

Internet use, feeling of unacceptance and Loneliness: immigrants of first and second generation in Italy

Giovanni Busetta, Maria Gabriella Campolo, Antonia Cava

1. Introduction

Controversial interpretations have usually attributed by the main literature on the topic to the relationship between Internet use and loneliness. On the one side, Internet-use disorders are generally caused by depression, anxiety, and loneliness (Longstreet et al., 2019). Indeed, this is most often because Internet addiction is used as a dysfunctional strategy to face everyday life's stressful events (Brand et al., 2019; Servidio et al., 2021). On the other side, gambling, online gaming, and social media use may produce states of anxiety and depression, and loneliness (Brand et al., 2019). This second strand of literature is based on the idea that excessive specific online behaviors could be approached by people to regulate their mood, translating into Internet addiction (Blasi et al., 2019; Islam et al., 2020; King et al., 2020).

This relationship is particularly relevant for children, adolescents, and young adults because Internet represents a particularly accessible way of entertaining to escape from reality (Kwon, 2011). Conversely, high levels of Internet use are usually associated with negative psychological health conditions, including loneliness (Dong et al., 2020; Li et al., 2019; Ismail et al., 2020; Seki et al., 2019). This relationship is even more pronounced among female adolescents (Liang et al., 2016).

Following King and Delfabbro (2020), on the one hand, Internet use, and especially gaming, produces a sense of energy and an increase in self-confidence. Through these channels the use of Internet induce a reduction in levels of loneliness, feeling of acceptance and happiness. Literature have devoted increasing attention to analysing interactivity or synergy between factors contributing to increasing or reducing such emotions (Tofallis, 2020).

Indeed, gaming (Király et al., 2020) is not necessarily problematic: it appears as an adaptive behavior (Billieux et al., 2019) which could enhance people's lives (Granic et al., 2014) and reduce loneliness (Carras et al., 2017).

The Italian research concerned lifestyle and consumption of immigrants (Al-Kandari et al. 2020; Bauer et al., 2020; Biolcati et al., 2017; Gao et al., 2020; Masaeli et al., 2021; Mattioli et al., 2020), shows a significant trend. The standardisation of media fruition, especially regarding digital technologies, and between new technologies and the use of the Internet has had a remarkable development in the last years.

Considering the different aspects that the massive use of the Internet could have in the life of people, several studies focus on the relationship between the Internet and loneliness. If on the one hand, some studies have found that Internet' use has a negative impact on social relationships and for this reason is associated with increased loneliness (Kraut et al., 1998; Lavin et al., 1999)

On the other side, other studies found that the Internet uses can impact on society and on the life of persons positively, for example, removing the geographical barriers between people, or providing an ideal social environment for lonely people to interact with other persons. For this reason, lonely individuals are more likely to use the Internet excessively (Morahan-Martin and Schumacher, 2003).

Using the Survey on Social Condition and Integration of Foreign Citizens conducted by Istat

Giovanni Busetta, University of Messina, Italy, gbusetta@unime.it, 0000-0001-5843-3851
Maria Gabriella Campolo, University of Messina, Italy, mgcampolo@unime.it, 0000-0002-1075-4573
Antonia Cava, University of Messina, Italy, acava@unime.it

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in 2011-2012, we investigate the difference in using Internet between first- and second-generation immigrants in Italy. Our study wants to verify the socio-economic determinants (such as, age, gender, education level) that can affect the use of Internet. Among the explanatory variables, we included the perception of the subjects about their integration in the social framework and their feeling, such as loneliness, or the perception of unacceptance.

The rest of the paper is organized as follows. The data are presented in Section 2. In Section 3 we provide a presentation of methods and descriptive results. Section 4 contains the empirical results, and Section 5 concludes.

2. Data

The sample is drawn from the "Condition and Social Integration of Foreign Citizens, SCIF 2011-2012" survey provided by the Italian National Institute of Statistics (ISTAT). It represents the first national survey on immigrants. Its aims to provide information on money features of socio-economic integration of immigrants in Italy for a better understanding of the resident foreign population. It was carried out on a sample of 9,553 households residing in Italy, with at least one foreign citizen living with. In total 25,326 individuals have been surveyed: 20,379 are foreign citizens, 4,251 are native born and 696 Italian citizens for acquisition.

Behaviors, attitudes, and opinions of foreign citizens in Italy were investigated, as well as the family composition, education, migratory path, employment status, discrimination, health conditions and accessibility of health services, immigrant integration, citizen's security and victimization. Foreign citizens are identified using the principle of citizenship, instead of the place of birth. People with Italian citizenship achieved by acquisition (foreign at birth), hereafter referred to as naturalized people are also subject to the survey, as long as they cohabit in the family with a foreign person at least. Italians natives are included as part of the sampled families, but they are interviewed only with regard to their socio- demographic characteristics (gender, age, citizenship, state of birth, educational qualifications, etc).

Rumbaut (2004), distinguishes immigrants depending on the age of migration and the concerning level of socialization characterizing those ages:

- Generation 1: a person who has immigrated in a new country;
- Generation 1.25: a person who comes after age 12 but before age 18;
- Generation 1.50: a person who comes between 6 and 12;
- Generation 1.75: a person who comes before formal schooling at age 6;
- Generation 2: children of an immigrant.

In our analysis we restricted the sample to 11934 observations, mainly first- and second-generation immigrant living in Italy, without considering Italians. Following the categorization shown above (Rumbaut, 2004), we consider as First generation only persons identified as Generation 1 (78% of the sample), and as Second generation, the subjects included in the other four categories (Generation 1.25 to Generation 2). Regarding second generation (the remaining 22% of the sample), 2609 are the persons included: 10% is Generation 1.25, 7% is Generation 1.50, Generation is 1.50, 3% is Generation 1.75 and 2% is Generation 2. In general, 54% of the sample are women, and 45% live in the South or Islands. The 68% of the sample uses Internet every day. The percentage increase to 86% for second generation immigrants. In the next Section we report all sample characteristics.

3. Methods and descriptive results

The aim of our analysis is to investigate the difference in the use of the Internet between immigrants of first- and second-generation in Italy. In particular, through a Probit estimation model, we want to estimate the impact of socio-economic characteristics on the regularity of using

the Internet. The dependent variable “Internauta” is a dummy variable that assumes value 1, if subject use Internet every day and 0 otherwise. The independent variables include a dummy variable concerning the gender of the individuals (*Woman*: 1=yes; 0=no), the number of the household components, the level of education expressed in years of school (*Edu*), whether the subject has achieved the highest level of education in Italy (*Study_Italy*:1=yes, 0=no), the geographical area (*South*=1 south and islands, 0=north-center), a dummy that identify the subjects as either worker or unemployed (*Work*:1=yes, 0=no), a variable that identifies whether the subject is a first- or second-generation one (*Generation2*:1=yes, 0=no), and the age of the subjects (*Age*: 1=15-19; 2=20-29, 3=30-39, 4=40-44). Furthermore, we include two variables: *Loneliness*, which assumes value 1 if the subject feels alone, either “much” or “enough”, in Italy, 0 otherwise; and a dummy variable concerning how much the subject feels accepted in the city, in which she/he lives (*Unaccepted*: 0=Much or enough, 1=otherwise). To focus on the impact of the potential loneliness among different generations, we also include in our model interaction effects between these two last covariates and the generation of the immigrant.

In the following Table (Tab. 1) we report descriptive statistics of the variables used in our analysis.

Table 1: Descriptive statistics by generation

Variable	Second-generation		First-generation		Min	Max
	Mean	Std. Dev.	Mean	Std. Dev.		
Internauta	0.86	0.35	0.64	0.48	0	1
South and islands	0.41	0.49	0.46	0.50	0	1
Number of household components	4.08	1.55	3.14	1.54	1	12
Women	0.46	0.50	0.57	0.49	0	1
Study in Italy	0.69	0.46	0.10	0.30	0	1
Worker	0.37	0.48	0.69	0.46	0	1
Education (years of school)	8.98	3.35	10.69	4.36	0	17
Loneliness	0.07	0.25	0.16	0.37	0	1
Unaccepted	0.04	0.20	0.08	0.26	0	1
Age	1.70	0.68	3.01	0.69	1	4

From the descriptive statistics shown in Table 1, it emerges that, on average, 86% of Second-generation immigrants are “Internauta”, while this percentage is 64% for First-generation ones. Moreover, second-generation immigrants are characterized by a lower proportion of individuals living in south or islands and being women, employed, and a higher proportion of individuals, being older, studying in Italy, studying for more years and living in households made by a higher number of components. Finally, first-generation immigrants feel more unaccepted and lonelier compared to second-generation ones.

4. Empirical Results

The results of our Probit estimation model are reported in Table 2.

We can observe that the probability to use every day Internet decreases for women, for individuals living in the south of Italy and in islands, and for the first-generation immigrants. All the coefficients related to these variables are statistically significant. Moreover, the probability decreases with the ages of the individuals. An education title in Italy and the achieved education level both play an important rule. In both cases the coefficients are positive and significant.

To better understand the estimation results we have calculated also the average marginal effects, reported in Figure 1, and the predictive probabilities (Table 3). For example, as shown in Tab. 3, we can observe that the probability of being “Internauta” decreases by 10 percentage points, for subjects living in the north-center (0.73), compared to subjects living in the south or in

Table 2: Results of the probit model

Dep. Variable: using internet everyday	Coef.	Std. Err.	P. value
South and islands	-0.32	0.03	***
Number of household components	-0.04	0.01	***
Woman	-0.12	0.03	***
Study_Italy	0.22	0.04	***
Worker	0.05	0.03	
Education	0.08	0.00	***
Age ref. 15-19			
20-29	-0.44	0.07	***
30-39	-0.69	0.07	***
40-44	-0.99	0.08	***
Second Generation	0.42	0.05	***
Loneliness	-0.13	0.04	**
Unaccepted	-0.19	0.05	***
Second generation#Loneliness	-0.14	0.12	
Second generation #Unaccepted	-0.44	0.14	**
Constant	0.54	0.09	***

Note: p. value: *** <0.001; ** < 0.01; * < 0.05

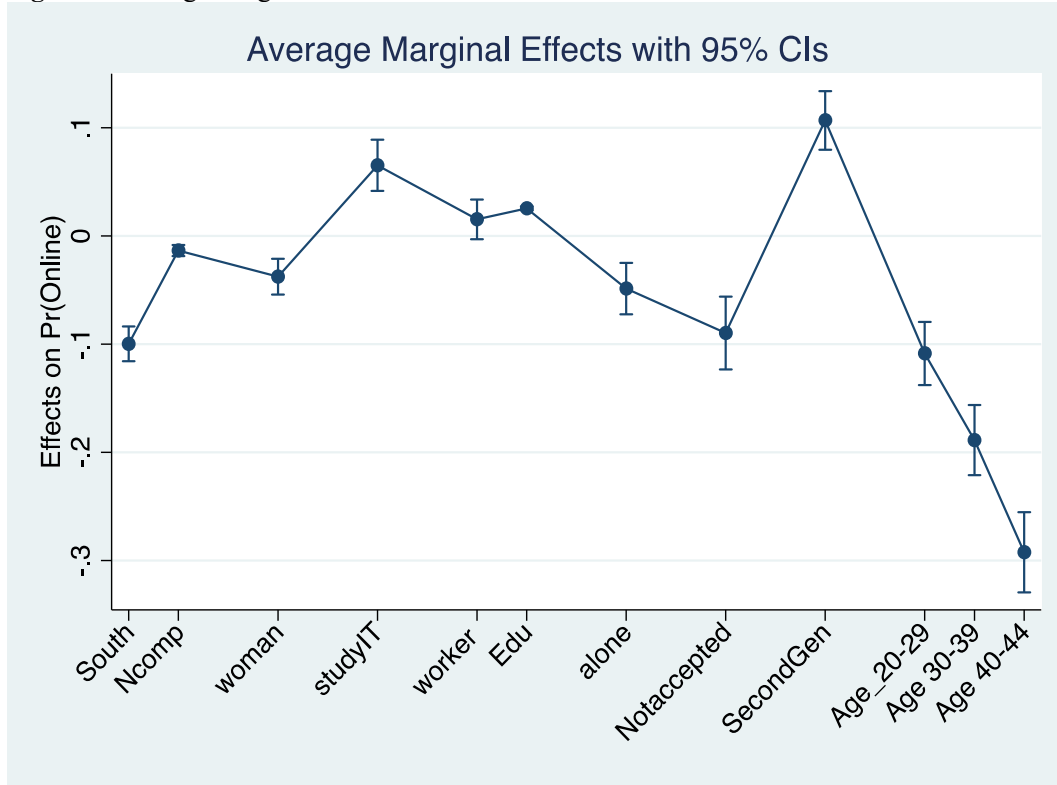
Table 3: Estimation results of Probit model

		Delta-method		
		Pred. Prob.	Std. Err.	P.value
South	North - center	0.73	0.01	***
	South and islands	0.63	0.01	***
Woman	Man	0.71	0.01	***
	Woman	0.67	0.01	***
study_Italy	Study abroad	0.67	0.00	***
	Study in Italy	0.74	0.01	***
Worker	Unemployed	0.68	0.01	***
	Worker	0.69	0.01	***
Age	Age 15-19	0.86	0.01	***
	Age 20-29	0.75	0.01	***
	Age 30-39	0.67	0.01	***
	Age 40-44	0.57	0.01	***
Generation	First generation	0.66	0.01	***
	Second generation	0.77	0.01	***
Alone	Feeling not alone	0.69	0.00	***
	Feeling alone	0.64	0.01	***
Unaccepted	Feeling accepted	0.69	0.00	***
	Feeling unaccepted	0.60	0.02	***
Generation#Alone	First Generation and not alone	0.67	0.01	***
	First Generation and Alone	0.63	0.01	***
	Second Generation and not alone	0.78	0.01	***
	Second Generation and Alone	0.71	0.03	***
Generation#Unaccepted	First Generation and Accepted	0.67	0.01	***
	First Generation and Unaccepted	0.60	0.02	***
	Second Generation and Accepted	0.79	0.01	***
	Second Generation and Unaccepted	0.59	0.05	***

Note: p. value: *** <0.001; ** < 0.01; * < 0.05

the islands (0.63). This probability decreases also by 4 percentage points for women, moving from 0.71 (man) to 0.67 (woman). Having achieved education in Italy increases the probability of being an “Internauta” by 7 percentage points (from 0.67 to 0.74). This probability increases by 11% points (from 0.66 to 0.77) when the individual is a second-generation immigrant. The feelings of

Figure 1: Average marginal effects of the estimated Probit Model



loneliness or not acceptance of the subject negatively affect the probability of being an Internet user by 5 and by 9 percentage points, respectively.

Through the two-fold interaction effects, we can also calculate the different impact of loneliness and the feeling of not acceptance between and within generations. Within first-generation immigrants, the difference in probability of being an Internauta conditioned on the loneliness of the individuals is equal to 4% (0.67 for first-generation that does not feel alone and 0.63 for first-generation that feels alone). Within second-generation, the related probability is equal to 7% (0.78 for second generation not feeling loneliness 0.71 for second generation feeling it). Moreover, while between first- and second-generations the subgroup of “not alone” shows a difference of 12% (0.78-0.67) in predictive probability, this gap in the “alone” subgroup is equal to 8% (0.71-0.63).

Finally, we consider the interaction effect of feeling accepted between generation. Within first-generation, the difference due to the feeling of acceptance or unacceptance is equal to 7% (0.67 for first generation immigrants feeling accepted and 0.60 for the same generation immigrants feeling unaccepted), while the difference for second-generation is equal to 20% (from 0.79 to 0.59). Moreover, in the subgroup of the immigrants feeling “accepted”, the difference imputed to being first- or second-generation is equal to 13% (0.79-0.67), while this difference in the “unaccepted” subgroup almost collapse (0.59-0.60).

5. Conclusions

In this study we analyse the different behaviour in terms of frequency in the use of the Internet between immigrants of first- and second-generation. In our analysis, we controlled for socio-economic characteristics, taking into account the feeling of loneliness and of unacceptance of the

subject. Our results show that the probability of using Internet everyday increases being male and living in the north or centre of Italy. Moreover, our results show that both the feeling of loneliness and unacceptance are negatively correlated with the probability of using Internet everyday both for First- and Second-Generation immigrants. In particular, Second-generation immigrants are more likely to use the Internet everyday than the First-generation ones. The difference in predicted probability of being an Internauta is equal to 11% (0.77 and 0.66, respectively). Nevertheless, while this probability decreases to 0.59, if the second-generation immigrant feels unaccepted in the city where he/she lives, and to 0.71 if he/she feels alone.

We can conclude that new possibilities offered by “web sociability” or, in general, by the use of the Internet, is negatively correlated to the immigrants’ dissatisfaction that we identify with the perception of integration and sociability in the offline life (Loneliness and Unacceptance).

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