will be tested with SPSS 18 before proceeding to the estimation of the structural model with AMOS 18.

RESULTS

The Dependent Variable Facebook Addiction

The test of the dimensionality of the Facebook addiction scale involves an Exploratory Factor Analysis (EFA). We conducted a Principal Component Analysis (PCA) on the 6 items of the scale ($KMO = 0.827$, $\chi^2 = 853.783$, $p = 0,000$). The PCA conducted on the items of the scale of the addiction to Facebook emerges a one-dimensional structure on the basis of the criterion of Kaiser ($\lambda > 1$). We arrive at a one-dimensional structure that restores 54.593% of the variance

However, the 6 items introduced generate a convergent validity which ρ is slightly lower than the generally recommended threshold of $0.442 < 0.5$ and a Jöreskog's $\rho 0.823 > 0.8$. Eliminating the item with the lowest factorial contribution significantly improves the ρ of convergent validity to 0.463, while Jöreskog ρ is 0.836.

The Independent Variables

Loneliness: To test the dimensionality of this scale, we conducted a principal component analysis on the 20 items ($KMO = 0.893$, $\chi^2 = 3665.557$, $p = 0,000$). The PCA conducted gives rise to a four axis, the first of which yields 25.873% of the variance, the second 16.565%, the 3rd 11.234% and the last 7.172%. The purification process consists in eliminating in turn

the variable (s) which are less correlated with the axis 1, we end up with a one-dimensional structure that restores 51,874 % of the variance and 10 items.

However, ρ_{vc} slightly lower than the generally recommended threshold of 0.5, since it amounts to 0.463. The Jöreskog's ρ is $0.902 > 0.8$. The elimination an item with the lowest factorial contributions makes it possible to pass the rho of the convergent validity beyond the recommended threshold of 0.5, the Jöreskog's $\rho = 0.902$.

The involvement: We conducted a principal component analysis on the 20 items of the scale ($KMO = 0.915$, $\chi^2 = 4885.918$, $p = 0,00$). The PCA conducted makes emerge a solution in three axes the first one renders 30.496% of the variance, the second 25.126%, and the third 7.492%. The purification process consists in eliminating the least correlated variable to the axis 1. We finally end up with a one-dimensional structure that restores at 56.065% of the variance and 11 items.

However, the eleven items introduced generate a convergent validity ρ slightly lower than the generally recommended threshold of 0.5, and a Jöreskog's $\rho > 0.8$. The elimination of the item Imp19 having the smallest factorial contribution, very appreciably improves the ρ of convergent validity which passes to 0.558. Jöreskog's ρ meanwhile is 0.926.

Hedonic Motivation: We conducted a principal component analysis on the 11 items of the scale ($KMO = 0.921$, $\chi^2 = 1970.815$, $p = 0,000$). The PCA conducted makes emerge a solution in two axes, the first of which returns 30.074% of the variance and the second 29.509%. The purification process consists of eliminating an item. We arrive at a one-dimensional structure that restores 51.583% of the variance.

However, the ten items introduced generate a $\rho_{vc} 0.450 < 0.5$ and a Jöreskog's $\rho 0.895 > 0.8$. The elimination of four items with the lowest factorial contributions, improves the $\rho_{vc} = 0.474$, the Jöreskog's ρ as to he is 0.844.

Peer Attachment: We conducted a principal component analysis on the 25 items of the scale ($KMO = 0.929$, $\chi^2 = 5084.619$, $p = 0,000$). then reducing the PCA until a three-dimensional structure is obtained after the elimination of 17 items.

However, the two introduced items of the communication generate a $\rho_{vc} = 0.638$ a Jöreskog's $\rho 0.778 < 0.8$. The third entered items of confidence generate a $\rho_{vc} = 0.663$, and a Jöreskog's $\rho 0.855 > 0.8$. Whereas for the alienation the 3 items introduced generate a $\rho_{vc} = 0.41$, and a Jöreskog's $\rho 0.667 < 0.8$.

Discriminant Validity

After making sure of the convergent validity of the latent variables tested, we proceed to the test of the discriminant validity (Fornell & Larcker 1984). The table (Appendix 1) makes it possible to ensure such validity and reproduces the R2s of the correlations two by two of the latent variables of the structural model.

Structural Model Test Integrating the Psychological and Behavioural Variables of Addiction

The evaluation of the adequacy of the conceptual model to the data collected in the field requires the evaluation of the indexes of fit obtained following the estimation of the structural model. These fit indexes are of 3 kinds: absolute, incremental and parsimonious. Compliance

with the generally accepted thresholds of these indices provides information on the acceptability of the model.

Fit indexes	χ^2	dl	χ^2/df	GFI	AGFI	CFI	RMSEA
Values	1476.124	514	2.872	0.816	0.786	0.857	0.068

The values of the fit indexes shown in the Table 1 show that the theoretical model is over-identified. It is therefore acceptable except that some indexes are below the empirical threshold of 0.9. In order to improve the fit indexes, it is recommended to covariate the error terms of the latent variables and re-specify the theoretical model, that is to say to eliminate the insignificant relationships of the structural model and then to re - estimate the model again. Thus, we decided to eliminate the alienation variable ($t = -1.114$, $p = 0.265 > 0.05$) and loneliness ($t = 0.428$, $p = 0.63 > 0.05$) which proved to be insignificant. The re-estimation of the model gives us the following results:

Fit indexes	χ^2	dl	χ^2/df	GFI	AGFI	CFI	RMSEA
Values	696.744	284	2.453	0.886	0.86	0.922	0.06

Table 2 shows that there is an improvement in fit indexes that is within acceptable empirical limits. The results of the estimation of the model are presented in Table 3.

Relations	β	t	p	significance	sign
Involvement \rightarrow Facebook addiction	0.265	4.907	0.00	OK	Positive
Motivation hédoniste \rightarrow Facebook addiction	0.292	4.637	0.000	OK	Positive
Peer attachment \rightarrow Facebook addiction					
Communication \rightarrow Facebook addiction	4.48	2.959	0.003	OK	Positive
Trust \rightarrow Facebook addiction	-3.461	-2.801	0.005	OK	Negative
Alienation \rightarrow Facebook addiction	-0.404	-1.114	0.265	NO	Negative
Loneliness \rightarrow Facebook addiction	0.025	0.428	0.63	NO	Negative
Involvement \rightarrow Hedonic motivation	0.460	8.595	0.00	OK	Positive

DISCUSSION

The spread of loneliness was found to be very strong in social networks and even stronger for women than for men. The results have shown the main axes and the great social forces that animate loneliness and suggest efforts to reduce this phenomenon that harms the health of individuals because loneliness increases through social networks (Cacioppo & Hawkley 2009). So, loneliness is an antecedent of addiction to the social network Facebook, while in our research we found the opposite and this is explained by research like that of Clayton et al. (2013) who found that Facebook became the site of the most popular and used social network by individuals and a source of connection with other people online. Individuals with a high level of loneliness use Facebook to form new relationships and talk. Although loneliness causes

connection with others on Facebook, it does not predict emotional connectivity to Facebook. At the level of this study, people who experience high levels of loneliness are not emotionally attached to Facebook, but indeed use the latter to connect with others. In another case the study, so, the hypothesis H1 is rejected and the loneliness is not an antecedent of the addiction to the social network Facebook.

In the literature hedonic motivation is generally linked to shopping and consumers with hedonic motives take shopping as a pleasure and diversion (Dennis et al., 2007). Addiction is simply a form of search for means that is based on desires and as a source of pleasure (Foddy & Savulescu, 2007). The addiction and the hedonic motivation come together by the fact that these two concepts revolve around the search for the pleasure, we notice in this case a relation between the addiction to the social network and the hedonic motivation which is in conformity with the theoretical result therefore Hypothesis H2 is verified.

(Lin et al., 2009) sought to know the effects of parental supervision through recreation, boredom, and entertainment activities on Internet addiction. Their sample consists of 1289 adolescents in eleven high schools in Taiwan. The results showed that leisure and boredom create an involvement on the Internet and social activities increase the probability of being dependent on the Web. The results of this research explain that parental supervision is a major inhibitor of Internet addiction. The study of Valenzuela et al. (2009) aims to find out if Facebook, which is the most popular social networking site for young American students, is related to attitudes and behaviours that reinforce the social capital of individuals. The study is done on a sample of 2603 Texan students on the Web at random. The results show positive relationships between Facebook's intense use and student fulfilment, social trust, civic engagement and political involvement. The results of our research are consistent with Hypothesis H3 and the involvement variable is an antecedent of addiction to the social network Facebook.

The results of the study by Josiam et al. (2005) summarize that participants who gave high scores to the drive for shopping motivation also declined in the involvement category at its peak, while those who give low importance to motivational push factors fell into the low-involvement category. As a result, buyers with a high level of involvement are interested in the social, leisure and hedonic facets of shopping. The goal of the research of Hemetsberger (2003) is to advance understanding of the sources of motivation for consumer engagement in online innovation. This research favours a behavioural vision of the involvement and the relation between the cognitive-affective, and the behavioural involvement on the web. An Internet survey revealed that out of a population of 1486 open-source software users, the degree of behavioural involvement is strongly related to the structure and strength of relationships between different motivations (hedonic and utilitarian). The involvement is related to hedonic motivation, which is also shown by the results of our empirical study, from which hypothesis H4 is accepted.

Peer attachment is made up of three dimensions: trust, communication and alienation. In the research of Govani and Pashley (2005), they note that friends on Facebook are chosen and accepted much easier than outside Facebook. They are considered friends with a high level of trust in Facebook. In a study by Lei and Wu (2007) aimed at understanding the impact of father-adolescent attachment on adolescents' Internet use on a sample of 712 adolescents, in order to assess associations between adolescents and adolescents. Paternal attachment, the intensity of Internet use and the preferences of Internet services. The result of this research revealed that alienation positively predicts the pathological use of the Internet (PIU) directly and also indirectly (through mediation) by the preference of leisure services. While trust predicts negatively the problematic use of the internet. Hypothesis H5 (a) is accepted and trust is an

antecedent of addiction to the social network Facebook. This predicts a negative relationship with addiction to Facebook, that is, the lower the confidence, the more Facebook addiction increases.

The motivations of the students for the use of Facebook has become the main reasons for the dependence on this site. Students use Facebook excessively for reasons such as: social interaction, time spent on this site, entertainment, companionship, and communication. Variables such as time spent on the social network, entertainment and communication have been among the motivators that contribute more to addiction to Facebook (Sharifah Sofiah et al., 2011). Any social network (example: Facebook) is a means of communication between friends and families, but this site creates a number of problems for young people, but also is a great waste of time for them (Farooqi et al., 2013). Social network users derive a variety of uses and benefits, such as communication with others. The enjoyments created through social connections lead to an increased frequency of use of social networking sites or even addiction (Joinson 2008). Hypothesis H5 (b) is accepted and the results of this research are consistent with the theoretical. Communication is an antecedent of addiction to the social network Facebook.

Alienation has been omnipresent in the classics of sociology, and this concept has a fundamental place in contemporary work. Alienation consists of five meanings that are: impotence, insignificance, normlessness (no standard), isolation, and self-alienation. "One of the definitions of alienation is isolation. This usage is more frequent in the descriptions of the role of the intellectual, where the authors refer to the detachment of the intellectual from the popular cultural standards that have become separated from society and culture, this use does not refer to the isolation as a lack of social adjustment of warmth or security but a lack of intensity of an individual's social contacts (Seeman 1959). Since 2004, Facebook has become the most popular social networking site and the most important; several searches have been interested in Facebook and addiction problems to this site. Users spend several hours communicating with their friends, forming new acquaintances because this site is primarily a place of communication that also allows for interactive activities and some users may be heavily dependent on it (Zaremozhzabieh et al., 2015). The definition of alienation and in particular, the trait of isolation clearly shows the absolute divergence between it and the addiction to the social network Facebook which is mainly based on socialization and frequent contact between its users.

Hypothesis H5 (c) is rejected and the alienation is not an antecedent of the addiction to the social network Facebook.

CONCLUSION

Since the appearance of this social network research has focused on determining the reasons for this addiction. Our work is fed by a break to find other variables that explain the addiction to the Facebook site that are essentially drawn from the marketing literature. This allowed us to offer a new angle of analysis of the issue of addiction.

We classified these antecedents into two types: psychological and consumer behavioural. The results of this research showed that hedonic motivation, involvement, and two of the three dimensions of peer attachment (communication and trust) are antecedents to Facebook addiction. Facebook is a social network that has created a revolution on the Net, since 2004 this site provides a multitude of services for its users through interactions with peers, sharing videos, photos and information etc. Misuse of this site creates an addiction among Internet users that has even been cited in the latest version of DSM.

APPENDIX

Appendix 1 TABLE OF THE DISCRIMINANT VALIDITY OF LATENT VARIABLES OF THE MODEL						
Variables	Loneliness	Involvement	Hedonic motivation	Communication	Trust	Alienation
Loneliness	1	0.1	0.275(0.474)	0.3(0.638)	0.46(0.663)	0.007(0.41)
Involvement	0.1(0.502)	1	0.197(0.474)	0.052(0.638)	0.053(0.663)	0.034(0.41)
Hedonic motivation	0.275(0.502)	0.197(0.558)	1	0.228(0.638)	0.125(0.663)	0.05 (0.41)
communication	0.3(0.502)	0.052(0.558)	0.228(0.474)	1	0.256(0.663)	0.008(0.41)
Trust	0.46(0.502)	0.053(0.558)	0.125(0.474)	0.256(0.638)	1	0.0002 (0.41)
Alienation	0.007(0.502)	0.034(0.558)	0.05(0.474)	0.008	0.0002	1

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