



## Relation between social skills and life satisfaction by adolescents and use of applications for communication

*Relación entre habilidades sociales y satisfacción personal en adolescentes y uso de aplicaciones para comunicación*

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### Abstract

Numerous factors have been studied to identify the consequences of the use of Information and Communication Technologies (ICTs), among them social skills (SS) and life satisfaction (LS). This study aimed to evaluate the associations between SS and LS in adolescents that use ICTs. The sample consisted of 228 adolescents (age:14-17;  $M=16.07$ ;  $DP=.74$ ), students from two private high schools from south of Brazil. The participants answered a Sociodemographic Questionnaire and ICTs' use, Social Skills Inventory for Adolescents (IHSA-Del-Prette) and the Multidimensional Life Satisfaction Scale for Adolescents (MLSSA). The results indicated that smartphone (71.5 %,  $n=163$ ) is the most used gadget by adolescents, and the most common apps are the WhatsApp (96.9 %,  $n=221$ ) and Facebook (83.3 %,  $n=190$ ). Good levels of LS and SS were founded, as well as various associations between them (Friendship/Empathy  $p=.365$ ; Non-Violence/Self-Control  $p=.392$ ; Total\_Scale-MLSSA/Empathy  $p=.412$ ), inferred that the bigger the repertoire of adolescents' SS are, the bigger their LS is.

**Keywords:** Adolescents; Social Skills; Personal Satisfaction; Social Media

### Resumen

Hay numerosos factores para identificar las consecuencias del uso de las Tecnologías de la Información y la Comunicación (TIC), entre ellas las habilidades sociales (HS) y la satisfacción con la vida (SV). El objetivo fue evaluar las asociaciones entre HS y SV en adolescentes que utilizan las TICs. La muestra estuvo formada por 228 estudiantes (edad: 14-17;  $M=16.07$ ;  $DP=.74$ ), de dos escuelas secundarias privadas del sur de Brasil. Los participantes respondieron un cuestionario sociodemográfico y uso de las TIC, el IHSA-Del-Prette y la EMSVA. Los resultados indicaron que el móvil (71.5%,  $n=163$ ) es el dispositivo más utilizado, y las aplicaciones más comunes son WhatsApp (96.9%,  $n=221$ ) y Facebook (83.3%,  $n=190$ ). Se fundaron buenos niveles de HS y SV, así como varias asociaciones entre ellos (Amistad/Empatía  $p=.365$ ; No Violencia/Autocontrol  $p=.392$ ; Escala\_Total-EMSVA/Empatía  $p=.412$ ), se deduce que cuanto mayor es el repertorio de las HS de los adolescentes, más grande es su SV.

**Palabras clave:** Adolescentes; Habilidades Sociales; Satisfacción Personal; Medios de Comunicación Sociales

## Introduction

The use of different technologies – internet, applications, smartphones, online games, etc. – has a relevant role in the life of young people in their way of learning and behaving (Guan & Subrahmanyam, 2009; Pagani, Argentin, Gui, & Stanca, 2016). The means can be designated as Information and Communication Technologies (ICTs) and their use have demonstrated to be an irreversible process, emerging as a possibility of insertion in environments that are part of everyday life, so that mastering them becomes a way of existing in the current world (Verzoni & Lisboa, 2017). The ICTs are composed by means that assist information and communication, whether hardware or software, such as smartphones, computers, radio, TV and the most different applications, such as games, social networks, instant messaging and text messaging (Cotten, 2008; Judi, Ashaari, Zin, & Yusof, 2013).

In this context, compared to other age groups, adolescents are the largest consumers of ICTs and spend more time online than adults, surpassing all other age groups in the use of chat, instant messaging and other new forms of electronic communication (Montgomery, 2000). According to the International Telecommunication Union (ITU, 2017), the proportion of young people between the ages of 15 and 24 using the internet (71 %) is significantly higher than the total proportion of internet users (48 %). Current data from the Internet World Stats (IWS, 2017) reports that out of the 211 million of Brazilians, 65.9 % of the population has access to the internet. A nationwide survey conducted with 6.100 children and adolescents between nine and 17 years old, indicated that 83 % of the population with that age uses the smartphone as the main means to access the internet (Cetic.Br, 2016).

For this reason, it is noticed that several technological means are present in the life of adolescents, as a process of gradual construction in the interaction with the environment, demonstrating satisfaction in different social contexts. In this way, the ICTs are characterized by the wide possibilities of communication and expression they offer, attracting more interactive and immersive than traditional media. In adolescence, communication has been characterized as instantaneous and

easy, having as a facilitator of the interaction in the online context, the emojis. These come in order to symbolize feelings and complement writing, illustrating words and emotions sent to people through online conversations, having specific characterizations that are standardized (Sternbergh, 2014; Unicode, 2017).

The emoji's use has a mediating role in a message, breaking linguistic barriers, bringing different cultures together and creating new ways of communication (Moro, 2016). The appropriation of those technologies is emphasized by their global reach and the facility integration of all means of communication since it is the interactivity with the ICTs that provides the contact between different contexts through an exchange of information at an increasing speed (Arnett, 2010; Castells, 2003).

It is through digital social networks and communication applications, such as Facebook and WhatsApp, that adolescents face emotional and behavioral difficulties by showing complex patterns of self-image modification and dynamic involvement with peers, making it extremely important for some issues, such as school adaptation, interaction, life satisfaction, socialization, and peer relationship management (Assunção & Matos, 2014; Gilman & Huebner, 2006; Tomé, Camacho, Matos, & Diniz, 2011; Tomé, Camacho, Matos, & Simões, 2015). By being faced with this interaction and social learning, the adolescents acquire new behaviors and shape their beliefs based on the results of experiences (Andretta & Oliveira, 2005; Desousa, Rodríguez, & Antoni, 2014).

In this context, the social skills become essential for individuals to establish a range of well elaborated interactions with peers. According to Zilda Del Prette and Almir Del Prette (2009b), the social skills are indispensable behaviors for a competent social performance. Besides that, adolescents have not fully developed some important interpersonal skills yet, making this stage a propitious time to build a repertoire of highly elaborated social skills, contributing to well-being, healthy and satisfying interpersonal relationships (Del Prette & Del Prette, 2009a; 2010; Coronel, Levin, & Mejail, 2011).

The social skills' repertoire consists of efficient ways that the adolescent interacts in

the most varied social groups that it is inserted, aiming at avoiding and solving problems and can be measured through the empathy, self-control, civility, assertiveness, affective approach and social adroitness (Del Prette, Del Prette, & Mendes Barreto, 2012; Del Prette & Del Prette, 2009b). It is through interactions with peers that adolescents put into practice the interaction skills, cooperation, assertiveness, empathy and self-control (Del Prette & Del Prette, 2009b; Motoca, Williams, & Silverman, 2012).

Studies show that adolescents who have a larger social skills' repertoire tend to have higher self-esteem, less negative feelings, better school performance and less behavior problems (Coronel et al., 2011; Durlak, Weissberg, & Pachan, 2010). Hence, the social skills are considered protective factors, since they predict psychological well-being in this age group, mainly because they promote more gratifying interpersonal relationships and allow the subject a greater aptitude to deal with problems, regardless of the family configuration they are inserted into (Silva & Murta, 2009; Leme, Del Prette, & Coimbra, 2015).

The social interaction establishes a fundamental basis for life in society, and together with the subjective well-being, it influences the levels of life satisfaction of adolescents (Leme et al., 2015). In this way, for adolescents to become a healthy adult, it is important to measure positive practices and levels of subjective well-being in order to identify subsidies that make up the facets of life satisfaction in this development period (Hutz, 2014; Segabinazi, Zorteza, & Giacomoni, 2014; Steinberg, 2014). The subjective well-being is defined as a person's cognitive and emotional assessment of one's own life (Diener, 2009). The cognitive component is related to life satisfaction, and can be evaluated globally or over several domains (family, work, school, and others), and the affective is related to positive and negative affections (Diener, 2009).

In this perspective, the social skills and life satisfaction are presented in several materials in the literature, evidencing the significant of future studies to investigate in a more detailed way the social skills' repertoire of adolescents in other contexts, mainly on the internet. The Internet "is a window into an infi-

nite world of possibilities" and can be both a rewarding and enriching bias in order to promote learning as well as dangerous, by exposing adolescents to various threatening virtual situations (Spizzirri, Wagner, Mosmann, & Armani, 2012, p. 334).

Therefore, both the positive and negative use of ICTs should be considered. Different national and international studies have sought to identify the positive and negative impact of the ICTs' use by adolescents. The negative bias detected by the interaction of adolescents with different ICTs is pointed out by internet abuse and dependence, few physical activities, reduced concentration and memory skills, contact with pornography, violent content and the possibility of finding inconvenient people (Issa & Isaias, 2016; Terroso & Argimon, 2016). On the other hand, the positive bias is addressed by a study in Australia and Portugal with 265 adolescents, which identified new factors that favor the use of the Internet, such as problem solving skills, proactive study, improved communication and collaboration with peers and family, as well as the incentive to play virtual and physical games (i.e., Wii® and Kinect for Xbox®) (Issa & Isaias, 2016). Other benefits include increasing the number of information (both in the school environment and in peer group), direct contact with people of their interest and the increase of friends.

Therefore, the internet can be used to complement traditional methods of intervention in psychological treatments, promoting cognitive, social and physical development (Guan & Subrahmanyam, 2009). With this, the guiding question of this study is referred to how the adolescents use the ICTs and what social skills are linked to the well-being, more specifically to life satisfaction.

The general objective is to identify the association between the social skills' repertoire and the life satisfaction of adolescents and to describe the use of ICTs in communication with their peers, related to online context. The other objectives are to identify the profile of adolescents (hobbies, sleeping hours, sports practiced, etc.) and the ICTs types used by those population; analyze the frequency of emitted social skills and what difficulties are linked with them; to verify if there is an association between the levels of life satisfaction and the social skills' repertoire.

In this way, it was hypothesized that the larger the repertoire of social skills, the more satisfied adolescents are with their lives.

## Method

### Design

Cross-sectional study (Sampieri, Collado, & Lucio, 2013).

### Participants

The sample was composed by 228 adolescents with ages between 14 and 17 years old ( $M = 16.07$  years old,  $SD = .74$ ), enrolled in two private schools from two cities in the metropolitan region of Porto Alegre/RS, using some ICTs at least once a week, regardless the time they spend and the tool used.

Within the 228 adolescent participants, 61.8 % ( $n = 141$ ) were females, and 38.2 % ( $n = 68$ ) were males. Most students ( $n = 136$ , 59.6 %) were in the third grade of High School ( $n = 76$ , 33.3 % at first grade of High School;  $n = 16$ , 7 % in the second grade High School). They reported to live with their parents and siblings 46.9 % ( $n = 107$ ) while others lived only with their fathers, mothers, stepmothers or stepfathers ( $n = 70$ , 30.7 %). The parents' schooling was mostly referred as complete graduation (parents:  $n = 74$ , 32.5 %, mothers:  $n = 78$ , 32.4 %).

Most of the adolescents reported being single ( $n = 180$ , 78.9 %), however, 19.7 % ( $n = 45$ ) reported have been dating, from three months to three years. They mostly reported the demonstration of affection by hugging friends and family ( $n = 204$ , 89.5 %). In relation to some kind of job, 89 % ( $n = 203$ ) of the adolescents declared that they did not have any, but 9.2 % ( $n = 21$ ) had some work activity. Among the participants, 71.42 % ( $n = 15$ ) had a paid job or internship ( $n = 8$ , 3.5 %).

### Instruments

**Sociodemographic Questionnaire and ICTs' use.** Developed by the research group "Intervenções Cognitivo-Comportamentais: Estudo e Pesquisa (ICCeP)", aimed to evaluate socio-demographic data (age, gender, family constitution, parents' schooling, relationships, affect demonstration, job, sports, hobbies, and amount of sleep hours), and adolescents'

ICTs use (gadgets: smartphone, computer/notebook, tablet; frequency: during the week or weekend; and main apps: Facebook, Messenger, WhatsApp, Instagram, Snapchat, YouTube, Pinterest, Netflix, Twitter, Skype, Twitch, Games and other).

**Social Skills Inventory for Adolescents (IHSA-Del-Prette).** This is a self-report scale with 38 items for adolescents between 12 to 17 years old. It evaluates the adolescents' social skills repertoire using two indicators (the frequency "at each 10 situations like the options I react in 2, 3 to 4, 5 to 6, 7 to 8 or 9 to 10 times" and difficulty - none, little, medium, a lot and total - in which they react to social interactions). In this study, the IHSA-Del-Prette demonstrates Cronbach's alpha .91 to frequent and also difficult, and the answers are marked in a Likert scale. The results was evaluated by percentiles obtained through General Score and six subscales: F1 - Empathy (frequency  $\alpha = .78$ , difficulty  $\alpha = .84$ ); F2 - Self-Control (frequency  $\alpha = .75$ , difficulty  $\alpha = .78$ ); F3 - Civility (frequency  $\alpha = .79$ , difficulty  $\alpha = .90$ ); F4 - Assertiveness (frequency  $\alpha = .75$ , difficulty  $\alpha = .71$ ); F5 - Affective Approach (frequency  $\alpha = .75$ , difficulty  $\alpha = .72$ ), and F6 - Social Adroitness (frequency  $\alpha = .66$ , difficulty  $\alpha = .59$ ). The exact form of correction was found in the instrument's manual, which is marketed (Del Prette & Del Prette, 2009b).

**Multidimensional Life Satisfaction Scale for Adolescents (MLSSA).** It was developed by Joice Segabinazi, Claudia Giacomini, Ana Cristina Dias, Marco Teixeira, e Denis Moraes (2010), the MLSSA has 52 items, distributed in seven subscales: Family, Self, School, Compared Self, Non-Violence, Self-Efficacy, and Friendship. It is a five-point Likert scale and had satisfactory levels of reliability in this study ( $\alpha = .93$ ). Each subscale has a maximum and minimum score (see Segabinazi et al., 2010), and in each one the level of satisfaction is correlated to the number of scores obtained. Therefore, the increase of scores indicates greater satisfaction with life, while lower satisfaction is expressed by lower values of scores. Cronbach's alpha has exposed good internal consistency for all subscales: Family ( $\alpha = .91$ ), Self ( $\alpha = .88$ ), School ( $\alpha = .87$ ), Compared Self ( $\alpha = .77$ ), Non-Violence ( $\alpha = .70$ ), Self-efficacy ( $\alpha = .74$ ), Friendship ( $\alpha = .82$ ), and Total Scale ( $\alpha = .93$ ).

## Procedure

The University's Research Ethics Committee approved the project (CEP 2.024.822) in accordance with the required ethics in the Resolution 510/16 of the National Health Council (CNS, 2016) and 010/12 of the Federal Council of Psychology (CFP, 2012). Those in charge of participating schools signed Letters of Consent, accepting the conduction of the survey at their local.

The sample was defined by convenience, through a previous invitation to the students in the classrooms, which consisted of explaining the objectives of the study, verifying that they met the pre requirements, as well as the interest in participating. Since they were all students under 18 years old, those who accepted to participate in the study and who met the selection criteria gave to their responsible, two ways by the written informed consent form, and after signing, the adolescents received and signed the Assentment Term. The adolescents who had permission were participated in collectively collection of data, in the classroom, on days and times available by the school.

## Data Analysis

All analyses were performed using the Statistical Package for the Social Sciences (SPSS), version 22.0, and the statistical level of significance of 5 % was considered in all analyses ( $p \leq .05$ ). In order to carry out descriptive analyzes, we used frequencies, percentages, means and standard deviation's sample. In addition, a distribution of the data was verified by the Kolmogorov-Smirnov test with Lilliefors correction.

From this, it was defined the use of parametric and non-parametric tests. For the analysis of correlations between social skills (IHSA-Del-Prette) and life satisfaction (MLSSA), we used Pearson test and its corresponding non-parametric version, Spearman test. The variables that presented normality (analyzed with the Pearson test) in their correlations, were the Compared Self and Total Scale of MLSSA. For the others, the Spearman test was used, since the data did not satisfy the conditions for the use of a parametric test (Field, 2009). For the interpretation of the correlations, it was used the measurement suggested by Christine Dancy and John Reidy (2005): 0.1

to 0.3 - weak correlation; 0.4 to 0.6 - moderate correlation; 0.8 to 1 - strong correlation.

The IHSA-Del-Prette data was analyzed by the gross results (total scores and of each scale), converted to the percentile position. The percentiles make up the manual based on data from the same-sex and same-age sample, according to the guidelines specified in the instrument's manual (Del Prette & Del Prette, 2009b).

In order to calculate the scores of each subscale of MLSSA, the average and standard deviation of the corresponding items in each dimension were calculated (average calculated by the total sum and divided by the number of items of each subscale) (Segabinazi et al., 2010).

## Results

The sample shows that in sports, 68.9 % ( $n = 157$ ) of the participants practice some modality, with emphasis on gym ( $n = 48$ , 21.1 %), with a sport practice frequency of four times a week or more ( $n = 71$ , 31.1 %). When questioned about their hobbies, 76.8 % ( $n = 175$ ) reported having some type of activity and performed them four times a week or more ( $n = 87$ , 38.2 %), especially watching movies, TV, Netflix and going to the cinema ( $n = 56$ , 24.6 %).

When questioned about the ICTs' use, 98.2 % ( $n = 224$ ) of the adolescents reported using smartphone, 71.5 % ( $n = 163$ ) computer and/or notebook, and 26.3 % ( $n = 60$ ) tablet. The most used communication application on smartphones by adolescents during the week and at the weekend is WhatsApp ( $n = 221$ , 96.9 %,  $n = 203$ , 89 %). The most visited site on the computer or notebook during the week and on the weekend is YouTube ( $n = 118$ , 51.8 %,  $n = 112$ , 49.1 %) and on tablet is Netflix ( $n = 43$ , 18.9 %). All applications used are listed in Table 1.

The adolescents reported using emoji to represent humor ( $n = 162$ , 71.1 %) with a frequency of "sometimes" ( $n = 126$ , 55.3 %) and neutral importance ( $n = 88$ , 38.6 %). The three most used emojis were red heart ( $n = 94$ , 41.2 %), face with tears of joy ( $n = 70$ , 30.7 %) and a face blowing a kiss ( $n = 58$ , 25.4 %).

	Smartphone		Computer or notebook		Tablet	
	Week n (%)	Weekend n (%)	Week n (%)	Weekend n (%)	Week n (%)	Weekend n (%)
Facebook	190 (83.3)	173 (75.9)	87 (38.2)	80 (35.1)	28 (12.3)	23 (10.1)
Messenger (Facebook)	107 (46.9)	117 (51.3)	42 (18.4)	38 (16.7)	15 (6.6)	12 (5.3)
WhatsApp	221 (96.9)*	203 (89)*	35 (15.4)	31 (13.6)	12 (5.3)	10 (4.4)
Instagram	160 (70.2)	163 (71.5)	19 (8.3)	22 (9.6)	18 (7.9)	17 (7.5)
Snapchat	188 (82.5)	180 (78.9)	13 (5.7)	13 (5.7)	15 (6.6)	14 (6.1)
YouTube	183 (80.3)	180 (78.9)	118 (51.8)*	112 (49.1)*	41 (18.0)	42 (18.4)
Pintrest	37 (16.2)	41 (18)	12 (5.3)	13 (5.7)	6 (2.6)	6 (2.6)
Netflix	129 (56.6)	163 (71.5)	86 (37.7)	110 (48.2)	43 (18.9)*	43 (18.9)*
Twitter	109 (47.8)	101 (44.3)	32 (14.0)	26 (11.4)	12 (5.3)	10 (4.4)
Skype	21 (9.2)	26 (11.4)	20 (8.8)	30 (13.2)	5 (2.2)	6 (2.6)
Twitch	15 (6.6)	17 (7.5)	14 (6.1)	14 (6.1)	2 (0.9)	2 (0.9)
Games	66 (28.9)	60 (26.3)	33 (14.5)	36 (15.8)	6 (2.6)	7 (3.1)
Others	22 (9.6)	18 (7.9)	13 (5.7)	10 (4.4)	1 (0.4)	-

Note: \* Higher frequencies by application on week and weekend.

**Table 1.** Application's usage during the week and weekend

When asked if the internet helps or disrupts relationships, the adolescents have stated that the internet helps family ( $n = 189$ , 82.9 %), friends ( $n = 111$ , 48.7 %) and relationship ( $n = 141$ , 61.8 %), besides bringing people closer ( $n = 141$ , 61.8 %). Regarding the imposition of rules made by those responsible about the use of the internet, 80.7 % ( $n = 184$ ) of the adolescents reported lack of rules and declared that parents know how much time they spend on the internet ( $n = 102$ , 44.7 %) and that they also use ICTs ( $n = 222$ , 97.4 %).

The adolescents' satisfaction was verified by the Friendship' subscale ( $M = 4.05$ ;  $SD = .68$ ), Family ( $M = 4.05$ ;  $SD = .68$ ), Self ( $M = 3.96$ ;  $SD = .73$ ), Total Scale ( $M = 3.85$ ;  $SD = .49$ ), Non-Violence ( $M = 3.72$ ;  $SD = .69$ ), Self-Efficacy ( $M = 3.71$ ;  $SD = .61$ ), School ( $M = 3.50$ ;  $SD = .83$ ) and Compared Self ( $M = 3.38$ ,  $SD = .83$ ), all means bigger than normative data according to the Segabinazi et al. (2010).

With the IHSA-Del-Prette it was possible to measure what social skills' repertoires were reported as more frequent in the sample and they were classified according to the manual

	Below the Lower Average	Lower Average	Good Repertoire	Elaborated Repertoire	Highly Elaborated Repertoire
F1 - Empathy	29.8 %	8.8 %	30.3 %*	9.2 %	21.9 %
F2 - Self-Control	25.4 %	12.3 %	25.4 %	10.5 %	26.3 %*
F3 - Civility	15.4 %	13.2 %	27.6 %	4.4 %	39.5 %*
F4 - Assertiveness	26.8 %	9.6 %	24.6 %	9.2 %	29.8 %*
F5 - Affective Approach	39.9 %*	6.1 %	25.0 %	7.5 %	21.5 %
F6 - Social Adroitness	18.4 %	9.6 %	32.0 %	9.2 %	30.7 %*
General Score	25 %	10.5 %	30.3 %*	7 %	27.2 %

Note: \* Higher frequencies by each subscale.

**Table 2.** Frequency Indicator from IHSA-Del-Prette

regulations. The subscales with highly elaborated repertoire, with results higher than average to F3 - Civility (n = 90, 39.5 %), Social Adroitness (n = 70, 30.7 %), F4 - Assertiveness (n = 68, 29.8 %), and F2 - Self-Control (n = 60, 26.3 %), indicative of highly satisfactory interpersonal resources. The adolescents also presented good repertoire to F1 - Empathy (n = 50, 21.9 %) and General Score (n = 69, 30.3 %), since they had average results for most items or a balance between resources and deficits. The subscale F5 - Affective Approach (n = 49, 21.5 %) demonstrated a classification below a low average. All frequencies are displayed in Table 2.

The IHSA-Del-Prette also allows us to know the difficulty presented by the adolescent regarding each subscale. The result refers to the cost of response that the adolescent has when they behave in a given situation. The

high cost of response was measured in the F1 - Empathy (n = 91, 39.9 %) and F4 - Assertiveness (n = 84, 36.8 %), followed by the average cost of response in the F5 - Affective Approach (n = 93, 40.8 %) and low cost of response in F2 - Self-Control (n = 83, 36.4 %), Civility (n = 101, 44.3 %), F6 - Social Adroitness (n = 106, 46.5 %) and General Score (n = 97, 42.5 %). The frequencies and percentage are shown in Table 3.

To evaluate the relationship between the frequencies from IHSA-Del-Prette and indices of life satisfaction, it was evaluated how the subscales F1 - Empathy, F2 - Self-Control, F3 - Civility, F4 - Assertiveness, F5 - Affective Approach, F6 - Social Adroitness, and General Score correlate with subscales Family, Self, School, Compared Self, Non-Violence, Self-Efficacy, and Friendship from MLSSA. The Table 4 presents results with correlations.

	Low Cost of Response	Medium Cost of Response	High Cost of Response
F1 - Empathy	35.1 %	25.1 %	39.9 %*
F2 - Self-control	36.4 %*	28.9 %	34.6 %
F3 - Civility	44.3 %*	30.7 %	25 %
F4 - Assertiveness	31.6 %	31.6 %	36.8 %*
F5 - Affective Approach	38.6 %	40.8 %*	20.6 %
F6 - Social Adroitness	46.5 %*	25.9 %	27.6 %
General Score	42.5 %*	25.9 %	31.6 %

Note: \* Higher frequencies by each subscale.

**Table 3.** Difficulty Indicator from IHSA-Del-Prette

	Empathy	Self-Control	Civility	Assertiveness	Affective Approach	Social Adroitness	General Score
Family	.225 <sup>2**</sup>	.116 <sup>2</sup>	.237 <sup>2**</sup>	.017 <sup>2</sup>	.068 <sup>2</sup>	.125 <sup>2</sup>	.162 <sup>2*</sup>
Self	.355 <sup>2**</sup>	.145 <sup>2*</sup>	.336 <sup>2**</sup>	.113 <sup>2</sup>	.316 <sup>2**</sup>	.222 <sup>2**</sup>	.311 <sup>2**</sup>
School	.339 <sup>2**</sup>	.107 <sup>2</sup>	.259 <sup>2**</sup>	.177 <sup>2**</sup>	.152 <sup>2*</sup>	.330 <sup>2**</sup>	.273 <sup>2**</sup>
Compared Self	.238 <sup>1**</sup>	.083 <sup>1</sup>	.210 <sup>1**</sup>	.122 <sup>1</sup>	.253 <sup>1**</sup>	.136 <sup>1*</sup>	.214 <sup>1**</sup>
Non-Violence	.215 <sup>2**</sup>	.392 <sup>2**</sup>	.184 <sup>2**</sup>	-.005 <sup>2</sup>	-.025 <sup>2</sup>	.132 <sup>2*</sup>	.243 <sup>2**</sup>
Self-Efficacy	.348 <sup>2**</sup>	.113 <sup>2</sup>	.246 <sup>2**</sup>	.227 <sup>2**</sup>	.314 <sup>2**</sup>	.340 <sup>2**</sup>	.342 <sup>2**</sup>
Friendship	.365 <sup>2**</sup>	.130 <sup>2</sup>	.266 <sup>2**</sup>	.123 <sup>2</sup>	.180 <sup>2**</sup>	.164 <sup>2*</sup>	.265 <sup>2**</sup>
Total Scale	.412 <sup>1**</sup>	.200 <sup>1**</sup>	.335 <sup>1**</sup>	.142 <sup>1*</sup>	.241 <sup>1**</sup>	.300 <sup>1**</sup>	.355 <sup>1**</sup>

Note: <sup>1</sup> Pearson test; <sup>2</sup> Spearman test; \*p ≤ .05; \*\*p ≤ .01.

**Table 4.** Relation between adolescents' life satisfaction and social skills

The subscale F1 - Empathy, showed significant weak positive correlations among subscales from MLSSA: Family, *Self*, School, *Compared Self*, Non-Violence, Self-Efficacy and Friendship; and significant positive correlation at Total Scale. The subscales F3 - Civility and General Score from IHSa-Del-Prette, showed significant weak positive correlations among all subscales from MLSSA (Family, *Self*, School, *Compared Self*, Non-Violence, Self-Efficacy, Friendship, and Total Scale). The subscale F2 - Self-Control showed significant weak positive correlations among *Self*, Non-Violence, and Total Scale from MLSSA. The subscale F4 - Assertiveness presented significant weak positive correlations among subscales School, Self-Efficacy, and Total Scale from MLSSA. The subscale F5 - Affective Approach showed significant weak positive correlations among subscales *Self*, School, *Compared Self*, Self-Efficacy, Friendship, and Total Scale from MLSSA. The subscale F6 - Social Adroitness demonstrated significant weak positive correlations among subscales *Self*, School, *Compared Self*, Non-Violence, Self-Efficacy, Friendship, and Total Scale from MLSSA.

## Discussion

The study aimed to identify if there was any association between social skills' repertoire and life satisfaction of adolescents and the use and frequency of ICTs in communication with their peers, related to the online context. According to the results found, it is possible to consider that the surveyed adolescents have good social skills' repertoire, are satisfied with their lives and use various applications.

Good levels of satisfaction with life in adolescents were found, with scores close to normative scores (Segabinazi et al., 2010). Studies suggest that adolescents tend to feel satisfied with their lives (Arteche & Bandeira, 2003; Gilman & Huebner, 2006; Segabinazi et al., 2014). Adolescents who report high overall satisfaction also have more positive relationships with others (parents and peers), less difficulty, higher levels of hope and a sense of personal control (Gilman & Huebner, 2006).

In general, the adolescents presented a good total social skills' repertoire with low frequency or anxiety in the emission of the

skills. The subscale Assertiveness, which refers to the ability of the adolescent to deal with different situations with other people and that demand of them a positioning and self-esteem, had a highly elaborated repertoire with high cost of response, that is, the assertive adolescents do not have confronting capacity and motivation, generating a high response cost in having behavior (Del Prette & Del Prette, 2009b). On the other hand, the subscale Affective Approach, in which consists conversational skills among friends, entering work groups in school, expression of satisfaction or not in different forms of affection, presented a classification below the lower average referring to the frequency, with a medium cost of response, which leads us to an indication of Social Skills Training (Del Prette & Del Prette, 2009b).

Throughout the correlations, it was verified that the greater the capacity of conversation in the group of friends and expression are, either school works and display of affection, the greater is the perception of positive characteristics, perception of life, importance of school, comparison with peers, ability to achieve goals, relationship with friends and overall satisfaction of life. It is in school that the adolescent, besides having a cognitive development, exercises the abilities to relate with other people besides the family (Prata & Soares, 2014). It should be taken into account that the constant proximity to technologies makes the adolescents emit the exchange of information much more through digital resources than through face-to-face conversation, making them more distracted and occupied, which may justify the difficulty in this repertoire (Assunção & Matos, 2014; Verzoni & Lisboa, 2017).

The data also pointed out that the greater the fun and satisfaction situations in relationships with peers and family are, the greater the chances of having healthy friendship relationships are, since those are constantly being built and they are fundamental for the development of social skills during adolescence (Desousa et al., 2014). Studies have already identified an association between subjective well-being and communication, in which adolescents who have more positive relationships with their peers and family are happier and satisfied with their life, emphasizing the importance of relationships in adolescence as a



predictor of subjective well-being (Gilman & Huebner, 2006; Tomé et al., 2011; Tomé et al., 2015).

The correlations found between adolescents' satisfaction with the Compared Self subscale and the other subscales from IHSa-Del-Prette (Empathy, Civility, Affective Approach and General Score) confirm that the interaction with peers has been essential in the development of the self in adolescence, since it is related to the constitution of their identity, a social process in which beliefs about oneself are often reinforced by peers, with the intention of establishing a favorable and ideal perception of themselves (Andretta & Oliveira, 2005; Macedo, Petersen, & Koller, 2017). In this way, there is a new way of accepting the peers, since in the context of the ICTs it is made through the likes of online friends and this constant search for approval is seen in the posts, photos and comments, impacting the beliefs and behaviors of adolescents (Verzoni & Lisboa, 2017).

The adolescents have a good repertoire in relation to the subscale Empathy, but they present a high cost of answer, that is, even if there are positive correlations between Empathy and all the other subscales of life satisfaction (Family, Self, School, Compared Self, Non-Violence, Self-Efficacy, Friendship and Total Scale), it is inferred that there is a need for those adolescents to increase the emission of behaviors to identifying feelings, problems and worry about the well-being of others, express, understand and apologize (Del Prette & Del Prette, 2009b).

Regarding the use of ICTs, the data indicates the smartphone is the main instrument used by adolescents to get connected, secondly the computer and finally the tablet, corroborating with a national study, which the public under 18 years old also pointed such media (Cetic.Br, 2016). The communication application used through the smartphone is WhatsApp. The main purpose of the computer and tablet is to access YouTube and Netflix.

Research related to adolescent use and behavior in WhatsApp is recent and claims that the application is used as an extension in relationships for sharing everyday facts (Montag et al., 2015). The constant proximity to technology makes adolescents exchange information much more through digital resources

than through face-to-face conversation, making online contacts an extension of friendships in real life (Asunción & Matos, 2014).

The adolescents in the sample use emoji to represent their mood, the most used by them were the red heart, face with tears of joy and face sending kiss, all expressing positive emotions. It should be noted that among the 20 most used emoji in the world, all of them express emotions, and intend to complement the words (D'Angelo, 2016).

Regarding the impact of the internet on relationships, adolescents said that the internet helps with their family, friends and dating, as well as bringing people closer. The perception of adolescents met with ability of ICTs to establish networks between people from anywhere, allowing them to participate in different experiences, which makes them more tolerant and sensitive to differences (Assunção & Matos, 2014; Verzoni & Lisboa, 2017).

The adolescents declared that there is a monitoring from the parents regarding the time they spend on the internet, corroborating with a national study in which adolescents also have this perception (Cetic.Br, 2016). Although adolescents must build an identity and acquire autonomy from their parents, their presence as figures that still establish limits is crucial for the maintenance of healthy habits (Desousa et al., 2014, Rodriguez & Damásio, 2014). Another factor mentioned is the use of ICTs by parents, showing that they are closer to the digital world and this use may be a way to overcome the various communication difficulties between parents and children (Verzoni & Lisboa, 2017).

## Conclusion

Quality of life in adolescents is related to mental health and well-being. The present study aimed to identify different correlations between the repertoire of social skills and the different facets that constitute adolescents' life satisfaction, permeated by the use of ICTs, as well as to characterize the main means of access and perceptions about their use.

It is important to investigate the difference in the social skills' repertoire at personal and online contact. The increasingly constant approximation with technologies causes adoles-

cents to sometimes talk by means of ICTs than through face-to-face dialogue, reinforcing the need to develop digital social skills in order to establish healthy relationships in both contexts.

It is emphasized that the use of ICTs with moderation and limits brings several benefits to the healthy development of adolescents. Parents, therapists, and teachers have the difficult task of guiding and sensitively managing their use so that relationships should be closer but not invasive. It is through the dialogue that the family dynamic establishes itself in the adolescence, providing relations with more satisfaction for the children and the parents.

This study was limited to research only adolescents from the private school, but the literature points out the difference between the private and public schools, which is an indicative of other research that could be done comparing those contexts. It is also perceived the need to study risk and protection factors in this population. Longitudinal studies may make the differences more evident throughout development and may also identify causal relationships between variables.

It is recommended the research of future studies with clinical populations, in order to identify the presence of other relevant psychological variables. Advances in this area can contribute to the promotion of a more satisfactory life and an increase in effectiveness in clinical interventions permeated by technology.

It is expected that the present study helps to advance the understanding of the use of ICTs by adolescents in order to foster the development of strategies, interventions and tools capable of developing the promotion of mental health in this population and in this context.

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