



# **Adolescents' online personas in the use of Social Network Sites**

by

Cristina Isabel Mendes de Freitas

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Faculdade de Economia, Universidade do Porto

Supervised by:

Professor Doctor Pedro Quelhas Brito

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## **Biographic note**

Cristina Isabel Mendes de Freitas was born on the 31<sup>st</sup> of May 1994 in the Autonomous Region of Madeira. From an early age, she had an interest in economics and management which lead to her to enrol in the Socio-Economic studies in the high school of Jaime Moniz in Funchal, which she finished with a grade point average of 17 points in 2012.

On September of 2012, she moves to Porto to initiate her bachelor degree in Management in the Faculty of Economics of Porto University. During the last two years of her Bachelor she integrated the human resources department of U.DREAM, the first Social Junior Enterprise of Portugal. Later, on 2015 she finished her bachelor with a grade point average of 14 points and, on September of that year, she initiated the Master in Management at the Faculty of Economics of Porto University, in which she currently has a grade point average of 17 points. During the second year of the master she did a curricular internship, as a trainee, at CH Business Consulting in the international marketing department.

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## **Abstract**

Social Network Sites (SNSs) have revolutionized the way people communicate and interact with each other and in our current society they are highly embedded in children's daily lives. In these websites, they construct their online identities and profiles where they expose several features of their personal lives.

Some researchers have investigated the impacts of using social network sites and reached conclusions relating to both positive and negative implications. However, the investigation on social network sites and their use by adolescents is still scarce. In this study, we applied the main theories and definitions regarding: adolescence, social network sites and adolescents' behaviours and use of these sites.

The goal of this investigation was to assess whether the use of simultaneous social network accounts is influenced by the conscious and intrinsic creation of multiple online personas. A questionnaire has applied to a sample of 189 adolescents with ages between 15 and 18, containing questions regarding their regular use of social network sites, their use of privacy restrictions and simultaneous accounts and other questions regarding their own characteristics and profiles.

The findings proved that the use of simultaneous accounts is significant among the participants, with nearly 50% of them having simultaneous accounts. Furthermore, aspects such as the average time per day spent on social network sites and the "likes" dependency are positively associated with having simultaneous accounts. No gender differences were found, except in terms of the average time spent per day online, in which girls presented higher values than boys. Finally, parents with higher total online presence are more probable of being friends with their children in at least one of the social network sites.

**Key Words:** Adolescence, Identity, Parents, Social Network Sites, Simultaneous Accounts, Facebook, Instagram, Twitter, Snapchat, WhatsApp

## Resumo

Os sites de redes sociais revolucionaram a forma como as pessoas comunicam e interagem umas com as outras e, na nossa sociedade atual, estas estão altamente imersas no dia-a-dia dos jovens. Nestes sites, eles constroem as suas identidades e perfis online onde expõem várias características das suas vidas pessoais.

Alguns investigadores têm estudado os impactos do uso das redes sociais e chegaram a conclusões ambas positivas e negativas relativamente às implicações do uso. No entanto, a investigação sobre as redes sociais e seu uso por adolescentes ainda é escassa. Neste estudo, aplicamos as principais teorias e definições sobre: a adolescência, os sites de redes sociais e os comportamentos dos adolescentes nos mesmos.

O objetivo desta investigação é estudar se o uso de contas simultâneas nas redes sociais é influenciado pela criação consciente e intrínseca de múltiplas personas online. Um questionário foi aplicado a uma amostra de 189 adolescentes com idade compreendidas entre os 15 e os 18 anos, contendo perguntas sobre o uso regular das redes sociais, o uso de restrições de privacidade e contas simultâneas e outras questões sobre as próprias características e perfis dos adolescentes.

Os resultados da investigação comprovaram que o uso de contas em simultâneo é significativo entre os participantes, sendo que cerca de 50% dos participantes detêm contas simultâneas. Além disso, aspetos como o tempo médio por dia passado nas redes sociais e a dependência de "gostos" estão positivamente associados a ter contas simultâneas. Não foram encontradas diferenças de género, exceto em termos do tempo médio por dia passado nas redes sociais, em que as raparigas apresentaram valores mais elevados do que os rapazes. Finalmente, os pais com maior presença total online são mais prováveis de ser amigos dos seus filhos em pelo menos uma das redes sociais.

**Palavras-chave:** Adolescência, Identidade, Pais, Sites de Redes Sociais, Contas Simultâneas, Facebook, Instagram, Twitter, Snapchat, WhatsApp

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## 1. Introduction

The increased use of the Internet has changed the way people communicate and interact (Ahn, 2011). With the vast variety of social network sites, children now have access to a number different tools to interact with each other. In recent years the use of Social Network Sites (SNSs) by youth has increased significantly to the point of becoming a central part of their social lives (Ahn, 2011; Antheunis et al., 2016; Valkenburg and Peter, 2011). As of April of 2017 the most popular SNS, in terms of active users, was Facebook (1.97 billion) (Statista, 2017) and according to Antheunis et al. (2016) the use of SNSs is higher in adolescents than in adults.

These have changed not only the way people communicate but also how they portray themselves online, which has a particular impact on adolescents, that are at such a crucial stage of human development (Ahn, 2011). During this phase children start enhancing their social capabilities and looking for different ways to connect and interact with each other (Antheunis et al., 2016). Furthermore, the search for identity is another very important and long process involving different stages and emotions that initiates at this point of their lives (Berger, 2006) and children use these websites as a tool to develop their social identities (Ahn, 2011).

In Social Network Sites, it is possible to create and design the personal profile to the users' preferences, which allows children to manipulate, to a certain point, the profile to what they want to portray (Boyd, 2007). Furthermore, on the internet and subsequently on social network sites, there is no control for how many accounts one could have (Musiał and Kazienko, 2013) and the privacy setting also allow for adolescents to further control their privacy (Boyd, 2007). With social media, adolescents have the opportunity to fabric images of themselves without any boundaries (Rosenberg and Egbert, 2011). Having simultaneous accounts on the same social network, "mirror networks", hiding and deceiving information on social network sites have been some of the behaviours of adolescents in social network sites (Boyd, 2007, p.132).

However, little has been done concerning these behaviours on SNSs and especially on adolescents. According to Ahn (2011), research on social network sites usage in

adolescence is just beginning and Košir et al. (2016), in a more recent study, complement it by stating that investigation on early adolescents is particularly rare.

So, it is particularly important to better understand these behaviours and how adolescents are using social network sites. Thus, this investigation intends to study how adolescents are constructing their online identities and to what extent they are creating different online personas by segmenting information and/or by managing different simultaneous accounts in one same social network site.

Apart from this section, this report is divided in other five sections. In the next section, a literature review concerning the main concepts and supporting this investigation will be presented. In chapter 3, we present the methodological approach along with the investigation model and the hypotheses of the investigation.

In section 4, we present the results and analysis of both methodologies and in chapter 5 we discuss the obtained results and how they relate to the literature review.

Finally, in chapter 6 we present the main conclusion of the investigation, its contribution and the limitations and suggestions for future research.

## 2. Literature Review

In this chapter, we present the literature review of the main concepts and theories. First, it is important to understand and define adolescence along with the main concepts and theories. Understanding how adolescents develop their identities and who are their biggest influencers are two important topics also reviewed. After this, in the second part of this chapter we define Social Network Sites and present the most known websites along with the main theories concerning adolescents' behaviour in the use of these social network sites.

### 2.1 Adolescence

Adolescence is a crucial stage of human development that follows childhood and precedes adulthood, characterized by physical and psychological changes (Berger, 2006). This period of transition is particularly marked by puberty, friendships, defining personal tastes, attitudes, construction of personality and timidity of the body (Rosen, 2007). Puberty is a crucial moment in the development of a human being "*associated with dramatic hormonal and somatic changes*" (Foillb et al., 2011, p.391) and characterized by "*rapid physical growth and sexual maturation*" (Berger, 2006, p.432).

A lot of the changes happening at adolescence have been often blamed on hormones, which do in fact influence a number of human activities, according to Malina et al. (2004) there are a minimum of 23 hormones that influence growth and maturation. However, the "sudden" emotions characteristic from this stage are considered to be more a result of a social response to the physical changes rather than an effect of hormones (Berger, 2006).

There are several unique characteristics specific to this stage of life, according to Berger (2006) one aspect that differentiates adolescents from older people is in terms of cognitive processes. Adolescents have a tendency to combine ego, logic and emotion in unique ways, one of them being adolescent egocentrism (Berger, 2006). Egocentrism is often associated with puberty and can be defined as the tendency for teens to see themselves "as unique, special and more socially significant to others" (Brito, 2011, p.350).

It is a phase that includes the initiation of the socialization process that consists in the acquisition and development of certain abilities, knowledge and attitudes relevant for any individual living within a society (Atkinson et al., 2015). This process can also be referred to as Social Capital, which is associated with the benefits that can result from having relationships with others (Antheunis et al., 2016).

### **2.1.1 Parental and peer relation**

For Mullen and Hamilton (2016), these years are also characterized by the process of individualization, where adolescents first start demanding privacy from their parents and start testing and pushing their boundaries of control (Mullen and Hamilton, 2016). Their desire for independence along with their parents usual need to control lead to inevitable arguments, however these conflicts are normally a sign of close parent-child relation (Berger, 2006).

Along with socialization, children also start to seek more their colleagues and peers and less their parents (Antheunis et al., 2016; Kroger, 2000). Peer relation in adolescence is often associated with peer pressure (negative form of influence/ social pressure from peers) (Berger, 2006), however peers also have important positive impacts in adolescents, since friends are a source of interaction, sense of belonging and a baseline of identity (Adler and Adler, 1998).

According to Brown and Larson (2009) several research has been conducted regarding peer relations at this stage of life and different important conclusions can be outlined: peer relations not only become more relevant at adolescence but also more complex, since new types of relationship levels emerge when choosing friends, creating a wider peer system than in childhood. Seeking similar traits in peers is another relevant behaviour that impacts friends' selection. Furthermore, different authors mention status and prestige as another important factor regarding peer relation, since adolescents often assess each other in terms of status (social and/or economic) (Brown and Larson, 2009).

Parents and peers play important roles in adolescents' lives and have different types of influence on them (Brown and Larson, 2009). According to the situational hypothesis the parent-peer influence will vary depending on the circumstances (Brittain, 1968) (Apud

Meeus et al., 2002). Parents' influence will be greater in certain aspects, such as in regard to future and academic path, and peer's influence in others more related with the present, day-to-day life. Finally, both influences do not necessarily clash and can even correlate, what an adolescent learns from his parents he can apply/pass it on to peers (Meeus et al., 2002).

### **2.1.2 Identity Development**

The search of one's identity is another crucial process that initiates at this stage of life and that could be very hard on children leading them to the first crisis of adolescence. Having to deal with mixed emotions, trying to find their own core self while at the same time wanting to fit in can be a hard task on children that requires time and reflection (Berger, 2006).

According to Berger (2006), the first step in the search of identity is establishing a coherent and stable personality, allowing children to feel and convey a sense of continuity and consistency at all times. However, this is no easy task and the majority of adolescents tend to adopt multiple possible selves by, in a sense, trying out different personas or behaviours in different contexts and situations (Berger, 2006). This tends to happen in a more imaginary context than realistic but throughout their daily lives, adolescents are aware that they adopt different behaviours and shift from one emotion to another (Berger, 2006). This process not only enables them to explore their self-knowledge but also their future aspirations. By understanding who they want to be and who they do not want to be, adolescents get a better interpretation of their self as well as aspirations and direction of who they want to become (Markus and Nurius, 1986).

During adolescence, teens need to present themselves to others, take in and interpret all feedback received and then adapt accordingly. This process helps them understand and validate their behaviours and potential identity. For that they develop two very important skills, self-presentation and self-disclosure (Valkenburg and Peter, 2011). Self-presentation can be understood as efforts to present partial or fabricated information about the self when convenient to the individual and self-disclosure, on the other hand, can be

explained as attempts to present or reveal correct information about the self (Schlenker, 1986).

Throughout this process children fear taking on a false identify or conveying a sense of contradictory self, which is common in adolescents, however Berger (2006) defends that “as one possible self becomes the true self, the false selves fade away” (Berger, 2006, p.496).



## 2.2 Social Network Sites

In our present society, online social networks are a major tool through which people interact and communicate on the Internet (Kim et al., 2009; Musiał and Kazienko, 2013). With the increased use of the World Wide Web different types of computer based services have been emerging and online social networks are a result of the internet phenomenon (Musiał and Kazienko, 2013).

Social Network Sites (SNSs) are integrated in the social media group and are a type of Web application that follows the principles of Web 2.0 (Ahn, 2011). Web 2.0 goes beyond the Web 1.0 by providing its users a more enriching experience by conferring access to a platform that covers all connected devices along with a wide set of Web 2.0 applications (O'reilly, 2007).

The definition of the Web 2.0 is not unanimous, there are several features that make it difficult to define, leading to several different perspectives and consequently different definitions. Nonetheless, a very good example of the Web 2.0 features is the Social Networking phenomenon. Through these websites, users can easily interact, share and access content. The emergence of Web 2.0 has given the opportunity to individuals to participate and to socially interact globally, by social networking users are able to maintain social connections that prove to be beneficial at different levels such as social, career and personal (Kim et al., 2009). However, much of the Web is based upon personal information disclosure and/or display which has over the years raised some concerns regarding loss of privacy and identity (Zimmer, 2008).

Before social networking entered the internet world, all previous social networks were based on interactions between people in the real world (Musiał and Kazienko, 2013). According to Musiał and Kazienko (2013) the main aspects that differentiate the online social networks are:

1. Absence of physical contact;
2. Lack of certainty and assurance that the online identity corresponds to the real identity;
3. Opportunity of multimodal communication, being able to interact simultaneously with different users;

4. The ease and simplicity in cutting ties and ending relationships;
5. The ease in terms of collecting data about the communication and its processing;
6. Probable lack of reliability in the of the user's available information;

In contrast with more traditional sites, social network sites focus on its users, the people (Kim et al., 2009). According to Boyd and Ellison (2007) the first social networking site was released in 1997 and what differentiated it from previous similar web sites was the display of the individual's social network. They defined Social Network Sites, as any website that allowed users to create a public or semi-public profile, and, through which, they could choose who they shared content with and where they could view and share connections with others in the system (Boyd and Ellison, 2007).

Brandtzæg et al. (2010) defended that for a social network site to be successful two features had to be guaranteed: (1) the ability to share content within the social network and (2) the ability to socialize and interact with other users.

Social network sites are often also referred to as social media and according to Kietzmann et al. (2011) to better understand the phenomenon of social media and its users it is important to first understand how these websites work. These authors defended that this could be explained through a framework composed by seven different "building blocks" (Kietzmann et al., 2011, p.243):

- Identity. In most of the social media sites, users are asked to reveal information about themselves and their identities, whether is through name, age, gender, occupation or hobbies. In SNSs, this feature is usually portrayed through the user's profile, where all this information can be uploaded. However, different sites have different layouts and setting, where individuals can choose how much information about their identities they want to disclose and how they are presented. Nowadays, some users choose not to use their real information (name, age, etc) but instead virtual identities such as fake names or personas, or even nicknames.
- Conversations. The communication between users is another important feature. Some SNSs are more focused on communication and others where it is not considered the core feature.

- **Sharing.** It is a crucial feature of social media. From information, to photos, to videos, to music, SNSs are considered a platform for sharing. Depending on the type of SNS the object of sharing can vary.
- **Presence.** Knowing who is online and in which social networks they are present, is another characteristic of SNSs. Some social network sites have different options regarding privacy settings, however normally users are able to know which sites others are present. Moreover, from a virtual and/or real point of view, social media can allow users to know the presence of others. Some social media sites can even display the geographic location and or proximity between the connections of one's network.
- **Relationships.** Making connections and/or creating a network of friends is another possibility in SNSs. From connecting with already existing relationships to getting to relate to strangers, these sites allow individuals to form and engage in relationships with others. Some are more focused on relationships and connections and other where they are not the focal point.
- **Reputation.** This feature can have different meanings differing from site to site, but it can be understood as how users are perceived within the social network atmosphere. In some sites, it can be interpreted as the number of likes and in others the number visualizations or even the size of a user's network.
- **Groups.** Lastly creating groups and/or communities within the SNS is also an option. Whether they are public or secret, formal or informal, the options are plenty.

In practical terms, when an individual first joins a social network site he is asked to create a profile, which is a form of the individual description (Boyd, 2007). In this profile, the user is encouraged to fill certain personal information (demographic, tastes and hobbies) and to upload a profile photo (Boyd and Ellison, 2007; Boyd, 2007). The visibility of the profile can differ from private to public and this also depends on the site itself, some SNSs allow users to choose whether they want to have a public or private profile, where others do not offer any choice (Boyd and Ellison, 2007). "*The public display of connections is a crucial component of SNSs*" (p.213), thus in a user's profile the list of friends is visible

and accessible by a link leading to their correspondent profile. In the majority of social network sites, it is also possible to contact and communicate, either by private messaging a user, or by leaving “comments” in other user’s profiles or pictures (Boyd and Ellison, 2007). These websites also have different features and applications as previously presented, allowing users to share photos, videos, comments (Boyd and Ellison, 2007) and to communicate online (Liu and Baumeister, 2016).

Online communication, has been proven to be one of the greatest advantages of SNSs, by providing improved and efficient online communication. These websites enable users to communicate by posting information online that can be read at different periods of time and by a great number of people. This offers different advantages to its users, by being able to edit and rewrite the intend information prior to posting it online they can better prepare their interactions and answers. Through this process individuals can get to know and connect with each other at a much faster rate, and has proven to be beneficial for more lonely and isolated people (Liu and Baumeister, 2016).

While the phenomenon of “Social Networking” usually entails the initiation of new relationships with strangers this is not normally the case in SNSs, but instead the primarily practice is to connect and engage with the already existing offline network. Thus, most of them support already existing relationships offline, nevertheless these still help create connections with new individuals who may share the same interests (Boyd and Ellison, 2007). Currently, social networks reach the masses however, most of them, at their launch, attracted a more homogenous population and functioned as niche communities, as it happened with Facebook (Boyd and Ellison, 2007).

### 2.2.1 Different types of Social Network Sites

As presented in the previous literature, nowadays there are several different SNSs, that can be used for different purposes other than to connect with other users and/or to share interests. A good example of that is the well-known website LinkedIn, used for work related contexts (Ellison et al., 2007).

According to Pappacharissi (2009) the way a social network is constructed, its core features, norms and settings can influence user's behaviour. LinkedIn is an open network constructed around a more corporative feel by having a "résumé-like format" thus appealing to a more professional conduct. On the other hand, Facebook is more wide-open and flexible website (Ahn, 2011).

#### **Facebook**

Facebook is the most popular social network site according to Statista (2017), holding a total of 1.97 billion active users as of April 2017. The website was created in 2004 by a young Harvard student (Cassidy, 2006) and it was initially aimed to be a more private site to an exclusive audience, college students (Boyd and Ellison, 2007). However, the network rapidly became popular among students and in just a year it was made available to high schools and eventually to everyone (Boyd and Ellison, 2007; Zhao et al., 2008).

After creating an account, the user has its own profile where a wide range of personal information can be displayed at the users' will. Some of that information could be "*birthdate, e-mail address, physical address, hometown, academic demographics (year, major), hobbies, sexual orientation, relationship status, course schedule, favourite movies, music, books, quotations, online clubs*" (p.30). When navigating the website, individuals can search for friends' accounts and make friendship requests, or simply add strangers to their network. After becoming friends with someone, both users can see each other's profiles and information, along with each other's network (Walther et al., 2008).

Facebook has been the focus of investigation for many researchers. Many investigating the impacts for the users (Brandtzæg et al., 2010; Ellison et al., 2007; Košir et al., 2016; Mullen and Hamilton, 2016), and some phenomenon, as online identity creation (Zhao et al., 2008) and impression management (Rosenberg and Egbert, 2011; Walther et al.,

2008). Also, one of the main concerns regarding Facebook use has been addiction. Internet and addiction are two topics that in recent years have been greatly discussed and Facebook being the most popular social network site has also increased concerns (Tang et al., 2016). In a study conducted by Tang et al. (2016) it was concluded that addiction is in fact a growing and concerning phenomenon on Facebook. On the other hand, some authors have defended that Facebook usage could also have different positive impacts. According to Good et al. (2013) Facebook usage has positive impacts in terms of well-being, especially in terms of self-soothing and calming effects, when involving online Facebook activities of reminiscing.

### **Instagram**

Instagram is an online and mobile app that allows its users to share photos and videos (Sheldon and Bryant, 2016). The social network was initially launched in the year of 2010 (Instagram, 2017) and latter on aquired by Facebook in April 2012 (Alper, 2014).

According to Sheldon and Bryant (2016), Instagram is considered one of the “*fastest growing social network site globally*” (Sheldon and Bryant, 2016, p.89), counting with over 600 million monthly active accounts, as of April 2017 (Statista, 2017). However little research has been done concerning the phenomenon (Sheldon and Bryant, 2016). On Instagram, users have available a number of different filters that can be applied to their photos, taken at the moment or already stored on the cell phone, and post them online (Alper, 2014; Sheldon and Bryant, 2016). These filters are one of the main features that differentiate Facebook from Instagram, however users can still make a connection with these two social network sites by opting to repost something from Instagram on to Facebook (Alper, 2014). Another relevant trend on Instagram is the use of #(hashtags), by adding a hastag to the post made on Instagram other users can easily find it (Sheldon and Bryant, 2016).

One of the few investigations conducted on Instagram found that it is a social network site more focused on the person itself rather than in its relationships and network, which is a more common behaviour on Facebook (Marcus, 2015) (Apud Sheldon and Bryant, 2016). Instagram users are more focused on making their photos durable and appreciated in time and with higher photograph quality (Alper, 2014). Narcissism has also been found

to be connected to Instagram use, in a study conducted by Sheldon and Bryant (2016) it was found that life satisfaction was negatively related to use of Instagram, in the sense that users would resort to Instagram in an attempt to appear cool.

### **Twitter**

Twitter is another popular social network site that was launched in 2006 (Chen, 2011) and is considered a microblogging service (Chen, 2011; Kwak et al., 2010). Twitter is a platform focused on interpersonal communication where users can write and share “140-character messages, called tweets, with other people, called followers” (Chen, 2011, p.755). According to Statista (2017), as of April 2017, the site had 319 million monthly active accounts.

Similar to the previous social networks, in Twitter the user also has a profile containing personal information about himself, such as “*full name, the location, a web page, a short biography, and the number of tweets*” (Kwak et al., 2010, p.592). Users communicate with each other through the so called “tweets” that are visible to their followers. After posting a tweet, any other user can retweet it in order to spread the information. The most common terminologies used are: “@” used to identify other users, and, as in Instagram, the use of “#” to create a hashtag (Kwak et al., 2010).

Twitter, when compared with Instagram, could be perceived as less personal social network, in the sense that individuals use less selfies and personal photos and more text-based posts (Sheldon and Bryant, 2016). The same could be applied when comparing Twitter to Facebook, the last one is much more focus on reciprocal connections, where in Twitter a user can follow another, without being necessarily followed back by the other user (Kwak et al., 2010).

Twitter has received less focus of investigation than Facebook for example (Chen, 2011). However, some research has been done regarding this growing social network (Chen, 2011; Davenport et al., 2014; Kwak et al., 2010). According to Davenport et al. (2014) there are features in Twitter that may be more alluring to narcissists and, in their study, they compared both Twitter and Facebook in terms of narcissism. They came to conclude that narcissistic college students prefer to use Twitter and that Facebook is the preferred for narcissistic adults.

On the other hand, the research conducted by Chen (2011) lead to more positive results in terms of Twitter usage. According to her findings, Twitter is also a place where people resort to fulfil the human need to connect and, therefore, where they find pleasure in satisfying it.

### **Snapchat**

Snapchat emerged from a start-up in 2011 (Billings et al., 2017) and today has 300 million active users (Statista, 2017). According to Piwek and Joinson (2016), Snapchat is a “*time-limited instant messaging service*” (p.358) and that, in terms of instant messaging and social media, has presented one of the biggest growths.

Snapchat enables its users to take photos and videos in the app and then send them to other users. The major difference regarding other SNSs is the temporary aspect, when a user sends a photo he can choose for how long that photo will be displayed (from 1 to 10 seconds maximum). The same is applied to written messages (32 characters-long), after the receiver views the photo, video or message it is instantly deleted (Piwek and Joinson, 2016).

Snapchat provides to its users a higher sense of controllability in the sense that the user can control exactly who sees the content and for how long (Bayer et al., 2016). According to Piwek and Joinson (2016) the self-destructibility of the content shared is the most unique feature of Snapchat and that can work as an incentive to share for those who are more timid. However, this feature has also raised some concerns with the association of Snapchat use and sexting (Piwek and Joinson, 2016). Nonetheless, in their study, Piwek and Joinson (2016) found that Snapchat is used as fun mobile app, to share content with a close small group.

### **WhatsApp**

WhatsApp is a smartphone instant messaging application. The app was first available in 2010 and since then has been very popular (Aharony, 2015), having over 1.2 billion active users (Statista, 2017).



WhatsApp is considered a social network and an instant messaging service that enables communication between users of the app (Bouhnik and Deshen, 2014). With this app, users can exchange messages, photos, videos and audio (Aharony, 2015; Bouhnik and Deshen, 2014). Besides allowing communication between two individuals, WhatsApp has the option to create exclusive groups where different users can interact. The specific group is managed by the user who created it, who is also responsible for the addition and removal of participants (Bouhnik and Deshen, 2014). WhatsApp is considered a more closed platform in the sense that most users choose and already know the other users in their network (Aharony, 2015).

In Aharony's (2015) investigation, it was possible to conclude that WhatsApp attitudes and intention to use have a positive impact in student's social capital. The findings only reaffirm previous research, that when a user is content with an app or platform he might use it to connect with friends (Aharony, 2015). Furthermore, this app has also proven to be beneficial as a tool in education, it's unique features have motivated teachers and students in using it and applying it to their academic life. In their investigation, Bouhnik and Deshen (2014), found that WhatsApp has in fact several advantages that motivate its use in education, such as: "*simple operation, low cost, availability, and immediacy*" (p.217). However, some disadvantages and difficulties were also pointed out in the investigation, which could create obstacles to the educational process.

### 2.2.2 Social networks usage by adolescents

When online communication first emerged in the 1990's it was believed that it had a negative impact on adolescents' social lives, this belief was referred to as the Reduction Hypothesis (Valkenburg and Peter, 2009). According to Kraut et al. (1998) the time spent online creating superficial relationships was made in deterioration of the already existing offline relationships, leading adolescents to isolation and reduction of their social well-being. However, along with the internet constant evolution there were changes in its use that questioned this theory (Valkenburg and Peter, 2009) and consequently recent studies have shown that young individuals make use of the online communication tools to interact with already existing friends (Košir et al., 2016; Boyd and Ellison, 2007). Furthermore, other authors have concluded that SNSs have a positive impact in communication (Antheunis et al., 2016), and not only in that but also in other features that enhance the quality of adolescent's friendships (Valkenburg and Peter, 2009).

According to the Internet self-disclosure hypothesis, developed by Valkenburg and Peter (2009), there are positive effects in terms of well-being, from using the Internet to self-disclose. The theory defends that by communicating online, adolescents are motivated to self-disclose information about themselves, which will lead to better relationship quality and social connectedness and, consequently to well-being. Nevertheless, this theory depends upon three different aspects that could influence the assumptions, which are: the type of technology used, the gender and the level of social anxiety.

Nevertheless, as positive aspects are found, other negative emerge for discussion. Narcissism online and how it could be connected with social networks usage has been one of them (Bergman et al., 2011) According to Tang et al. (2016), "*people scoring high on narcissism indices tend to be more active on Facebook*" (p.103). Additionally, Bergman et al. (2011) found evidence that narcissism can be a predictor of the reasons why Millennials use social networks.

In the past, adolescents would learn how to communicate and get to know each other on a face-to-face basis, interacting with their colleges and peers, however, today that is not always the case. Communication between adolescents has highly moved online, to the internet and particularly to SNSs, and different authors defend that the main reasons why have to do with the level of controllability that adolescents have in terms of the

information they provide (Valkenburg and Peter, 2011). This control leads to a feeling of security enabling them to feel freer, and according to Valkenburg and Peter (2011) there are three features of the internet which encourage this sense of control:

- Anonymity: Being able to be anonymous online or to only present minimal information provides users, and especially adolescents, with a sense of security since they do not preoccupy as much with what others may think.
- Asynchronicity: Being able to think, reflect and change what they are writing online before they send it or post it is considered a major advantage. It enables adolescents to think through and optimize their interactions.
- Accessibility: Having access to a wide range of channels and sites to communicate, interact and present themselves allows users to optimize their self-presentation and self-disclosure.

Along with adolescents increased use of technologies, smartphones and eventually social media, parents have been reduced of their surveillance skills when monitoring their children's activities. Thus, integrating the online world of social networks has become a valid tool for parents to have a closer look into to their children's online activity. Facebook and Myspace were the first two obvious contenders for parents to start getting acquainted with the social networks, however currently teens are resorting to various sites (Mullen and Hamilton, 2016). According to Boyd (2007) deception and lockdown are two usual techniques used by adolescents to protect themselves from parents, whenever they feel their privacy is being invaded. By making their profiles private adolescents can control who is allowed to view their information and profile, including their parents. Another strategy used is mirror profiles, which are basically fake accounts, with fake names where adolescents have the liberty to post anything they want without having to worry about parents finding out (Boyd, 2007).

The communication privacy management theory (Petronio, 2002) has been adapted to support some of these online dilemmas (Mullen and Hamilton, 2016). According to Petronio (2010) the mentioned theory relates with the existent dilemma of both the human need for privacy and the need to share. According to the theory, individuals believe they have ownership of their private information and that, consequently, they have the right to control it. In order to do so, people resort to different set of rules that help them control

the flow of the information. However, once the information is disclosed to someone, that person becomes a co-owner of that information, and conjoint rules and boundaries should be developed to manage that new shared private information (Petronio, 2010). When applying it to SNSs we could perceive that when a user posts private information online he is sharing ownership of that information with his network. However, when a parent attempts to be-friend a child on social media it could be perceived differently (Mullen and Hamilton, 2016). In the study conducted by Mullen and Hamilton (2016) the subject was investigated and it was possible to conclude that parental presence on Facebook and friendship requests do not negatively impact the parent-child relationship. Furthermore, it was found that adolescents do not find parents friendship requests as a threat nor a dilemma.

Another important topic in this section is the profile creation on SNSs. One important theory regarding this is the Signalling Theory that defends that a lot of the information that people want to know about someone cannot be directly observed but is instead perceived through signals. This theory analysis how the construction and presentation of a social network profile can signal certain intended feelings such as trust and identity (Donath, 2007).

Another theory regarding this matter is the Warranting Theory, that defends that the credibility of an online profile is often questioned in the sense that users can adjust and manipulate the information on their profiles, thus statements from other users or friends are perceived as more credible (Walther et al., 2008). Individuals, and in the particular case adolescents, resort to different tools to present themselves in positive ways and this happens not only on face-to-face interactions but also through the use of digital technologies. In the use of SNSs, adolescents resort to these techniques of impression management where they make conscious acts to generate an intended reaction or impression (Rosenberg and Egbert, 2011).

### **3. Methodology**

In this chapter, we present the methodological approach to this investigation. The main goals of the investigation, the research hypotheses along with the proposed method of investigation.

The main goal of this investigation is to get a better understanding of how adolescents create and manage their profiles online. Having all these different tools at display it is important to understand how adolescents use them and how these impact adolescents' daily lives. Taking into consideration the prior literature, we can understand how important it is to study and understand this phenomenon. Having a defined problem under study and a coherent research proposal is essential to any investigation (Malhotra and Birks, 2007). Thus, we intend to study how adolescents portray themselves online and if they undertake in some form different personas online.

In previous studies conducted regarding these subjects and teens both qualitative and quantitative methods were utilized. Accordingly, and in order to achieve the proposed goal, for this investigation the two major research components are qualitative and quantitative.

The qualitative research is essential to get a better understanding of the problematic under study (Fossey et al., 2002), therefore in a first phase of this study a qualitative approach was applied by conducting two separate focus groups during the month of March of 2017. The main goal was to understand better how adolescents use social networks sites, how present and important they are in their day-to-day lives and to use this information as a base for the next phase, the quantitative approach. After the information was collected and analysed we used it as a baseline for the questionnaire by incorporating some of the information into questions. Thus, for the second phase of the data collection, a survey was applied to 189 adolescents of the 10<sup>o</sup> grade of a high school in Madeira Island during the month of May of 2017.

Another important factor to mention in this chapter is ethical aspects, which are crucial to any investigation but especially when concerning children (Pagla and Brennan, 2014). Explicit permission and consent had to be obtained by the parties involved, in this case by the subjects (adolescents), their parents and the school.

### 3.1 Qualitative Approach

The use of a qualitative analysis allows a deeper inquiry of the problematic and serves as base for the quantitative approach, since qualitative methods have proven to be useful for improving validity of surveys and questionnaires (Fossey et al. 2002). Understanding better the problematic at hand and how adolescents use it and perceive it was an important first step. Thus for the purpose of this investigation we resorted to a direct approach of exploratory qualitative research through focus groups.

*“A focus group is a discussion conducted by a trained moderator in a non-structured and natural manner with a small group of participants”* (Malhotra and Birks, 2007, p.205).

The main goal of focus groups is to have a relax, free and open discussion where participants can talk about their feelings, experiences, behaviours and opinions regarding all different subjects (Malhotra and Birks, 2007). According to Malhotra and Birks (2007) there are some important aspects and steps when planning and conducting a focus group that should be considered:

- Define the problem. Defining the problem and the main goals of the discussion is one of the most important steps and crucial to the success of the focus group. Being aware of the information that we want to obtain from the discussion will help prepare and conduct the focus group with more accuracy.
- Create a discussion guide. Having a prepared list of questions and/or items to introduce during the discussion.
- Select the members. Choosing the appropriated members for the discussion and recruit them. The recommend number of participants tends to vary from 6 to 10.
- Choose a location. The location where to hold the focus group has to be appropriate to the context of discussion and to the number of participants, in terms of acoustics and to create and convey a comfortable and relaxed atmosphere.
- Execute and moderate the discussion. The moderator must control the discussion and engage with the participants, inspiring discussion and conversation flow.
- Collect and analyse the data.

In preparing for the focus groups a guide (Appendix 4) with some questions and items was created to help conduct the discussion. Most of them were regarding social network sites and their use by adolescents, such as the number of SNSs they were present, what would they normally do when online, their main behaviours online, who is their network online and some about their opinions and reflections about the sites and their use of them. The location chosen to conduct the discussions was in the participants school due to convenience. Two focus groups were performed:

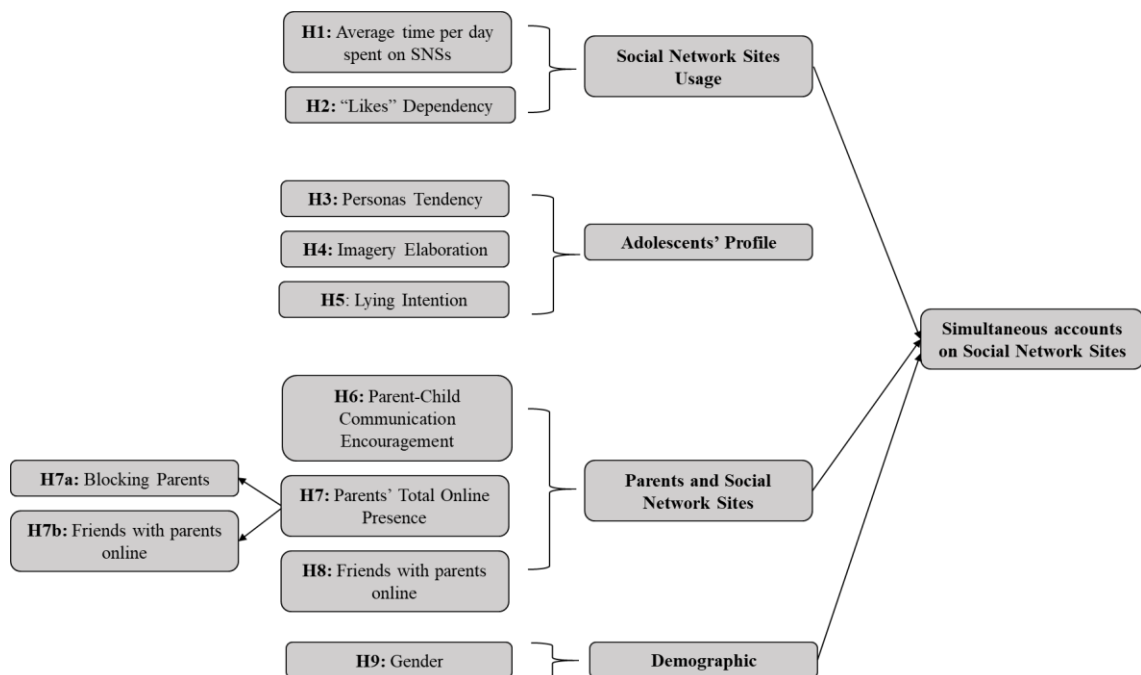
1. Mixed group with 8 participants (4 boys and 4 girls) with ages between 15 and 16.
2. Only girls with 9 participants with ages also between 15 and 16.

### 3.2 Quantitative Approach

Quantitative descriptive research is useful for answering investigation hypotheses by quantifying data and further analysing with statistical measures (Malhotra and Birks, 2007). According to Malhotra and Birks (2007) the most common tools in quantitative research are surveys and observation techniques, and both have advantages and disadvantages, however for the purpose of this investigation a survey was more adequate.

In the questionnaire applied we intended to study the association of different factors with the use simultaneous accounts (regression analysis) and also explore how parents' online presence would affect some aspects of adolescents' online information disclosure.

Having in consideration the prior literature review and the results from the focus group, a conceptual model of the investigation was designed.



**Figure 1: Conceptual Model**



### 3.2.1 Hypotheses

#### Social Network Sites Usage

With the increase of social network sites, people are increasingly taking socialization online, which has resulted “*in increased social utility and a growing social diversity of the user population*” (Brandtzæg et al., 2010, p.1007).

According to Sheldon and Bryant (2016) one of the main reasons people use social networks is to be updated and knowledgeable about what other people are doing, and that knowledge has proven to be linked with activities such as following and “liking” people’s posts.

Furthermore, popularity has proven to be another very important reason to use social network sites (Sheldon and Bryant, 2016). People have the human need to feel valued and appreciated and through social media, users have an opportunity to present themselves and gain popularity. “Likes” have been considered one of the biggest manifestations of popularity on Instagram and for some users they are their major goal (Greenwood, 2013).

A user’s physical and social attractiveness online can be measured through the number of comments, likes and even friends on social network accounts (Greenwood, 2013; Walther et al., 2008). This could lead users to present online selves that are not necessarily real or corresponding to the offline selves but instead “hoped-for possible selves” (Yurchisin et al., 2005) (Apud Zhao et al., 2008, p.1830).

**H1:** There is a positive association between the average time per day spent on SNSs and having simultaneous accounts on SNSs.

**H2:** There is a positive association between the “Likes” Dependency and having simultaneous accounts on SNSs.

## Adolescents' profile

With social network sites users are able to create images of themselves as they please and use them to their benefit by influencing how people perceive them (Rosenberg and Egbert, 2011).

Social network sites combine multiple audiences in one common place and when interacting with each other, users have to adapt to the multiplicity of audiences. Wanting to portray an authentic self while at the same time having to adjust to the different audiences is a difficult process that could create tension. Privacy settings are often used as a tool to segment information towards different audiences and an attempt to minimize the conflict, however this may not be enough (Marwick and Boyd, 2011). To overcome this, users adopted other different techniques “*such as using multiple accounts, pseudonyms, and nicknames, and creating ‘fakesters’ to obscure their real identities*” (Marwick, 2005) (Apud Marwick and Boyd, 2011, p.122). Furthermore, when creating internet identities or social media profiles there is no control on the number accounts one can have (Musiał and Kazienko, 2013).

**H3:** There is a positive association between the personas tendency and having simultaneous accounts on SNSs.

According Babin and Burns (1997) imagery processing and elaboration has proven to influence attitudes, the ability to fantasize and elaborate further from what is presented in reality could have an influence on an individual's attitudes. Thus, we could expect that significant values in terms of imagery elaboration could influence the creation of different simultaneous accounts.

**H4:** There is a positive association between imagery elaboration and having simultaneous accounts on SNSs.

Furthermore, Argo et al. (2006) in their investigation regarding social comparison, came to conclusion that individuals are more willing to lie when their public self-image might be compromised due to a social comparison.

**H5:** There is a positive association between lying intentions and having simultaneous accounts on SNSs.

## Parents and Social Network Sites

With the increase use of the social network sites by adolescents, parents are now entering the social media world as an attempt to better monitor their children (Mullen and Hamilton, 2016).

According to previous studies there are mixed opinions in terms of having parents as friends on social network sites, some children are friends with their parents and enjoy it, some are friends but have certain restrictions applied and others do not like it (Madden, et al. 2012). According to Madden et al. (2012) some parents tend to voice their concerns and talk to their children regarding social networks, however this is more common in parents that are present on social media than in parents who do not use social network sites.

Considering the Communications Privacy Management theory there are different factors that influence the privacy management theories (Petronio, 2002). As previously mentioned there are teens who enjoy having their parents on social media, because it is easier to communicate or because it is funny (Madden, et al. 2012), however a friend request from a parent could be perceived as an invasion of privacy and adolescents may resort to privacy restrictions to deal with it (Mullen and Hamilton, 2016).

**H6:** There is a negative association between Parent-Child Communication Encouragement and having simultaneous accounts on SNSs.

**H7:** There is a positive association between the parents' total online presence and having simultaneous accounts on SNSs.

**H7a:** There is a positive association between being friends with parents' in at least one SNSs and parents total online presence.

**H7b:** There is a positive association between the blocking of parents and parents' total online presence.

**H8:** There is a positive association between being friends with parents on SNSs and having simultaneous accounts on SNSs.

## **Demographic**

Previous studies have proven that gender influences different aspects in social network sites usage. According to Boyd (2007), female adolescents are more likely to use these sites and use them to communicate with friends they know in real life. Furthermore, in terms of disclosure women are more likely to disclose information regarding their music preferences and religion while men are more willing to disclose their phone numbers (Tufekci, 2008). In terms of privacy management techniques, a study conducted by Mullen and Hamilton (2016) concluded that female adolescents tend to resort more to privacy management restrictions than male adolescents. Thus, it is expected that differences in terms of gender will also be found regarding the use of simultaneous accounts on SNSs.

**H9:** There is a significant difference in having simultaneous accounts on SNSs between male and female adolescents.

### 3.2.2 Questionnaire

In order to test the hypotheses of research a suitable questionnaire had to be designed. According to Malhotra and Birks (2007) a questionnaire is “*a structured technique for data collection consisting of a series of questions, written or verbal, that a respondent answers*” (p.371). There are three main characteristics that every survey should have: first the questions should translate the information intended; second the questionnaire should be clear and inspiring in a way that it will motivate its completion; and finally, it should be designed with minimal error margin (Malhotra and Birks, 2007).

The survey applied was a structured questionnaire with some questions regarding demographic data and fixed-response alternative questions. A first part of the questionnaire was dedicated to behavioural variables where adolescents were inquired about their social network presence, main activities online, intensity of use, dependency and specific behaviours, such as blocking parents and possible reasons. These first questions were created based upon the findings from the qualitative research, the focus groups.

The second part of the questionnaire was based upon previous literature and the results from the qualitative approach. We resorted to some adapted scales and to others created for the purpose of this investigation. The goal was to understand how these would relate with the possible phenomenon of the online personas, through the use of simultaneous accounts.

### 3.2.3 Constructs

#### “Likes” Dependency

Individuals have been known to use social media for self-promotion and often likes are perceived as validity of popularity. Thus, for some users one of their main objectives when using social network sites is to gather as much “likes” as possible (Greenwood, 2013; Sheldon and Bryant, 2016).

The “Likes” Dependency construct was created specifically for this investigation and was based upon the data collected in the focus groups. The goal of this scale is to measure the level of influence that likes have on adolescents in the use of social networks. It is a 5-item scale measured by a 7-points Likert scale.

**Table 1** – “Likes” Dependency Scale

	Strongly Disagree		Neither agree nor disagree			Strongly Agree	
	1	2	3	4	5	6	7
1. If I have fewer likes in a photo, I'll delete it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. One of my objectives is to obtain more likes than others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. It is important to me, to have more followers than my firends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I take into consideration the time of the day in which I post new photos to get more likes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I have to post photos with a certain regularity in order to maintain my levels of popularity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Personas Tendency

*“Identity is not an individual characteristic; it is not an expression of something innate in a person, it is rather a social product, the outcome of a given social environment and hence performed differently in varying contexts.” (Zhao et al., 2008, p.1831).*

In the search for identity and core-self, adolescents go through a complex process. This process involves interactions, feedback, adjustment and trying out different roles and personas (Berger, 2006).

The Personas Tendency construct was created specifically for this investigation with the goal to understand to what extent do adolescents adopt different personas in their daily lives. It is an 8-item scale measured by a 7-points Likert scale.

**Table 2 – Personas Tendency Scale**

	Strongly Disagree		Neither agree nor disagree			Strongly Agree	
	1	2	3	4	5	6	7
1. It amuses me to pretend that I am a different character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Sometimes in my imagination I assume an actor / actress / pop star ...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I like to pretend that I am a different person just to please certain people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. When it is necessary, I only gain in pretending that I am another character	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. There is nothing wrong with having different styles in my way of interacting to be accepted in groups of peers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. In accounts on social networks where adults see what I do, I share different things from the ones I share with friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Sometimes to please adults I have to look close to what they expect and like	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. If necessary we can substantially change the kind of person we are *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\*Item 8 was based on a scale developed in the investigation of the Role of Implicit theories. According to implicit theories there are two types of people, entity theorists and incremental theorists. The incremental theorists “believe that people's traits are malleable.” (Levy et al., 1998, p.1421).

### Imagery Elaboration

The imagery elaboration scale was developed by Babin and Burns (1997) and it was used to measure the elaboration of mental images beyond what was visible and presented. It was a 3-item scale measure through a 7-point Likert scale and, on Babin and Burns 's (1997) investigation, it presented a composite reliability of 0.80.

For the purpose of this investigation the scale was adapted (Table 3) to better fit the objectives of the study.

**Table 3 – Imagery Elaboration Scale**

	Strongly Disagree		Neither agree nor disagree			Strongly Agree	
	1	2	3	4	5	6	7
1. I fantasize with things that I would like to happen to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I imagine what it would be like if I used the brands that appear in an ad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. In a movie or in an advertisement I imagine myself as feeling that reality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



### Parent-Child Communication Encouragement

This scale was first referred to as the Encouraging Verbalization scale by Schaefer and Bell (1958) and Carlson and Grossbart (1988) and it is a 4-item scale measured through a 5-point Likert scale. The communication encouragement scale intends to assess parents' belief that children should be allowed to voice and express their opinions freely, even when disagreeing with their parents. In Carlson and Grossbart (1988) the study was applied to 451 mothers and presented both an alpha and a beta of 0.69 (p.80).

For this investigation, we adapted the scale to be applied to children instead of parents, in order to measure their perception of their parents' encouragement to communicate. We intended to understand if and how comfortable children feel to express their own opinions to their parents.

**Table 4** – Parent-Child Communication Encouragement Scale

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
	1	2	3	4	5
1. I am allowed to openly disagree with my parents when I understand that my ideas are better	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. My parents encourage me to tell them whenever I feel the rules are unreasonable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Children have the right to have their own point of view and to express it openly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Children's ideas should be seriously considered before making family decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Lying Intention

The Lying Intention scale was developed by Argo et al. in 2006 and reported an alpha of .93 (p.101). The scale measured an individual's willingness to lie in specific situations and it was a 4-item scale, assessed by a 7-point Likert scale, with 1 corresponding to "Very Unlikely" and 7 to "Very Likely".

**Table 5** – Lying Intention Scale

	Very Unlikely		Neither likely nor unlikely			Very Likely	
	1	2	3	4	5	6	7
1. Misrepresent the truth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Decive the truth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Mislead	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Hide the truth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### **3.2.4 Pilot-Test**

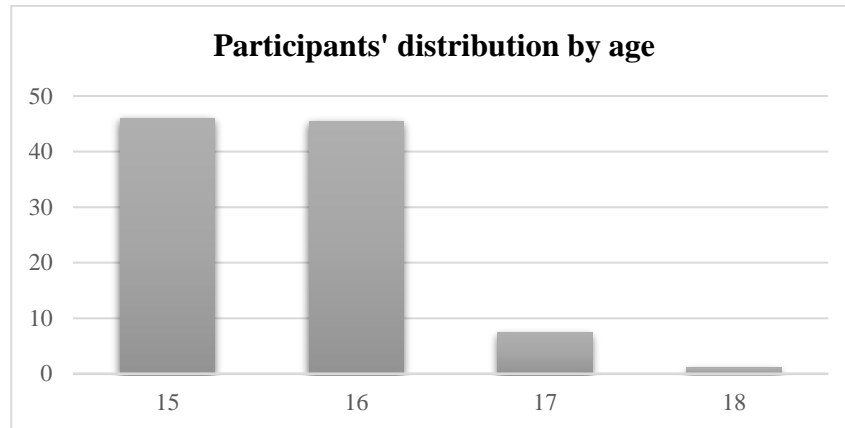
Conducting a pilot-test is an important step when applying a questionnaire. The test consists on applying the questionnaire to a small group of people in order to identify potential errors or mistakes and correct them adequately (Malhotra and Birks, 2007). Furthermore, Malhotra and Birks (2007) stated that the group chosen for the test should be representative of the intended population so that the findings are reliable. Thus, a first version of the questionnaire was implemented with a group of 6 adolescents where we analysed the time of completion, vocabulary adequacy, any error or mistakes, layout and appeal of the questionnaire. Based on all the feedback and findings from the pilot-test all required alterations were completed and a final version of the questionnaire was obtained (Appendix 5). Some of the alterations consisted in spelling, semantic, adaptation of the wording and placement of some items to make it clearer to the participants.

### **3.2.5 Sampling process**

*“The objective of most marketing research projects is to obtain information about the characteristics or parameters of a population”* (Malhotra and Birks, 2007, p.405).

Thus, a first step in a sampling process is to define the population under study (Malhotra and Birks, 2007). In the case of the current investigation, the target population would be Portuguese adolescents of both genders that are active users of social network sites. Having defined the population, the investigator is then able to define and select a representative sample to obtain the intended information (Malhotra and Birks, 2007).

The selected sample was 189 adolescents, from which 89 (47,1%) were male adolescents and 100 (52,9%) female adolescents. All the participants were enrolled on the 10<sup>th</sup> grade and had ages between 15 and 18 (Figure 2).



**Figure 2: Graphical representation of the participants' distribution by age**

All the participants were students in a high school in Madeira Island. The questionnaire was applied with the collaboration of the high school, which required a formal request to both the school and the Regional Secretariat of Education.

### **3.2.6 Implementing and Preparing Data**

After the authorization from the Regional Secretariat of Education we were able to implement the questionnaire. All the necessary authorizations and consents were obtained from parents and adolescents (Appendixes 1,2,3) and during the completion of the questionnaires there was always monitoring and further explanation whenever required.

After the data collection, it is important to analyse all the questionnaires for quality and accuracy in the answers (Malhotra and Birks, 2007). From the total of 192 questionnaires only three were considered unclear and unusable, leading to a total of 189 answers that were then coded and inserted into an Excel file and after into the statistical program IBM SPSS Statistics 24 for further analysis.

## 4. Results and Data Analysis

In this chapter, we present the results and analysis of both methodologies applied. First, we present the qualitative data analysis, which served as a base for the questionnaire applied. In the analysis, we identified different dimensions and had the opportunity to get a better understanding of the problematic.

The second section of this chapter is dedicated to the analysis of the quantitative research. For the analysis of the questionnaire we performed a descriptive statistical analysis of the characterization of the sample, an internal consistency reliability analysis of the scales applied, a bivariate analysis for testing two of the hypotheses and finally two regression analysis, where we tested the remaining hypotheses.

### 4.1 Qualitative Analysis Results

To analyse the focus groups first it is important to assemble the data, in this investigation both focus group were audio recorded and then transcribed. After analysing and carefully reading it is important to look for patterns and categories that might relate to each other and understand how they could impact the participants (Malhotra and Birks, 2007). In the present investigation, it was possible to highlight three different main dimensions of the discussion (Figure 3):

**Figure 3 – Focus Group dimensions**



The first dimension focusses on the context of use of the social network sites, where the participants were questioned about their online presence, their main activities online and what they liked and disliked the most about social network sites. The second dimension focused on their online self and how they portray themselves online. For that, they were questioned about the content of their posts, if they reflected on who would see their posts before they put it online, who integrates their network online and to what extend they feel

their online profiles are representative of their self. Finally, the last dimension focused on online personas, if they segmented their online information to different audiences, whether by using restrictions or by blocking certain users or also by using simultaneous accounts.

**Table 6** – Analysis of the dimensions

	<b>Description</b>	<b>Illustration</b>
<b>Use of the Social Network Sites</b>	<p>When asked to define social network sites, adolescents described them as a place to share and a tool to communicate. Most of the participants were, on average, present in 4 to 5 different social network sites. The most common being Facebook, Instagram, Twitter, Snapchat and WhatsApp. They also admitted spending a lot of time online, some even all day.</p> <p>In terms of main activities and behaviours participants pointed out as main activities: talking to each other on the chat, checking the news feed, commenting and liking photos, posting and some even making livestreams.</p> <p>In terms of the regularity of posting photos is very diverse among the different adolescents, some every two weeks, some every day and some very rarely or never.</p> <p>“Likes” are found to be important and some participants have strategies to obtain more likes, such as the time of the day they post the photos, or the type of social network they are using. Furthermore, in some cases if a photo does not have sufficient likes it can be sometimes delated.</p> <p>For Twitter and Instagram, some mentioned that it is important to have a positive</p>	<p>"A place where people can share moments.."</p> <p>"A virtual place to socialize with friends."</p> <p>“We do everything.”</p> <p>“On Twitter we post what goes on in our heads..”</p> <p>“Sometimes we just post things we find funny.”</p> <p>“No, because if you post a photo every day, you create a certain regularity that afterwards you have to maintain.”</p> <p>“I only post photos of myself on Fridays, Saturdays and Sundays... I have to get likes..”</p> <p>“You have to manage your posts, around 6:30 pm is the best time.”</p> <p>“Yes, you will delete a</p>

	<p>balance in terms of followers and people they are following. Meaning that if possible they will always try to have more people following them than the other way around.</p> <p>When they go online they check all the social networks they are present. But what is posted on one may not necessarily be posted on another. For some, Facebook is outdated and considered a parent social network, and most of them only use it because of the Messenger, to chat online.</p> <p>In terms of advantages and disadvantages, most participants felt that there were not that many negatives aspects, but the most common were the fake profiles that people would create using other people's identity and bullying.</p> <p>The most positives aspects were all about communication, being able to be in touch with friends at long distances.</p>	<p>photo if you do not have likes, for sure!"</p> <p>"Facebook is outdated, now Twitter is cooler."</p> <p>"Because parents are now creating Facebooks, so we use it less.."</p> <p>"I like everything."</p> <p>"I think it is possible to avoid any disadvantages, because we have the all tools for that."</p> <p>"People talk too much about other people's stuff.. and lie.."</p> <p>"To talk to friends we do not see every day."</p>
<p><b>Online Self</b></p>	<p>Most of the participants believe that their online profiles are indeed representative of their self. The social network sites that they feel better represent them are Twitter and Instagram.</p> <p>Furthermore, most of them stated that they do not reflect about who will see their posts before they put it online and that, apart from Twitter, most of their accounts are private.</p>	<p>"Yes, of course."</p> <p>"Yes, pretty much so."</p> <p>"When you see someone's Twitter you see a person's heart.."</p> <p>"Obviously, you see my life."</p> <p>"No, my profile is private so only who I want will able to see it."</p> <p>"Public accounts do not generate likes, nor followers."</p> <p>"Except on Twitter, it is public."</p>

	<p>Their online network is mostly composed by friends and some family members. However, some admitted, at some point, having befriended someone they did not know.</p>	<p>“School friends, siblings, team mates and friends we do not see all the time.”</p>
<p><b>Online Personas</b></p>	<p>Some of the participants admitted having more than one account simultaneously in the same social network, while others just one in each. The main reasons for the other simultaneous accounts were that: some are just fake, some are fan accounts to follow bands, some to help online games and some to post different things they also like. On those other accounts, most adolescents do not use their personal photos but cartons or other people's photos instead.</p> <p>When questioned about privacy restrictions, some participants admit having blocked or restricted their parents' and or family members' access on certain social network sites. One even admitted that his dad is unaware that he is on social network sites. Through these behaviours adolescents are segmenting themselves to different audiences.</p> <p>Two of the social network sites, Instagram and Twitter, were pointed out by some adolescents as the ones they would least want to have their parents as friends. Since these sites are where they more freely express themselves.</p>	<p>“I have two on Twitter.”          “I have three on Facebook, one mine and the others fake.”          “I only have one, I am not problematic.”          “One it is more personal and the other it is more..I don't know how to explain.”</p> <p>“More and more parents are creating social network accounts.”</p> <p>“On Instagram it does not happen so often, but afterwards we block them.”</p> <p>“One time I posted a photo with a girl and then my parents started with all the questions, so it is safer to restrict what they see.”</p>

As previously mentioned, this analysis was important for understanding better how adolescents use and perceive social network sites, but it also served as a base of investigation for constructing the questionnaire. From the analysis, we were able to



highlight two main behaviours concerning online personas: the blocking of parents and the use of simultaneous accounts which became the focus of our investigation.

Furthermore, the results from this analysis also served as a source and a baseline for the creation of one of the constructs used in the questionnaire. The importance of “likes” and popularity in the use of social network sites mentioned in the focus groups discussions lead us to create the “Likes” Dependency construct previously mentioned.

## 4.2 Quantitative Analysis Results

### 4.2.1 Descriptive Statistics

After computing all the data into to an SPSS file a first descriptive analysis of the first part of the questionnaire was conducted.

In terms of online presence in social media, the participants revealed significant levels of online presence and all participants were present in at least one social network site. Amongst the social network sites presented, Facebook holds the most participants (92,1%), followed by Instagram (86,8%), Snapchat (80,4%), WhatsApp (78,8%), Twitter (59,3%) and finally others (38,6%) (Table7).

**Table 7** – Participants' presence on Social Network Sites

<b>Presence Online</b>	<b>Facebook</b>	<b>Instagram</b>	<b>Twitter</b>	<b>Snapchat</b>	<b>WhatsApp</b>	<b>Other/s</b>
Yes	92,1%	86,8%	59,3%	80,4%	78,8%	38,6%
No	7,9%	13,2%	40,7%	19,6%	21,2%	61,4

In terms of family dynamics, we felt that it was also important to further investigate that aspect. According to the results from the focus groups, parents are more and more present in social media and their preferred site was pointed out by participants as being Facebook. In terms of online presence, it was possible to conclude that mothers' online presence is higher than fathers', 85,19% of participants' mothers are present in at least one of the sites presented, as well as 71,96% of the fathers. Our findings confirm that Facebook is in fact parents' preferred choice, followed by WhatsApp, Instagram and Others. However, mothers' online presence differs from fathers' when it comes to Twitter and Snapchat. They are both the least used social network sites by parents, but mothers are more present in Snapchat than on Twitter, and fathers are exactly the opposite (Tables 8 and 9).

For the participants who had siblings, the preferences were also similar. The sites with higher levels of presence were Facebook and Instagram and with the least Twitter and Others, for both older and younger brothers.

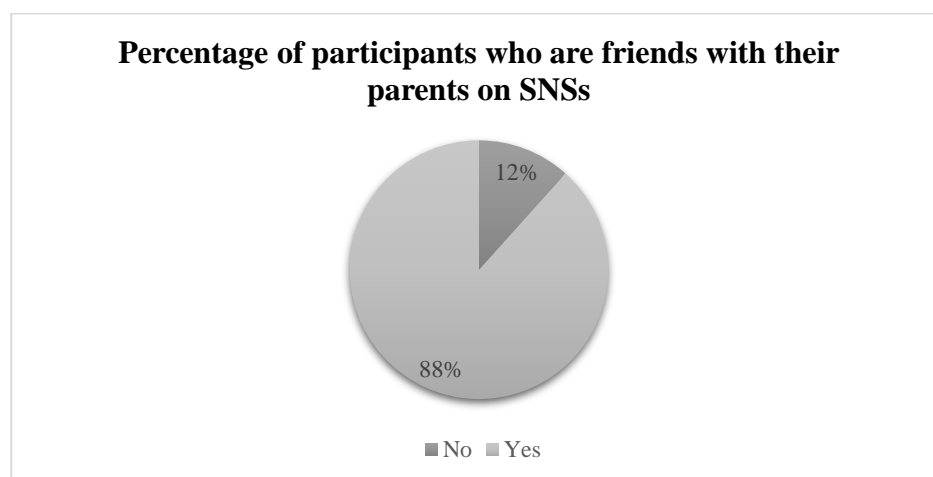
**Table 8** – Mothers' presence on Social Network Sites

Presence Online	Facebook	Instagram	Twitter	Snapchat	WhatsApp	Other/s
Yes	77,2%	27,5%	2,1%	4,8%	45,0%	5,8%
No	22,8%	72,5%	97,9%	95,2%	55,0%	94,2%

**Table 9** – Fathers' presence on Social Network Sites

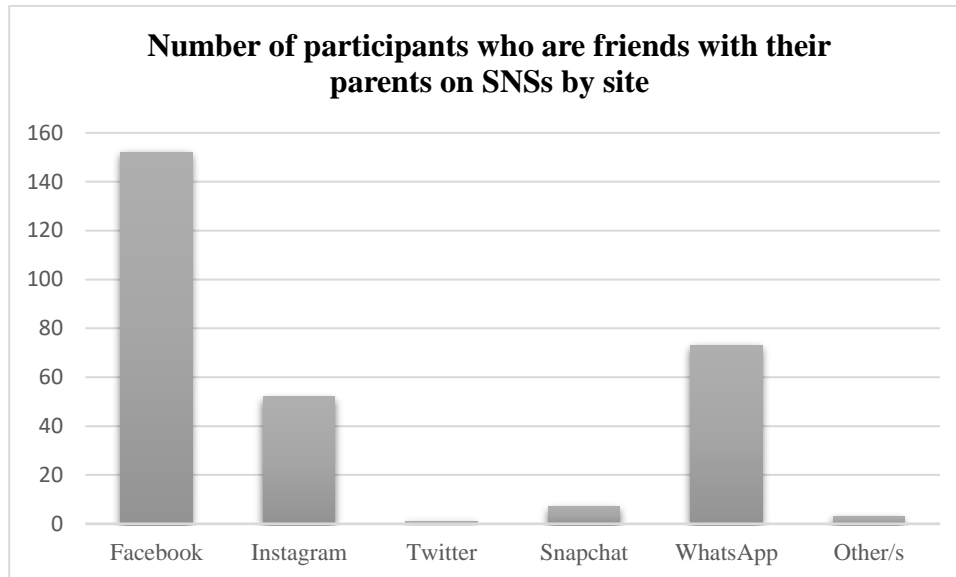
Presence Online	Facebook	Instagram	Twitter	Snapchat	WhatsApp	Other/s
Yes	68,8%	19,6%	3,2%	1,6%	34,9%	5,3%
No	31,2%	80,4%	96,8%	98,4%	65,1%	94,7%

Furthermore, in terms of befriending parents online, 88% of the participants are friends with their parents in at least one of the SNSs presented (Figure 4). Only 22 participants were not friends with their parents in social media.



**Figure 4:** Graphical representation of the percentage of participants who are friends with their parents on SNSs

When analysing in which SNSs adolescents are befriending parents, it is possible to observe that Facebook is clearly the most used site to do so, followed by WhatsApp (Figure 5). According to the results from the focus groups, Twitter was pointed out as the social network that participants would want the least to have their parents on, thus it makes sense that only one participant is friends with his parents on Twitter.



**Figure 5:** Graphical representation of the number of participants who are friends with their parents on SNSs by site

The average time per day spent on social media is between 2 to 3 hours. However, results show that female participants tend to spend more time on social network sites than male participants (Table 10).

**Table 10** – Average time per day spent on social network sites

	Female	Male
Mean	3,81	2,74
Std. Deviation	1,852	1,592

Scale: 1- More than 1h; 2- Between 1h and 2h; 3- Between 2h and 3h; 4- Between 3h and 4h; 5- Between 4h and 5h; 6- Between 5h and 6h; 7- More than 6h

In terms of the different types of SNSs and their use, we questioned our participants in terms of the time spent in different activities online, which we selected from the focus group discussion.

On Facebook, the activities in which participants spend more time in, by order, are: chatting online, checking the newsfeed and "liking" photos/posts. The least amount of time is spent on livestreams (Table 11).

**Table 11** – Average time per week spent on Facebook on the described activities

<b>Facebook</b>	<b>Average</b>	<b>Std.Deviation</b>
Check the news feed	4,1	2,7
Chat online	5,1	2,47
Post photos and videos	0,63	0,92
Make posts	0,92	1,5
Comment photos/posts	1,6	2
"Like" photos/posts	3,76	2,8
Livestream	0,07	0,58

Scale: 0- Never 1- 1 or less times a week; 2- 2 times a week; 3- 3 times a week; 4- 4 times a week; 5- 5 times a week; 6- Every day of the week but one; 7- Every day

On Instagram, the activities in which participants spend more time in, by order, are: checking the newsfeed, "liking" photos/posts and chatting online and the least amount of time is spent is also on livestreams (Table 12).

**Table 12** – Average time per week spent on Instagram on the described activities

<b>Instagram</b>	<b>Average</b>	<b>Std.Deviation</b>
Check the news feed	6,43	1,38
Chat online	3,62	2,73
Post photos and videos	1,69	1,667
Make posts	1,53	1,73
Comment photos/posts	3,15	2,43
"Like" photos/posts	6,09	1,66
Livestream	0,2	0,58

Scale: 0- Never 1- 1 or less times a week; 2- 2 times a week; 3- 3 times a week; 4- 4 times a week; 5- 5 times a week; 6- Every day of the week but one; 7- Every day

On Twitter, participants spend more time per week in: checking the newsfeed, "Liking" photos/posts and making posts (Table 13).

**Table 13** – Average time per week spent on Twitter on the described activities

<b>Twitter</b>	<b>Average</b>	<b>Std.Deviation</b>
Check the news feed	4,83	2,66
Chat online	2,4	2,64
Post photos and videos	1,03	1,64
Make posts	3,04	2,81
Comment photos/posts	2,43	2,81
"Like" photos/posts	4,12	3,01
Livestream	0,01	0,094

Scale: 0- Never 1- 1 or less times a week; 2- 2 times a week; 3- 3 times a week; 4- 4 times a week; 5- 5 times a week; 6- Every day of the week but one; 7- Every day

On Snapchat, participants spend more time per week in: checking the newsfeed, chatting online and posting photos and videos. (Table 14).

**Table 14** – Average time per week spent on Snapchat on the described activities

<b>Snapchat</b>	<b>Average</b>	<b>Std.Deviation</b>
Check the news feed	5,34	2,43
Chat online	4,83	2,55
Post photos and videos	2,97	2,65
Make posts	2,42	2,53
Comment photos/posts	1,45	2,38
"Like" photos/posts	1,18	2,45
Livestream	0,09	0,64

Scale: 0- Never 1- 1 or less times a week; 2- 2 times a week; 3- 3 times a week; 4- 4 times a week; 5- 5 times a week; 6- Every day of the week but one; 7- Every day

On WhatsApp, participants spend more time per week in: chatting online and checking the newsfeed. (Table 15).

**Table 15** – Average time per week spent on WhatsApp on the described activities

<b>WhatsApp</b>	<b>Average</b>	<b>Std.Deviation</b>
Check the news feed	3,77	2,87
Chat online	4,38	2,55
Post photos and videos	0,58	1,29
Make posts	0,63	1,54
Comment photos/posts	0,55	1,59
"Like" photos/posts	0,71	1,89
Livestream	0,01	0,12

Scale: 0- Never 1- 1 or less times a week; 2- 2 times a week; 3- 3 times a week; 4- 4 times a week; 5- 5 times a week; 6- Every day of the week but one; 7- Every day

On Other Social network sites, participants spend more time per week in: checking the newsfeed and chatting online (Table 16).

**Table 16** – Average time per week spent on Other SNSs on the described activities

<b>Other/s</b>	<b>Average</b>	<b>Std.Deviation</b>
Check the news feed	3,43	2,79
Chat online	1,85	2,41
Post photos and videos	0,81	1,55
Make posts	0,94	1,87
Comment photos/posts	1,26	2,27
"Like" photos/posts	1,54	2,58
Livestream	0,13	0,82

Scale: 0- Never 1- 1 or less times a week; 2- 2 times a week; 3- 3 times a week; 4- 4 times a week; 5- 5 times a week; 6- Every day of the week but one; 7- Every day

Considering the previous tables, we can observe that for each social network site adolescents have different patterns of use and intensity of use. In terms of the presented activities online, participants spend, on average, more time chatting online on Facebook than in any of the other SNSs, which is consistent with the findings of the focus groups. The same can be observed for Instagram in the activities of checking the news feed, commenting and liking photos/posts and also performing livestreams. In terms of posting photos and videos, Snapchat is the SNS where participants spend, on average more time

per week performing that activity. Finally, Twitter is the SNS where participants spend on average more time making posts, which is also consistent with previous findings, since participants stated that Twitter is where they more freely express themselves (Table17).

**Table 17** – Social network sites where participants spend, on average, more time per week performing the presented activities

<b>Activities</b>	<b>SNS</b>
Check the news feed	Instagram
Chat online	Facebook
Post photos and videos	Snapchat
Make posts	Twitter
Comment photos/posts	Instagram
"Like" photos/posts	Instagram
Livestream	Instagram

Furthermore, we questioned adolescents in terms of two different behaviours: blocking parents and omitting presence on social network sites. However, in tables 18 and 19 it is noticeable that these behaviours are not so evident among the participants.

Nonetheless, we can observe that among the chosen social network sites, the blocking of parents is more significant on Facebook (Table 18), which is also the social network site with higher levels of parental presence. The second behaviour, of omitting online presence, is more significant on Twitter (Table 19), which, as pointed out on the focus group, was the social network site that adolescents would least want their parents to see.

**Table 18** – Average blocking of parents on the different SNSs

<b>Blocking of parents on SNSs</b>	<b>Average</b>	<b>Std.Deviation</b>
I have blocked my parents on my Facebook account	1,31	0,991
I have blocked my parents on my Instagram account	1,20	0,824
I have blocked my parents on my Snapchat account	1,10	0,597
I have blocked my parents on my Twitter account	1,13	0,706
I have blocked my parents on my WhatsApp account	1,02	0,162

Scale: 5-point Likert scale, being 1- "Does not Apply" and 5- "Applies"



**Table 19** – Average omitting of online presence from parents on the different SNSs

Omitting online presence from parents	Average	Std.Deviation
My parents are unaware that I have an account on Facebook	1,02	0,230
My parents are unaware that I have an account on Instagram	1,26	0,919
My parents are unaware that I have an account on Twitter	1,54	1,252
My parents are unaware that I have an account on Snapchat	1,35	0,993
My parents are unaware that I have an account on WhatsApp	1,16	0,697

Scale: 5-point Likert scale, being 1- "Does not Apply" and 5- "Applies"

We also felt that it was important to understand the possible reasons behind these behaviours, so we questioned participants in terms of their opinion regarding what could lead adolescents to omit or block their parents in SNSs. According to the results the main reason explaining these behaviours is adolescents not wanting their parents to see their online activity (Table 20), which also is consistent with the results from the qualitative research.

**Table 20** – Potential reasons behind the blocking of parents on SNSs and omitting SNSs presence

Potential Reasons	Average	Std.Deviation
Because they do not want their parents to see their online activity	4,04	1,336
Because of embarrassment	2,50	1,529
Fear they won't understand	2,79	1,542
Because they will think it is ridiculous	2,67	1,577
Fear of being punished/grounded	2,68	1,587

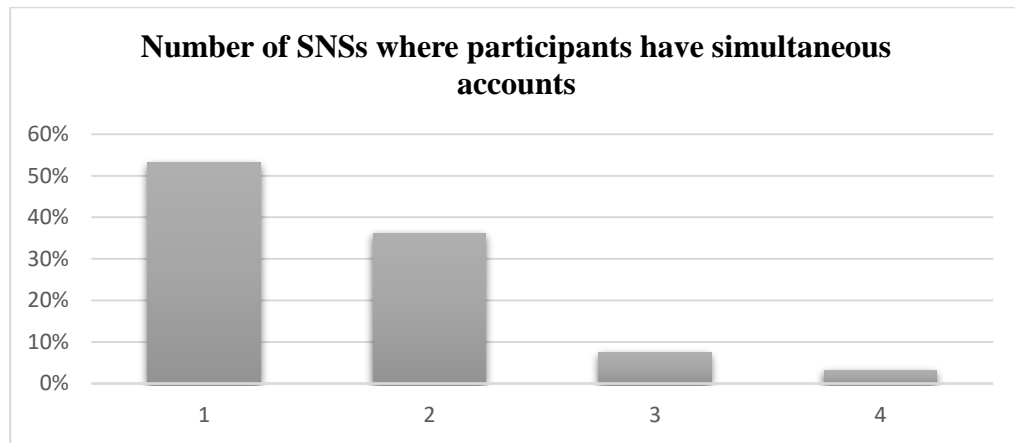
Scale: 5-point Likert scale, being 1- "Does not Apply" and 5- "Applies"

Finally, in terms of simultaneous accounts, 94 participants have more than one account in at least one of the social network sites presented (Table 21).

**Table 21** – Number Accounts in the social network sites presented

Number of Accounts	Frequency	Percentage
One or zero accounts on SNSs	95	50,3%
More than one account in at least one of the SNS presented	94	49,7%

Furthermore, in terms of intensity, from the 94 participants with simultaneous accounts, 53% have simultaneous accounts in just one SNS, 36% in two SNSs, 7% in three SNSs and 3% in four SNSs (Figure 6).



**Figure 6:** Graphical representation of the number of SNSs where participants have simultaneous accounts

#### 4.2.2 Reliability Analysis

The analysis of reliability assesses the consistency of a scale in terms of its results when repeated measures are applied. The internal consistency reliability analysis is applied to test the reliability of summated variables (Malhotra and Birks, 2007). Summated variables are a result of a process that consists in combining different items or variables that measure one same notion into one variable (Hair et al., 2014).

The Cronbach's Alpha is one of the most recurrently used for testing reliability that ranges between 0 and 1 (Hair et al., 2014) and can be defined as “*a measure of internal consistency reliability that is the average of all possible split half coefficients resulting from different splittings of the scale items*” (Malhotra and Birks, 2007, p.358).

An alpha between 0.6 and 0.70 is considered in the limit (Hair et al., 2014) and a value below 0.60 is considered unsatisfactory (Malhotra and Birks, 2007). According to Hill and Hill (2012) an alpha higher than 0.9 is considered an excellent consistency, between 0.8 and 0.9 is considered a good consistency, between 0.7 and 0.8 considered a reasonable consistency and between 0.6 and 0.7 considered a weak consistency but acceptable.

The first scale, the “Likes” Dependency scale that was created specifically for this investigation presented a Cronbach's Alpha of 0.72, which is considered a reasonable internal consistency (Table 22).

**Table 22** – Reliability statistics “Likes” Dependency scale

	Cronbach's Alpha	Cronbach's Alpha if Item Deleted
If I have fewer likes in a photo, I'll delete it.		0,686
One of my objectives is to obtain more likes than others		0,686
It is important to me, to have more followers than my friends		0,698
I take into consideration the time of the day in which I post new photos to get more likes		0,647
I have to post photos with a certain regularity in order to maintain my levels of popularity		0,630
	<b>0,72</b>	

The Personas Tendency scale, which was also created specifically for this investigation presented a reasonable internal consistency with a Cronbach's Alpha of 0.708 (Table 23). From the table below, it is noticeable that the overall alpha would improve if the item 4 would be deleted from the scale, however, since the improvement would be of 0,003 we did not consider it significant enough to justify deleting the item.

**Table 23** – Reliability statistics Personas Tendency scale

	Cronbach's Alpha	Cronbach's Alpha if Item Deleted
It amuses me to pretend that I am a different character		0,678
Sometimes in my imagination I assume an actor / actress / pop star ...		0,687
I like to pretend that I am a different person just to please certain people		0,681
When it is necessary, I only gain in pretending that I am another character		0,676
There is nothing wrong with having different styles in my way of interacting to be accepted in groups of peers		0,711
In accounts on social networks where adults see what I do, I share different things from the ones I share with friends		0,688
Sometimes to please adults I have to look close to what they expect and like		0,639
If necessary, we can substantially change the kind of person we are		0,671
	<b>0,708</b>	

Similar to the previous scales, we also calculated the Cronbach's Alpha for the remaining scales, which were supported upon the literature review (Table 24). The Imagery Elaboration scale presented an alpha of 0.755 which is considered reasonable, the Parent-Child Communication Encouragement presented an alpha of 0.639 considered weak but still acceptable and finally the Lying Intention scale presented an alpha of 0.812 which is considered good and indicative of a satisfactory internal consistency.

**Table 24** – Reliability statistics remaining scales

	<b>Cronbach's Alpha</b>
Imagery elaboration Scale	0,755
Parent-Child Communication Encouragement	0,639
Lying Intention Scale	0,812

From this analysis, we are able to verify the reliability and consistency of the measurements of the different constructs (concepts). The use of summated variables is not only helpful in facilitating the analysis of different concepts, but is also an effort to improve the overall reliability of the measurement of the concept or notion under study (Hair et al., 2014).

Thus, considering the overall alphas of the scales and their validity we created five new summated variables, that represented the total average scores of the items forming each of the previous scales. These new variables would be the ones used in the regression analysis, representing the total scores of the constructs under analysis.

### 4.2.3 Bivariate Analysis

According to Malhotra and Birks (2007), bivariate analysis is a process used to determine the association between one dependent variable and one independent variable. It is a helpful analysis for testing hypotheses and there are different tools and statistical techniques that can be used (Malhotra and Birks, 2007). For the present investigation, we resorted to the bivariate analysis to test two of the hypotheses of the model (H7a. and H7b.).

To test these two hypotheses a we computed a new variable, Parents' total online presence, that represented the total number of social network sites (from the 5 presented) that, both mothers and fathers, were present. This variable could range from 0 to 10, and represented the parents' online presence intensity.

According to Malhotra and Birks (2007), for analysing the association between a categorical variable and a continuous variable we use the analysis of variance (ANOVA). Thus, to test if there is a positive association between being friends with parents' in at least one SNSs and parents' total online presence online we conducted an analysis of variance (Table 25 and 26). As the dependent variable, we considered the Parents' total online presence and as the independent variable being friends with parents online in at least on SNS.

From the results, we can verify that being friends with parents online (in at least one SNS) is statistically significant for explaining parents' total online presence. Meaning that, the higher the parents' total online presence more likely adolescents are to be friends with their parents in at least one of the social network sites.

**Table 25** – Means Parents' total online presence

<b>Friends with parents online</b>	<b>Mean</b>	<b>N</b>	<b>Std. Deviation</b>
No	1,273	22	1,9069
Yes	3,180	167	1,7015
Total	2,958	189	1,8272

**Table 26** – ANOVA: Parents' total online presence

		Sum of Squares	df	Mean Square	F	Sig.
<b>Friends with parents online</b>	Between Groups	70,687	1	70,687	23,733	0,000
	Within Groups	556,974	187	2,978		
	Total	627,661	188			

On the other hand, to test if blocking parents online was correlated to the parents' total online presence we resorted to the Spearman's Correlation Coefficient. According to Malhotra and Birks (2007), this coefficient is used to measure correlation between variables that do not necessarily follow a normal distribution nor a linear relationship, which in the case of these two variables is applied. On Appendix 6, we can observe from the Q-Q Plots that at least one of the variables does not follow a normal distribution and that the variables are not linearly related.

Spearman's Coefficient can vary from -1 to 1 and a negative (positive) value will be indicative of a negative (positive) correlation between the variables. If the coefficient is closer to -1 or 1 this is indicative of a stronger correlation, if closer to 0 indicative of weak correlation (Malhotra and Birks, 2007).

It is noticeable that, for a 1% significance level, blocking parents online is positively correlated with the parents' total online presence. However, with a coefficient of 0.234 we can conclude that, although significant, the correlation is weak (Table 27).

**Table 27** – Spearman's Correlations

		Parents' Total Online Presence	Blocking of Parents
<b>Parents' Total Online Presence</b>	Correlation Coefficient	1,000	
	Sig. (2-tailed)		
	N	189	
<b>Blocking of Parents</b>	Correlation Coefficient	,234**	1,000
	Sig. (2-tailed)	0,001	
	N	189	189

\*\* . Correlation is significant at the 0.01 level (2-tailed).

#### 4.2.4 Regression Analysis

Regression analysis is a tool used to analyse the association between one dependent variable and one or more independent variables (Hair et al., 2014; Malhotra and Birks, 2007). Thus, for this investigation it is important to understand which independent variables (Gender, Average time per day on SNSs, Being friends with parents online, Parents' total online presence, "Likes" dependency, Imagery elaboration, Lying Intention and Communication encouragement) have an influence on the dependent variable (simultaneous accounts).

The most common multiple regression analysis is applied to metric variables, however it is possible to also perform a regression analysis with a non-metric variable. If the dependent variable is a non-metric, binary variable we can perform a Logistic Regression (Hair et al., 2014).

In the present investigation, we performed two different regressions: (1) one first logistic regression where we used the dependent variable (simultaneous accounts) transformed into a binary variable and (2) a second linear regression using the dependent metric variable. In the logistic regression, we study if the independent variables have any relation with adolescents having or not having simultaneous accounts. Whereas in the second regression, we study if the independent variables have any association with the adolescents' intensity of simultaneous accounts.

##### **Logistic Regression**

Logistic Regression is a form of regression analysis and it is a procedure used for predicting and explaining the association between a dependent binary categorical variable and a set of metric or nonmetric independent variables (Hair et al., 2014).

The regression verified that from the 9 independent variables only three are statistically significant (Table 28). The variables Gender ( $p=0.955$ ), Friends with parents online ( $p=0.534$ ), Parents' total online presence ( $p=0.948$ ), Persona tendency ( $p=0.234$ ), Imagery elaboration ( $p=0.128$ ) and Communication encouragement ( $p=0.189$ ) presented p-values higher than 0,05 which indicate that, for a 5% significance level, these variables are not statistically associated to having simultaneous accounts. On the contrary, the variables



Average time per day on SNSs ( $p=0,008$ ), "Likes" Dependency ( $p=0,050$ ) and Lying intention ( $p=0,022$ ) were considered statistically significant for explaining the dependent variable (having simultaneous accounts). The "Likes" dependency scale has the highest coefficient, meaning that the higher the "Likes" dependency more probable it is that the adolescents have simultaneous accounts.

**Table 28** – Logistic Regression

	<b>B</b>	<b>S.E.</b>	<b>Wald</b>	<b>df</b>	<b>Sig.</b>	<b>Exp(B)</b>
Gender	0,021	0,378	0,003	1	0,955	1,021
Average time per day on SNSs	0,273	0,102	7,080	1	0,008	1,313
Friends with parents online	-0,345	0,554	0,387	1	0,534	0,709
Parents' total online presence	0,007	0,104	0,004	1	0,948	1,007
"Likes" dependency	0,357	0,182	3,851	1	0,050	1,429
Persona tendency	0,231	0,194	1,417	1	0,234	1,260
Imagery elaboration	0,163	0,107	2,322	1	0,128	1,178
Lying intention	0,322	0,141	5,251	1	0,022	1,380
Communication encouragement	-0,333	0,254	1,728	1	0,189	0,716
Constant	-1,954	1,186	2,716	1	0,099	0,142

Pseudo R squares can be used to explain the fit of a model in a logistic regression (Hair et al., 2014). If we consider the Nagelkerke R Square as a pseudo R, we can conclude that the model explains 29,1% of the variance in having simultaneous accounts (Appendix 7, Table 32). Moreover, from Table 29 we can verify that the model correctly predicted 73% of the cases and it was more successful in predicting the cases with one or zero account than the cases of more than one account. The model predicted that 24 adolescents had simultaneous accounts but had instead one or zero accounts in each social network site they were present, and predicted that 27 adolescents had no simultaneous accounts when they actually had.

**Table 29** – Classification Table

		Predicted		Percentage Correct
		one or zero accounts	more than one account	
Observed	one or zero accounts	71	24	74,7
	more than one account	27	67	71,3
Overall Percentage				<b>73,02</b>

### Linear Regression

As previously mentioned, for this second regression, we intended to analyse the intensity of the simultaneous accounts. Thus, for the dependent variables we considered the number of social network sites where adolescents have simultaneous accounts, which can range between 0 (has no simultaneous accounts) to 5 (has simultaneous accounts in all 5 SNSs presented).

According to Hair et al. (2014) the adjusted determination coefficient (adjusted  $R^2$ ) is a useful tool when interpreting regression models, particularly when involving different independent variables. This model presents an adjusted  $R^2$  of 0,199, meaning that the model explains 19,9% of the variance in the data (Appendix 7, Table 33). Furthermore, we can verify from the ANOVA (Appendix 7, Table 34) that the model explains a significant amount of the variance of the dependent variable.

The results from the model show that from the independent variables, as in the logistic regression, only three are statistically significant (Table 30). However, from the three significant variables one differs from the logistic model. The variables Gender ( $p=0,898$ ), Friends with parents online ( $p=0,257$ ), Parents' total online presence ( $p=0,374$ ), Persona Tendency ( $p=0,381$ ), Lying Intention ( $p=0,180$ ) and Communication encouragement ( $p=0,147$ ) presented  $p$ -values higher than 0,05 which indicate that, for a 5% significance level, these variables are not statistically associated to the intensity of having simultaneous accounts. Meanwhile, the variables Average time per day spent on SNSs ( $p=0,002$ ), "Likes" Dependency ( $p=0,019$ ) and Imagery elaboration ( $p=0,025$ ) were considered statistically significant for explaining the intensity of having simultaneous accounts. As in the logistic regression, the "Likes" Dependency scale has the highest

coefficient, meaning that the higher the “Likes” dependency more probable it is that the adolescents have simultaneous accounts in more social network sites.

**Table 30** – Linear Regression

	Unstandardized Coefficients		Standardized Coefficients		
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>
(Constant)	0,095	0,439		0,216	0,829
Gender	-0,018	0,141	-0,009	-0,128	0,898
Friends with parents online	-0,243	0,214	-0,081	-1,137	0,257
Average time per day on SNSs	0,118	0,038	0,221	3,087	0,002
Parents' total online presence	0,035	0,039	0,066	0,891	0,374
"Likes" dependency	0,157	0,066	0,178	2,371	0,019
Persona tendency	0,065	0,074	0,071	0,879	0,381
Imagery elaboration	0,094	0,042	0,181	2,267	0,025
Lying intention	0,070	0,052	0,096	1,347	0,180
Communication encouragement	-0,139	0,096	-0,101	-1,456	0,147

## 5. Discussion

Since their creation, Social Network Sites have attracted a lot of attention not only in terms of users but also of investigators and researchers (Boyd and Ellison, 2007). According to Antheunis et al. (2016), SNSs are particularly relevant in adolescents' lives and their use of these tools can even be higher than in adults. Different concerns have been pointed out regarding adolescents use of these tools (Antheunis et al., 2016; Ahn, 2011), making it crucial to further investigate this phenomenon.

Adolescence is a very important phase in any individual's development and several unique changes occur during these years that could impact the rest of their lives. The search for their own identities is one of the crucial processes that teens have to go through during these years (Berger, 2006), that could also impact their use of social network sites (Zhao et al. 2008).

There are different aspects of the SNSs that are attractive for adolescence and that foment different behaviours online (Ellison et al., 2007; Pappacharissi, 2009). The main goal of this investigation was to understand better how adolescents present their online identities and if they undertake different personas online by using simultaneous accounts on social network sites. This investigation has contributed to the knowledge of social network sites and their use by adolescents.

In a first phase of this investigation we conducted a focus groups with the purpose to understand better adolescents' perspective on social network sites and their use. The results from the discussions confirmed how relevant social network sites are in adolescents' daily lives and provided us with several relevant information for constructing the questionnaire. From the results, we were able to outline two main behaviours regarding the segmentation of information to different audiences: blocking parents on social network sites and the use of simultaneous accounts in a same social network site. According to Boyd (2007) these behaviours are common in adolescents that struggle to keep their network more private. Thus, for the quantitative approach we questioned 189 adolescents on the mentioned behaviours, but focused our investigation on the use of simultaneous accounts and in the potential factors that could be associated with it.

From the results, it was noticeable that the use of simultaneous accounts was more significant than the blocking of parents, and that 49,7% of the participants had simultaneous accounts in at least one of the social network sites presented.

After analysing and testing the different proposed hypotheses in this investigation it was possible to conclude which variables had an association with the use of simultaneous accounts. In Table 31 we present the main results summarized.

The intensity of use of social network sites has been a topic of discussion when regarding young individuals (Tang et al., 2016). In this investigation, we concluded that the intensity of use, measured through the average time per day spent on SNSs, is positively associated with, not only having simultaneous accounts, but also with the intensity of simultaneous accounts. Participants spend on average two to three hours per day on social network sites, however girls tend to spend more time than boys. This time online is spent performing different activities that can vary from site to site. Facebook is the social network site where participants spend on average more time per week chatting online, whereas Instagram is where participants spend on average more time per week checking the news feed, commenting photos/posts, liking photos/posts and performing livestreams. One of the biggest advantages of SNSs, pointed out by participants in the focus groups, was the communication factor, being able to communicate with friends at all times. This is consistent with previous findings in the literature review, that these sites mostly support already existing offline relationships (Boyd and Ellison, 2007).

“Likes” dependency is also associated with having simultaneous and their intensity. Adolescents that are more dependent on “likes” are more likely to have simultaneous accounts. “Likes” have proven to be very important to adolescents when using social media and in fact, according to Greenwood (2013), they are the main goal for some users. According to the participants of the focus groups obtaining likes in photos and/or posts is very important and some even consider deleting a photo if it has fewer likes.

When considering the adolescents' profile, some of the variables proved to be statistically significant and others did not. The personas tendency, a scale created specifically for this investigation, proved to have no empiric evidence in terms of having simultaneous accounts. According to Zhao et al. (2008) an individual's identity is a social product that is influenced by the environment surrounding the individual. When presenting their

online identities, users have at display different tools that make it possible to “bend” the truth, thus often presenting different versions of the reality that are not necessarily true but are socially desirable (Zhao et al. 2008). We can conclude that, although a person may resort to simultaneous accounts for different purposes, that does not imply that, in their daily lives, they have personas tendencies.

The imagery elaboration proved to be associated, not with having simultaneous accounts, but with the intensity of simultaneous accounts. Meaning that the more significant the values in terms of imagery elaboration the more intense is to be the use of simultaneous accounts. The imagery elaboration is associated with the ability to fantasize and elaborate reality (Babin and Burns, 1997), thus the intensity of the simultaneous accounts could be a manifestation of the creativity and imagination.

On the contrary, the lying intentions is statistically associated with having simultaneous accounts, but not associated when considering the intensity. This is consistent with the literature review since one of the main reasons people use social network is for popularity and, as previously mentioned, that sometimes leads to the use of not so true and real information (Zhao et al. 2008).

According to Mullen and Hamilton (2016) parents are currently engaging more with the social media world as a tool to monitor their children's activities. In fact, according to the findings from the focus groups, parents are creating more accounts on social media, with Facebook as the preferred social network site. From the questionnaires, we found that parents' online presence is relatively high and that mothers are more present online than fathers. In terms of adolescents being friends with their parents online, 88% of the participants were friends with at least one of their parents in at least one of the social network sites presented. Furthermore, we found that the more intense is the parents' online presence more likely adolescents are to be friends with at least one of the parents in at least one SNS. This complements the findings of Madden et al. (2012) that parents that are more present in social media tend to be more aware and concerned with their children's use of social network sites. On the other hand, the parent-child communication encouragement proved not to be associated with the use of simultaneous accounts.

It was also possible to verify that the blocking of parents is associated with parents total online presence, which follows in line with the results from the focus group and also with

Mullen and Hamilton's (2016) findings that if children perceive parents' online presence as an invasion of privacy that they may resort to privacy restrictions to overcome it. However, parents' total online presence and being friends with parents online has not associated with the use of simultaneous accounts, meaning that, when resorting to privacy restrictions to overcome a potential invasion of privacy from parents, adolescents will prefer to block parents instead of creating simultaneous accounts.

Different studies have proven that the gender has influence in different aspects of social network sites usage. However, contrary to what expected, this investigation found no differences in terms of gender when considering having simultaneous accounts.

**Table 31 – Results from the test of hypotheses**

Hypothesis	Statistical Test	Result	Empiric Result
<b>H1:</b> There is a positive association between the average time per day spent on SNSs and having simultaneous accounts on SNSs	Logistic Regression	There is empiric evidence that there is a positive association between the average time per week spent on SNSs and having simultaneous accounts.	Supported
	Multiple Regression		
<b>H2:</b> There is a positive association between the “Likes” Dependency and having simultaneous accounts on SNSs.	Logistic Regression	There is empiric evidence that there is a positive association between the "Likes" Dependency and having simultaneous accounts.	Supported
	Multiple Regression		
<b>H3:</b> There is a positive association the Personas Tendency and having simultaneous accounts on SNSs.	Logistic Regression	There is no empiric evidence that there is a positive association between the Personas Tendency and having simultaneous accounts.	Not supported
	Multiple Regression		
<b>H4:</b> There is a positive association between Imagery Elaboration and having simultaneous accounts on SNSs.	Logistic Regression	According to the Logistic Regression model there is no empiric evidence that there is a positive association between the Imagery Elaboration and having simultaneous accounts. However, if considering the linear regression model there is empiric evidence of a positive association between the Imagery Elaboration and having simultaneous accounts.	Partially supported
	Multiple Regression		
<b>H5:</b> There is a positive association between lying intentions and having simultaneous accounts on SNSs.	Logistic Regression	According to the Logistic Regression model there is empiric evidence that there is a positive association between the Lying Intentio and having simultaneous accounts. However, if considering the linear regression model there is no empiric evidence of a positive association between the Lying Intention and having simultaneous accounts.	Partially supported
	Multiple Regression		
<b>H6:</b> There is a negative association between Parent-Child Communication Encouragement and having simultaneous accounts on SNSs.	Logistic Regression	There is no empiric evidence that there is a negative association between the Parent-Child Communication Encouragement and having simultaneous accounts.	Not supported
	Multiple Regression		
<b>H7:</b> There is a positive association between the parents' total online presence and having simultaneous accounts on SNSs.	Logistic Regression	There is no empiric evidence that there is a positive association between parents' total online presence and having simultaneous accounts.	Not supported
	Multiple Regression		
<b>H7a:</b> There is a positive association between being friends with parents' in at least one SNSs and parents total online presence.	ANOVA Test	There is empiric evidence that there is a positive association between being friends with parents' in at least one SNSs and and parents total online presence.	Supported
<b>H7b:</b> There is a positive association between the blocking of parents and parents' total online presence.	Spearman's Correlation	There is empiric evidence that there is a positive association between the blocking of parents and parents' total online presence.	Supported
<b>H8:</b> There is a positive association between being friends with parents on SNSs and having simultaneous accounts on SNSs.	Logistic Regression	There is no empiric evidence that there is a positive association between being friends with parents on SNSs and having simultaneous accounts.	Not supported
	Multiple Regression		
<b>H9:</b> There is a significant difference in having simultaneous accounts on SNSs between male and female adolescents.	Logistic Regression	There is no empiric evidence that there is a difference in having simultaneous accounts on SNSs between male and female adolescents.	Not supported
	Multiple Regression		



## **6. Conclusions**

Adolescents are increasingly using social network sites as an integral part of their daily activities, which has risen some concerns about their use of these tools and how these could impact them (Ahn, 2011). In this investigation, we analyse adolescents' online personas in the use of social network sites, with a focus on simultaneous accounts. This research contributes with interesting and relevant insights regarding this problematic.

From the literature review, it was possible to conclude that research on adolescents use of social network sites is not so vast (Košir et al., 2016). Adolescents have access to a vast variety of social network sites, where they present and disclose several features of their personal lives (Ahn, 2011), so it is important to study and understand this phenomenon of social network sites, specially at this, so crucial, stage of life.

The results of the present study indicate that the average time per day spend on SNSs and the dependency of "likes" are associated with the use and intensity of simultaneous accounts, and that the imagery elaboration and the lying intention are partially associated with simultaneous accounts. Furthermore, we found that the more intense is the parents' total online presence more likely adolescents are to be friends with at least one of the parents in at least one SNS.

### **6.1 Practical Implications**

This dissertation contributes with different insights for professionals and researchers in terms of the use of technologies, specifically the social network sites, in young individuals.

Having a better understanding of how adolescents use the internet and all its available tools is important, not only for parents and professors, but also for companies providing these services. Understanding how these sites are used and how they impact their users is essential for companies that want to provide a better quality and evolved service.

## **6.2 Limitations and suggestions for future research**

This present investigation presents some limitations that should be taken into consideration for future research. The first limitation would be in terms of the sample, since we only considered Portuguese adolescents and with ages between 15 and 18 years old. Furthermore, for the qualitative phase, the focus groups participants were from the Porto region and for the quantitative research the participants were residents of Madeira island, which could impact the results. The participants from Madeira island proved to be more conservative in certain aspects in the use of social network sites. Thus, for future research, the sample should be expanded to other regions and ages.

This investigation, focused on the use of simultaneous accounts as a potential manifestation of different personas. In the qualitative phase, we were able to understand some of the behaviours in the use of the simultaneous accounts, however the quantitative phase was focused on which factors could explain having these accounts and their intensity in terms of the different social network sites. For future research, it would be interesting to further study the use of the simultaneous accounts created by adolescents and in how they present themselves in each one of them.

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## **Appendixes**

**Appendix 1 – Parents Informed Consent**

Exmo Encarregado de Educação,

O meu nome é Cristina Freitas e estou neste momento a realizar a minha tese de Mestrado sobre o comportamento dos jovens da Madeira nas redes sociais. O trabalho consiste no estudo da vida “digital” e das redes sociais dos adolescentes, mas na perspetiva do seu contributo para o bem-estar do utilizador. Em particular como eles fazem a gestão das várias contas/plataformas.

A confidencialidade e o anonimato serão desde logo garantidos. Nenhum dos casos será analisado em separado e os resultados serão sempre apresentados de forma agregada. A Universidade do Porto está sujeita a um estrito código de ética na condução das suas pesquisas científicas.

Venho assim, por este meio, pedir autorização para que o seu educando colabore com a minha investigação para a tese de Mestrado através do preenchimento de um questionário. Caso autorize, devolva por favor esta carta assinada ao Diretor de Turma.

A participação neste estudo é voluntária e se por qualquer razão não quiser participar, tem todo o direito de o fazer sem que tal facto tenha quaisquer consequências para si ou para o seu educando.

Estarei disponível para quaisquer esclarecimentos.

Agradeço desde já a vossa colaboração.

Com os melhores cumprimentos,

Cristina Freitas.

(E-mail: cristinaimfreitas@gmail.com; Telmv: 926509845)

Autorizo que o meu educando \_\_\_\_\_ colabore.

Data: \_\_\_/\_\_\_/\_\_\_

Assinatura do Investigador

Assinatura do Encarregado de Educação

\_\_\_\_\_

\_\_\_\_\_

## **Appendix 2 – Subject's Information Document**

O meu nome é Cristina Freitas e estou neste momento a realizar a minha tese de Mestrado sobre o comportamento dos jovens da Madeira nas redes sociais.

As redes sociais revolucionaram a forma como as pessoas se comunicam e interagem umas com as outras e na atualidade estas ferramentas estão altamente incorporadas na vida diária dos adolescentes. É importante estudar e compreender melhor estes novos comportamentos online e suas implicações para os seus utilizadores, neste caso os adolescentes.

Desta forma, esta investigação tem como objetivo o estudo da vida “digital” e das redes sociais dos adolescentes, mas na perspetiva do seu contributo para o bem-estar do utilizador. Em particular como eles fazem a gestão das várias contas/plataformas.

A recolha de dados será feita através de um questionário a ser preenchido por alunos do 10º ano de escolaridade. O preenchimento do questionário é fácil e ao longo do mesmo encontrará indicações específicas ao seu preenchimento. A confidencialidade e o anonimato serão desde logo garantidos. A Universidade do Porto está sujeita a um estrito código de ética na condução das suas pesquisas científicas. Nenhum dos casos será analisado em separado e os resultados serão sempre apresentados de forma agregada.

A participação neste estudo é voluntária e se por qualquer razão não quiser participar, tem todo o direito de o fazer sem que tal facto tenha quaisquer consequências para si

Posteriormente teremos muito gosto em partilhar os resultados com a instituição de ensino.

Agradeço desde já a vossa colaboração.

Com os melhores cumprimentos,

Cristina Freitas.

(E-mail: cristinaimfreitas@gmail.com

Telmv: 926509845)

**Appendix 3 – Subject's Informed Consent**

Eu \_\_\_\_\_ li a explicação dada sobre a pesquisa, e fui esclarecido(a) sobre todos os aspetos que considero importantes e as perguntas que coloquei foram respondidas satisfatoriamente. Desta forma, autorizo o processamento anónimo dos dados a ser recolhidos e foi informado acerca do meu direito de desistir em qualquer momento sem qualquer prejuízo.

Data: \_\_\_/\_\_\_/\_\_\_

Assinatura do Investigador

Assinatura do Participante

\_\_\_\_\_

\_\_\_\_\_

**Appendix 4 – Focus Group script**

**Questão 1.** O que é para ti uma rede social?

**Questão 2.** Em quantas redes sociais estás presente? Quais?

**Questão 3.** Tens mais que uma conta na mesma rede social?

Quem tem mais que uma, porquê?

Quem só tem uma pensa em fazer mais?

**Questão 4.** Quando estás a navegar na rede o que é que normalmente fazes (ver o feed, conversar no chat, seguir páginas, ver fotos, etc).

**Questão 5.** Que tipo de informação costumavas divulgar nas redes sociais? O tipo de informação difere de rede para rede?

Costumas fazer alterações ou publicações frequentemente nos teus perfis?

**Questão 6.** Quando publicas algo, antes de o fazeres, reletes sobre quem o irá ver?

**Questão 7.** O teu/teus perfis são públicos ou privados?

Tens algum tipo de restrições de privacidade no teu perfil ou perfis? Se sim, quais e em que redes sociais? Porquê?

**Questão 8.** Os teus amigos nas redes sociais são quem? Colegas de escola, amigos, familiares, professores, amigos de amigos, desconhecidos?

Tens os teus pais nas redes sociais?

**Questão 9.** Nas redes sociais usas algum nickname?

**Questão 10.** Achas que os teus perfis nas redes sociais são representativos da tua pessoa? Mostram quem tu és?

**Questão 11.** O que é que mais gostas e menos gostas nas redes sociais? Se pudesses mudar alguma coisa que seria?

**Appendix 5 – Questionnaire****Questionário – Utilização das Redes Sociais**

Este questionário faz parte de uma investigação universitária que tem como objetivo analisar a relação dos adolescentes com as redes sociais.

1. Sexo Feminino   
Masculino

2. Idade \_\_\_\_\_

3. Ano de escolaridade \_\_\_\_\_ ° ano

4. Em tua casa quem está presente nas redes sociais?

	Facebook	Instagram	Twitter	Snapchat	WhatsApp	Outra/s
1. Eu	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Mãe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Pai	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Irmão/ã mais velho	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Irmão/ã mais novo que tu	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. És amigo/a dos teus pais nas redes sociais? Sim \_\_\_\_\_ Não \_\_\_\_\_. Se sim, em quais?

Facebook	Instagram	Twitter	Snapchat	WhatsApp	Outra/s
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Em média, quanto tempo passas por dia nas redes sociais?

Menos de 1h       1h- 2h       2h-3h       3h-4h

4h-5h       5h-6h       Mais de 6h

7. Coloca em média (de 0 a 7) com que regularidade fazes as seguintes atividades, sendo:

**7-** todos os dias da semana;      **6-** todos dias menos um;

**5-** 5 vezes por semana;      **4-** 4 vezes por semana;

**3-** 3 vezes por semana;      **2-** 2 vezes por semana;

**1-** 1 ou menos vezes por semana;      **0-** nunca;

	Facebook	Instagram	Twitter	Snapchat	WhatsApp	Outra/s
Ver o feed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conversar no chat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Publicar fotos e vídeos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fazer posts/publicações	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fazer comentários em fotos e publicações	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fazer "likes" em fotos e publicações	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fazer diretos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Indica (de 1 a 7) o teu grau de concordância com as seguintes afirmações:

	Discordo Completamente		Nem concordo nem discordo			Concordo Completamente	
	1	2	3	4	5	6	7
1. Se tiver poucos <i>likes</i> numa foto apago-a	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Um dos meus objetivos é conseguir ter mais <i>likes</i> que os outros	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Para mim é importante ter mais seguidores que os meus amigos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Tenho em atenção o horário em que coloco novas fotos para poder obter mais <i>likes</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Tenho que colocar fotos com uma certa frequência para manter os meus níveis de popularidade	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Indica se tens ou já tiveste mais que uma conta (verdadeira/s ou falsa/s) em simultâneo em cada rede social.

Coloca **1**-se tens / sempre tiveste apenas uma conta; **2**- se tens / já tiveste mais que uma conta (2,3,4,...contas)

	Facebook	Instagram	Twitter	Snapchat	WhatsApp	Outra/s
Número de contas						

10. Indica até que ponto as seguintes situações se aplicam à tua vida digital relativamente aos teus **Pais**, sendo 1 (não se aplica) e 5 (aplica).

	Não Aplica				Aplica
	1	2	3	4	5
1. Já bloqueei os meus pais na conta do Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Já bloqueei os meus pais na conta do Instagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Já bloqueei os meus pais na conta do Snapchat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Já bloqueei os meus pais na conta do Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Já bloqueei os meus pais na conta do WhatsApp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Os meus pais desconhecem que tenho conta no Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Os meus pais desconhecem que tenho conta no Instagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Os meus pais desconhecem que tenho conta no Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Os meus pais desconhecem que tenho conta no Snapchat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Os meus pais desconhecem que tenho conta no WhatsApp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Quando alguém bloqueia os pais ou não diz aos pais que tem outra conta quais podem ser as possíveis razões? Refere até que ponto achas que estas razões se aplicam, sendo 1 (não se aplica) e 5 (aplica).

	Não Aplica				Aplica
	1	2	3	4	5
1. Por não querer que os pais vejam a sua atividade online	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Por vergonha	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Por receio que não compreendam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Por acharem ridículo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Por receio que sejam castigados	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



12. Usando a escala de 1 a 7. Em que 1 significa “discordo completamente” e no outro extremo 7 significa “concordo completamente” Indica o teu grau de concordância com as seguintes frases:

	Discordo Completamente		Nem concordo nem discordo			Concordo Completamente	
	1	2	3	4	5	6	7
1. Diverte-me fazer de conta que sou uma personagem diferente	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Às vezes na minha imaginação assumo um ator/atriz/estrela pop...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Gosto de fazer de conta que sou uma pessoa diferente só para agradar certas pessoas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Quando é preciso só ganho em fingir que sou outra personagem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Não há nada de mal em ter estilos diferentes na minha forma de interagir para ser aceite nos grupos de colegas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Nas contas das redes sociais em que os adultos veêm o que faço, partilho coisas diferentes daquelas que partilho com os amigos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Por vezes para agradar aos adultos tenho que parecer próximo daquilo que eles esperam e gostam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Se for necessário conseguimos mudar substancialmente o tipo de pessoa que somos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Eu sonho acordado/a com coisas que gostariam que me acontecessem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Eu imagino como seria se eu usasse as marcas que aparecem num anúncio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Num filme ou num anúncio imagino-me como se eu sentisse aquela realidade	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Usando a escala de 1 a 5. Em que 1 significa “discordo completamente” e no outro extremo 5 significa “concordo completamente” indica a tua opinião sobre os aspetos referidos em baixo:

	Discordo completamente	Discordo	Nem concordo nem discordo	Concordo	Concordo completamente
	1	2	3	4	5
1. É-me permitido discordar abertamente com os meus pais quando eles entendem que as minhas ideias são melhores	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Os meus pais encorajam-me a dizer-lhes sempre que eles sentem que as regras não são muito razoáveis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Os filhos têm o direito de ter o seu próprio ponto de vista e poder expressá-lo abertamente	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. As ideias dos filhos devem ser seriamente tidas em consideração nas decisões da família	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Indica a probabilidade das situações seguintes acontecerem contigo no teu dia-a-dia.

	Nada provável			Mais ou menos provável	Muito provável		
	1	2	3	4	5	6	7
1. Distorcer a verdade	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Enganar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Induzir em erro	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Esconder a verdade	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Appendix 6 – Normal Distribution testing**

Figure 7 – Normal Q-Q Plot of adolescents' blocking of parents on SNSs

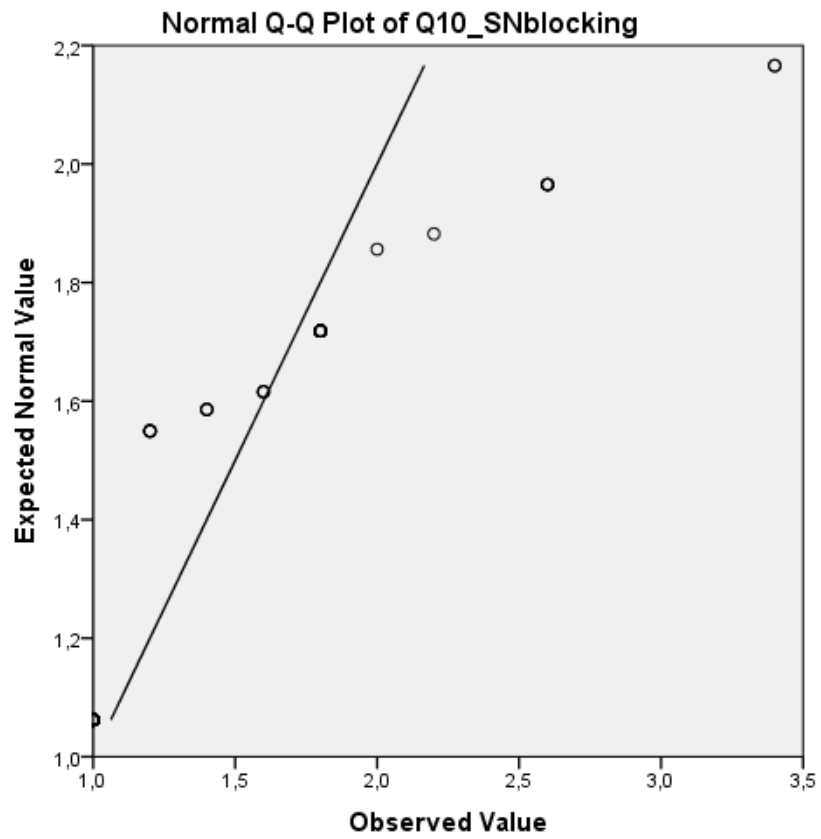


Figure 8 – Normal Q-Q Plot of parents' total online presence

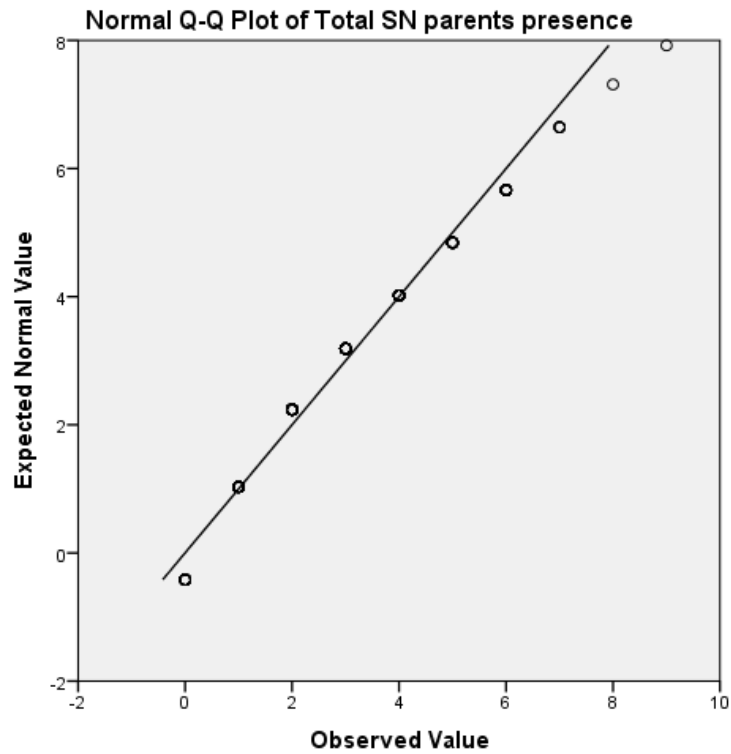
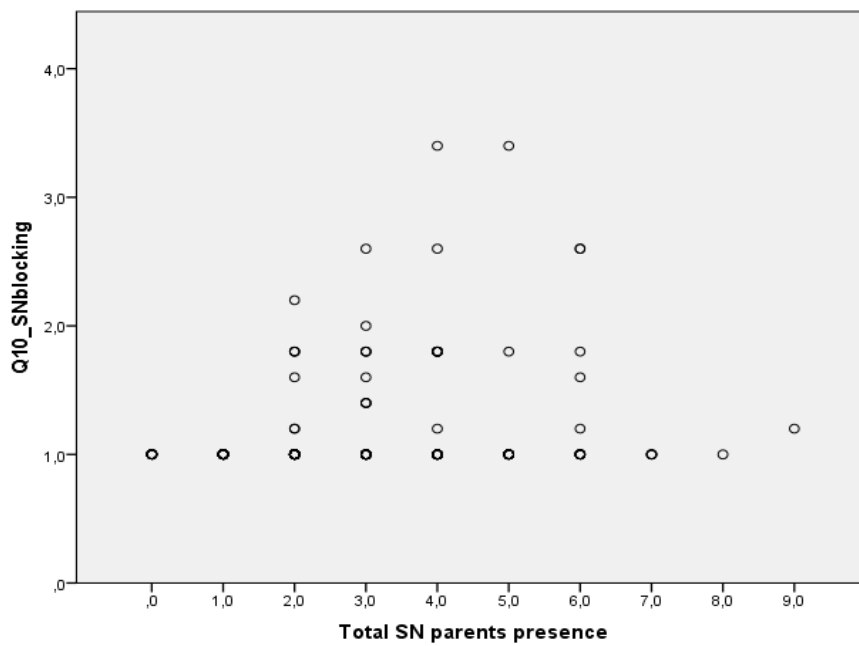


Figure 9 – Scatterplot of the adolescents' blocking of parents and parents' total online presence



**Appendix 7 – Regression Analysis**

**Table 32: Logistic Regression Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	215,502 <sup>a</sup>	0,218	0,291

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

**Table 33: Linear Regression Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,487 <sup>a</sup>	0,237	0,199	0,867

**Table 34: ANOVA Linear Regression**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41,809	9	4,645	6,180	,000b
	Residual	134,551	179	0,752		
	Total	176,360	188			