



**Universidade do Minho**  
Escola de Psicologia

Andreia Patrícia Costa Ramos

## **Visual Representations of Happiness in Adolescents**

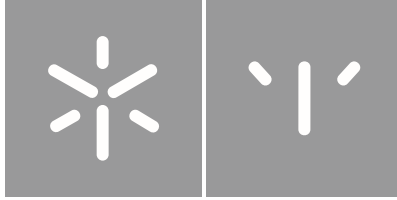
**Visual Representations of Happiness in Adolescents**

Andreia Ramos

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## **Visual Representations of Happiness in Adolescents**

Dissertação de Mestrado  
Mestrado Integrado em Psicologia

Trabalho realizado sob a orientação da  
**Professora Doutora Teresa Freire**

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## STATEMENT OF INTEGRITY

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I further declare that I have fully acknowledged the Code of Ethical Conduct of the University of Minho.

Braga, 04. de junho..... de 2019.

Andaia Patrícia Costa Ramos

## Representações Visuais de Felicidade nos Adolescentes

### Resumo

A felicidade é hoje um tópico principal na investigação em psicologia. Várias definições têm sido apresentadas, discutidas e empiricamente sustentadas, validando a existência de diferentes concepções. Utilizando a técnica “*draw-and-write*” e adaptando o Protocolo *iSquare*, a 330 adolescentes portuguesas, foi requerido “Desenha Felicidade”, num papel designado *hSquare*. Os participantes também descreveram o seu desenho e preencheram a Escala de Felicidade Subjetiva. As expressões visuais da felicidade foram analisadas através de análise qualitativa temática. Para as medidas quantitativas, foram averiguadas diferenças nas medidas de felicidade entre sexo e idade, sendo estes resultados combinados com as imagens. Os adolescentes expressaram o seu conceito de múltiplas formas. Em ordem de prevalência, os temas “pessoas”, “hobbies”, “amor”, “sorriso”, “desporto”, “necessidades básicas”, “harmonia interna” e “direitos humanos e igualdade” emergiram, com algumas variações entre felicidade subjetiva e idade. Também foi verificado que adolescentes mais novos são significativamente mais felizes que os mais velhos. Desta forma, este estudo enriquece a compressão da felicidade à luz de novas metodologias visuais. Metodologicamente, a técnica “*draw-and-write*” pode ser combinada com medidas psicológicas, trazendo novos conceitos que poderão estar na base da felicidade, sendo alguns destes inovadores para os estudos da felicidade.

*Palavras-Chave:* Adolescentes, Felicidade, *iSquare*, Representações Gráficas

## Visual Representations of Happiness in Adolescents

### Abstract

Happiness is nowadays a principal topic in psychology investigation. A lot of definitions have been presented, discussed and empirically sustained, validating the existence of different conceptions. Using the “*draw-and-write*” technique and adapting the *iSquare* Protocol, 330 Portuguese adolescents were asked to “*Draw Happiness*”, in a paper coined *hSquare*. The participants also describe their drawings and filled the Subjective Happiness Scale. The visual expressions of happiness were analyzed through qualitative thematic analysis. For the quantitative measures, it was verified differences in happiness measures between sex and age, being these results combined with the images. Adolescents expressed their concept according to multiple ways. In order of prevalence, the themes “people”, “hobbies”, “love”, “smile”, “sports”, “basic needs”, “inner harmony” and “human rights and equality” emerged, with some variations between subjective happiness and age. It was also identified that younger adolescents are significantly happier than the older ones. In conclusion, this study enriches the comprehension of happiness in the light of new visual methodologies. Methodologically, the “*draw-and-write*” technique can be combined with psychological measures, bringing new concepts to previous literature frameworks, being some of these innovative to happiness studies.

*Keywords:* Adolescents, Graphic Representations, Happiness, *iSquare*



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## Visual Representations of Happiness in Adolescents

### **1.1. Happiness**

Happiness has been a difficult construct to define and investigate, leading to some controversy within the scientific community (Delle Fave et al., 2016). This occurs because happiness is an abstract entity whose existence depends exclusively on human mind and language (Hale, 1988). Some studies define happiness as satisfaction with life and well-being (e.g., Kahneman, Diener, & Schwarz, 1999) and others complement this definition by assigning the synonym of subjective well-being, which consists of a well-being with life both in thoughts and feelings (Diener, 1984). Recent studies do not emphasize satisfaction as an essential component of happiness, showing that inner harmony is a more promising element to the construct (Delle Fave et al., 2016).

It is also known that happiness is influenced by two main dimensions, one characterized by psychological factors (e.g., balance, contentment) and another by contextual factors (e.g., family, interpersonal relationships) (Delle Fave et al., 2016). Depending on societal differences, individuals tend to value more one of these dimensions: collectivist societies emphasize more contextual variables and individualistic societies prioritize the psychological variables (Delle Fave et al., 2016).

According to Argyle and Martin (1991), for an individual to be happy it is possibly necessary three components partially independent: (1) frequency and level of positive affect, (2) average level of satisfaction for a period and (3) absence of negative affect, such as depression and anxiety. If these three components are present, it is probable that people perceive themselves as happy (Argyle & Martin, 1991).

Happy people usually experience average levels of happiness above neutral most of the time (Diener & Tay, 2017). This experience of happiness accompanies the achievement of needs that are congruent with individual values and goals (Diener & Tay, 2017). However, happiness does not mean not to experience negative events but helps answer effectively to them (Diener & Tay, 2017). This phenomenon occurs because the impact of external events is mediated by the person's cognitions and values (Diener & Tay, 2017).

This cognitive process indicates that unhappier people tend to interpret negative situations as internal and stable as opposed to happier people (Argyle & Martin, 1991). Instead, a happy person tends to make those same attributions to positive events to preserve the feelings of happiness (Argyle & Martin, 1991). Therefore, happiness is mainly influenced by interpretations about the individual and his interaction with the context (Argyle & Martin, 1991).

### **1.2. Happiness in Adolescence**

## VISUAL REPRESENTATIONS OF HAPPINESS IN ADOLESCENTS

Happiness is more unstable in adolescence and young adulthood due to constant changes in the environment, uncertainty about the future and less crystalized opinions about life (Veenhoven, 1991). Inside this age group also exists variations in the levels of happiness (Moneta, Schneider, & Csikszentmihalyi, 2001). Happiness in adolescence is characterized by a decrease up to 16 years old and a minimal recovery until 18 (Moneta et al., 2001). Thus, age is an important predictor of happiness in adolescence showing that younger adolescents are usually happier than older adolescents (Csikszentmihalyi & Hunter, 2003). This prediction is explained due to older adolescents experience higher levels of conflict mostly associated with identity problems (Moneta et al., 2001).

Csikszentmihalyi and Hunter (2003), investigate what adolescents were doing when they reported happiness. Using a methodology ESM (Experience Sampling Method), the authors analyzed happiness in this age group according to two types of perspectives: state perspective and trait perspective.

According to a state perspective, the results showed that adolescents experience higher levels of happiness when socializing with friends and lower levels when they are alone, with teachers or with colleagues (Csikszentmihalyi & Hunter, 2003). Another variable that appears to be positively correlated with happiness in adolescence is leisure activities, as opposed to school-related activities which tend to be associated with levels of happiness below average (Csikszentmihalyi & Hunter, 2003).

In a trait perspective, Csikszentmihalyi and Hunter (2003) found that time spent in school-related activities is positively related with happiness, as opposed with the result according to the state perspective. This result reveals that studying helps to build psychological capital, transforming potentially negative experiences in positive experiences over time (Csikszentmihalyi, 2003). Likewise, the percentage of time spent socializing with friends also presents that same correlation, revealing that adolescents who spend more time alone are usually unhappier (Csikszentmihalyi & Hunter, 2003). These results indicate that social context influences happiness in multiple ways (Csikszentmihalyi & Hunter, 2003). However, this association is not linear because older adolescents are unhappier and spend more time with friends comparing to younger adolescents, indicating that age cancels this effect (Csikszentmihalyi & Hunter, 2003).

As mentioned before, adolescence is also characterized by periods of unhappiness (Moneta et al, 2001). It is well documented an increase of depression in adolescence around 15 years old (e.g., Brooks-Gunn & Peterson, 1991), age coinciding with the decrease of happiness (Moneta et al., 2001). Although a lot of studies demonstrate that happiness is not the opposite of depression, this psychopathology and anxiety are the main manifestations of unhappiness (Cheng & Furnham, 2003).

Nevertheless, the causal effect between depression and unhappiness is not clear, but unhappiness can be a predictor and can be a consequence for depression or both (Cheng & Furnham, 2003).

The findings with unhappier adolescents show that they have less support relationships due to interdependence between subjective well-being and social relationships (Diener & Tay, 2017). This relation is evident because happiness is strongly related to a more extrovert lifestyle, thereby a happy person has usually higher levels of sociability and quality of social interactions (Csikszentmihalyi & Hunter, 2003; Diener & Tay, 2017). This effect is even clearer in adolescents due to close friendships become more important as they grow older (Youniss & Smollar, 1985).

### **1.3. hSquare Technique**

To allow this comparison between the happier and unhappier adolescents, the present study was focused on an innovative qualitative methodology, mainly centered in visual representations of adolescents about happiness (Hartel, 2014), in combination with Subjective Happiness Scale (Lyubomirsky & Lepper, 1999). The qualitative method will follow a recent formulation of “*draw-and-write*” technique to study information – *iSquare* (Hartel, 2014) – adapted to happiness – *hSquare*. The *iSquare* technique was developed by Hartel (2014), combining the qualities of qualitative investigation with the imaginative characteristics of art, to understand better the visualization of a concept. This strategy uses drawings to capture what quantitative investigation cannot apprehend, and to analyze “what is difficult to put in words”, also filling some aspects that may not be addressed by traditional methods of qualitative investigation (Weber, 2008). When it comes to abstract concepts, such as information and happiness, the drawings provide a rich and unique visual data set (Weber & Mitchell, 1995), because abstract words do not exist in space-time dimension, making it difficult to easily process and recognize their meaning (Kousta, Vigliocco, Vinson, & Andrews, 2009).

The *iSquare* technique is also constituted by a written part, which was integrated with two different aims: the first one involves the capture of another key variables to the study that are not included in the drawings (Hartel, 2017) and, the second one, to help in the understanding of certain drawings (Briell, Elen, Depaepe, & Clarebout, 2010). This last aim was integrated recently, due to facilitate the analysis of images more difficult to code (Hartel, 2017).

There are some studies that only used this written method to analyze happiness in this age group (e.g., Freire, Zenhas, Tavares, & Iglésias, 2013; López-Pérez, Sánchez, & Gummerum, 2016). Freire and colleagues (2013) showed that adolescents tend to focus on emotions, satisfaction, relationships and harmony when describing happiness. López-Pérez and colleagues (2016) found some important

differences between ages in adolescence: younger adolescents tend to focus more on positive feelings due to a more concrete vision of happiness and focus less on psychological variables as harmony and achieving goals. This last result is explained by the increase of extrinsic motivation and the decrease of intrinsic motivation in adolescents (Gillet, Vallerand, & Lafrenière, 2012). The familiar and social context was mentioned constantly across ages being justified by collectivist culture (López-Pérez et al., 2016).

The results with this methodology are very rich, so the most frequent vision was that it should be given more emphasis to the written component of the *iSquare* than to the visual part, because of the bias that drawings present (e.g., participants could draw what is easier) (Hartel, 2014). However, it was verified that visual data should be highlighted due to present more interesting and promising results when compared to the written part. Thereby, this study used the written part to only eliminate the bias of the drawing, not analyzing in detail what adolescents wrote about happiness.

### **1.4. The Present Study**

The present study was based in the *hSquare* technique and, through this, it is possible to ascertain three types of aims: (1) How do adolescents visualize the concept of happiness, (2) How do visual conceptions of happiness differ among happier adolescents and unhappier adolescents, and (3) How do these images vary according to age.

The execution of this study shows importance because happiness has been studied mainly using quantitative methods, through questionnaires and scales, more based on assumptions and expectations (Delle Fave et al., 2016). Therefore, qualitative investigation should be more used because happiness is influenced by multiple factors and the restriction of the answers in quantitative studies prevent studying in depth this construct (Delle Fave et al., 2016). Beyond this aspect, as happiness refers to an abstract concept, drawings could provide a chance to examine other factors that influence happiness but are “hard to put in words” (Weber, 2008). Thereby, using *hSquare* in combination with the Subjective Happiness Scale, will allow to obtain a broader vision about happiness.

It is important to study positive constructs as happiness, because psychology tends to focus on the negative aspects of individual's life, neglecting the positive ones (Myers & Diener, 1995). In this topic, seems that investigation is more interested to find the determinants of unhappiness instead of the conditions of well-being (Diener, 1984). Furthermore, understand how adolescents perceive happiness is relevant because adolescence is an age group characterized by a phase of development, with both conflicts and potentials (Csikszentmihalyi & Hunter, 2003). Thus, people should look at adolescence and

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highlight the positive components that directly influence happiness to ascertain how to promote an optimal functioning.

Regarding to the qualitative data, through the interpretation of the results of López-Pérez and colleagues (2016) and Freire and colleagues (2013) and adapting them to the present study, it is expected that adolescents represent the familial and social relationships and psychological variables as emotions and harmony. Moreover, it is also intended to find out age effects in the drawings as age is a strong predictor of happiness (Csikszentmihalyi & Hunter, 2003). The comparison between different levels of subjective happiness is something new added to the study.

For the quantitative results, the following hypothesis was formulated: younger adolescents have higher levels of subjective happiness than older adolescents.

In conclusion, this study has its central aim to identify and understand the variables that influence the visual representations of happiness in adolescence. However, in parallel, it is also intended to understand what the influence of unhappiness and age in those representations is.

### **Methodology**

#### **Participants**

The sample was constituted by 330 adolescents with ages between 11 and 18 years old ( $M = 14.89$ ,  $SD = 1.80$ ) from two different schools in the north of Portugal (Braga and Viana do Castelo). The participants consisted of 7<sup>th</sup> to 12<sup>th</sup> graders and there were 164 females ( $M = 15.03$ ,  $SD = 1.74$ ), 154 males ( $M = 14.76$ ,  $SD = 1.86$ ) and 12 participants prefer to not identify sex. There were not criteria of exclusion unless age and language barriers that could prevent the correct interpretation of the task. Their participation was voluntary, and they could stop the task at any time.

#### **Instruments/Measures**

As instruments utilized in this study, it was combined the *hSquare* technique and two of the four items of the Subjective Happiness Scale validated to Portuguese adolescents (Freire, Vilas Boas, & Teixeira, *in press*). This conjunction of techniques is allowed in the *iSquare* technique protocol, which aims to adapt the technique to the interest construct and field in study (Hartel, 2017).

**Sociodemographic questionnaire.** The sociodemographic variables included in this study were sex and age, integrating a back portion of the *hSquare*.

**hSquare technique.** The *iSquare* technique is constituted by a 4.25'' by 4.25'' square of white paper and a black pen (Hartel, 2017), being maintained these criteria to the *hSquare*. In the back side of the square, it was asked participants to draw happiness in the reverse side of the square. Then, it was required to describe in words the drawing through the indication "Say some words about your drawing".

**Subjective happiness scale.** Bellow the written portion of the *hSquare*, the participant had to fill the two items of the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999), validated to Portuguese adolescents (Freire et al., *in press*). The Subjective Happiness Scale evaluates subjective happiness, which is a subjective evaluation that individuals do to understand if they are happy or unhappy (Lyubomirsky & Lepper, 1999). It is composed by 4 items, on a 7-point Likert scale, but only two items integrated the present study. The items are: "In general, I consider myself: (1) not a very happy person, (7) a very happy person" and "In comparison with most people of my age, I think I am: (1) unhappier, (7) happier" (Freire et al., *in press*). These items were chosen because they were directly related with the conceptions of happiness, becoming easier to create the comparison between groups. The validated to Portuguese adolescents version of the scale has good internal consistency, and it is considered a good measure with similar psychometric properties to the original version (Freire et al., *in press*).

### Procedure

First, it was proceeded the realization of a pilot study to verified what indication was more objective to draw the concept. This study was composed by a convenience sample of 20 adolescents, wherein 10 did the drawings according to the indication "Draw happiness" and the remaining through the question "What is happiness for you?". The pilot study allowed to verify what is the most appropriate indication to capture the most variables in the drawings. Thus, it was verified that the indication "Draw happiness" appeared to be the most suitable.

The process of recruit participants was done in two different schools in the North of Portugal, in different classes to catch all ages of interest (7<sup>th</sup> to 12<sup>th</sup> graders). The schools were contacted to allow the realization of this study, being informed and clarified about its aims and implications. The approval of the school was given and allowed the students to voluntarily integrate the investigation as participants.

After a brief and partial explanation of the study, the participants who agreed with the stipulated terms signed the informed consent to start the task. The task lasted 10 minutes, being the author apologist to dedicate only 7 minutes to the draw and write part of the square (Hartel, 2017). The author



also advices to not provide any prior information about what will be done during the task, thereby aiming spontaneous responds of all adolescents that belong to the sample (Hartel, 2017).

After completing the *hSquares*, it was thanked to all participants for their participation and was given a clarification of the study for them to read and to show their guardians. Then, with all the materials collected, the *hSquares* were translated to English and combined in Excel data basis to be sent to the technique author and her team. This method allowed the realization of all the required analysis.

### **Data Analysis**

The images were interpreted through an inductive thematic analysis, suggestion by the author technique and her team to analyze the present results. This analysis acts like a flexible and useful investigation tool which provides a rich and complex data analysis (Braun & Clarke, 2006). The organization is done through themes that represent a level of standardized response and in inductive analysis the themes are strongly related with the data (Braun & Clarke, 2006).

The results are analyzed by steps: familiarization with the data, initial code generation, search for themes, review of themes, naming themes and producing the report (Braun & Clarke, 2006). After the identification of the general themes, it was intended to compare them between the happier and unhappier participants and between ages. To separate the groups, according to the level of subjective happiness, it was used the scores of the Subjective Happiness Scale. The ones who scored less or equal of four points, belonged to the unhappier sample and who scored higher to the happier sample. The neutral point was grouped to the first group because there were fewer adolescents with punctuations below four.

Regarding to the scale, it was made U-Mann Whitney tests to identify differences in the scores of the scale between sex and age. Regarding to age, younger adolescents had 11, 12, 13 and 14-year-old and older participants had 15, 16, 17 and 18-year-old.

## **Results**

### **Thematic Analysis**

In this analysis, all the squares were studied according to the visual themes and motifs appearing in the drawing, in team work to achieve consensus. The themes that seem to fit the data were: “people”, “hobbies”, “love”, “smile”, “sports”, “basic needs”, “inner harmony” and “human rights and equality”. It is relevant to mentioned that a lot of the times one drawing fitted more than one theme, showing that the themes were not discrete.

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**Happiness as people (n = 196).** Some people together were the main image that emerged through the drawings. In figure 1, are seen some examples. It is understood that the people drawings had three types of meanings, based on the written component: “family”, “friends” and the majority focused on “family and friends”.

When the intention was to draw “family” (n = 56), all the squares had at least two people. These varied according to simpler drawings as only faces and bodies and the majority were more complex as faces smiling in some scenarios (e.g., family at the table). When drawing people as “friends” (n = 68), also two people were at least drawn. Some of these were holding hands, had a smiley face and social interactions associated to them (e.g., balloons were sometimes drawn mostly balloons that represent talking). The squares characterized by the two previous factors (n = 72) showed that even though at least four people were drawn, a good portion of the drawings had a lot of people. Most of the people were smiling and most of the squares had other elements (e.g., a sun, a house, animals).

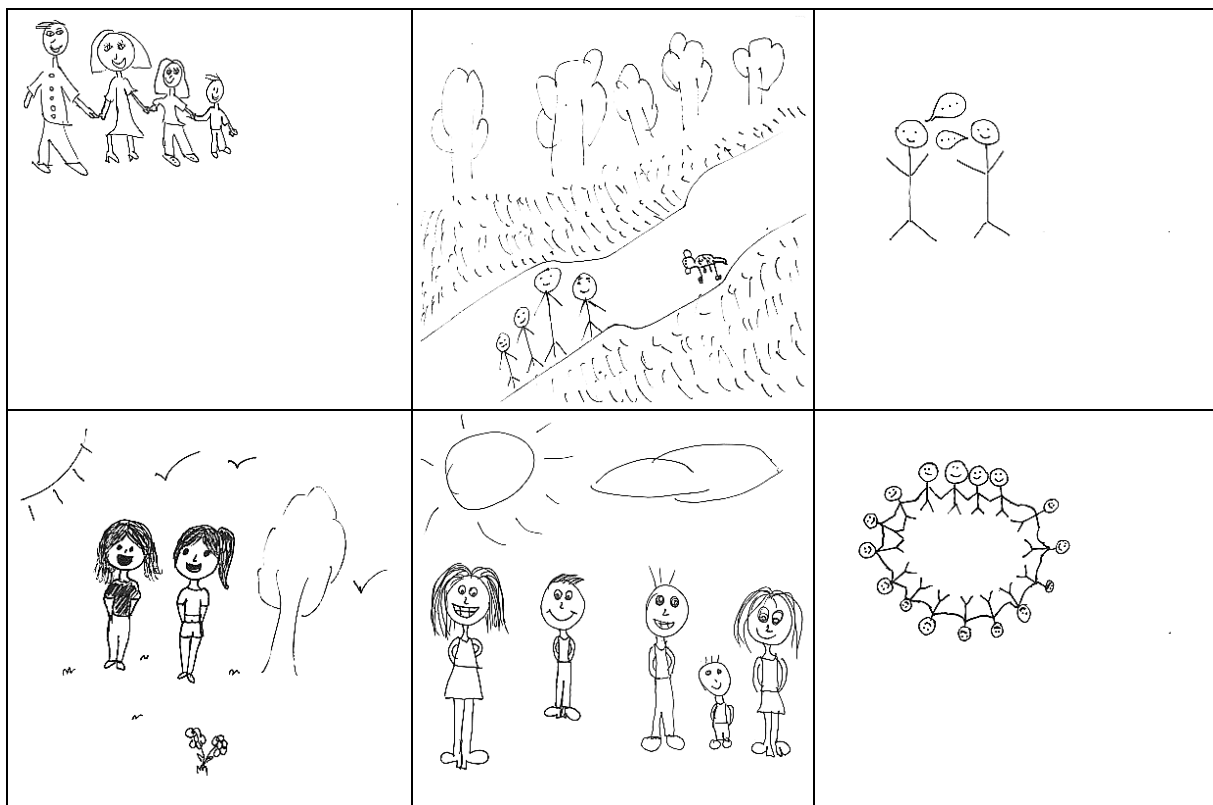


Figure 1. Examples of images focusing on “people” (the 1<sup>st</sup> and 2<sup>nd</sup> represent “family”, the 3<sup>rd</sup> and 4<sup>th</sup> “friends” and the 5<sup>th</sup> and 6<sup>th</sup> “family and friends”)

**Happiness as hobbies (n = 88).** This theme has a lot of distinct characteristics, all representing an activity, except sports, whose number was enough to create one independent theme,

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discussed shortly. Some examples can be observed in Figure 2. The images representing hobbies had three essential subthemes: “outdoors activities”, “technologies” and “music and reading”. The “outdoors activities” (n = 40) were mainly characterized by nature (e.g., mountain, beach scenario), with a lot of elements (e.g., sun, trees). The images representing “technologies” (n = 21) were composed by PlayStations, games, computers and Netflix. When it comes to “music and reading” (n = 27), a lot of times these two activities were grouped in one image but reading never showed up alone.

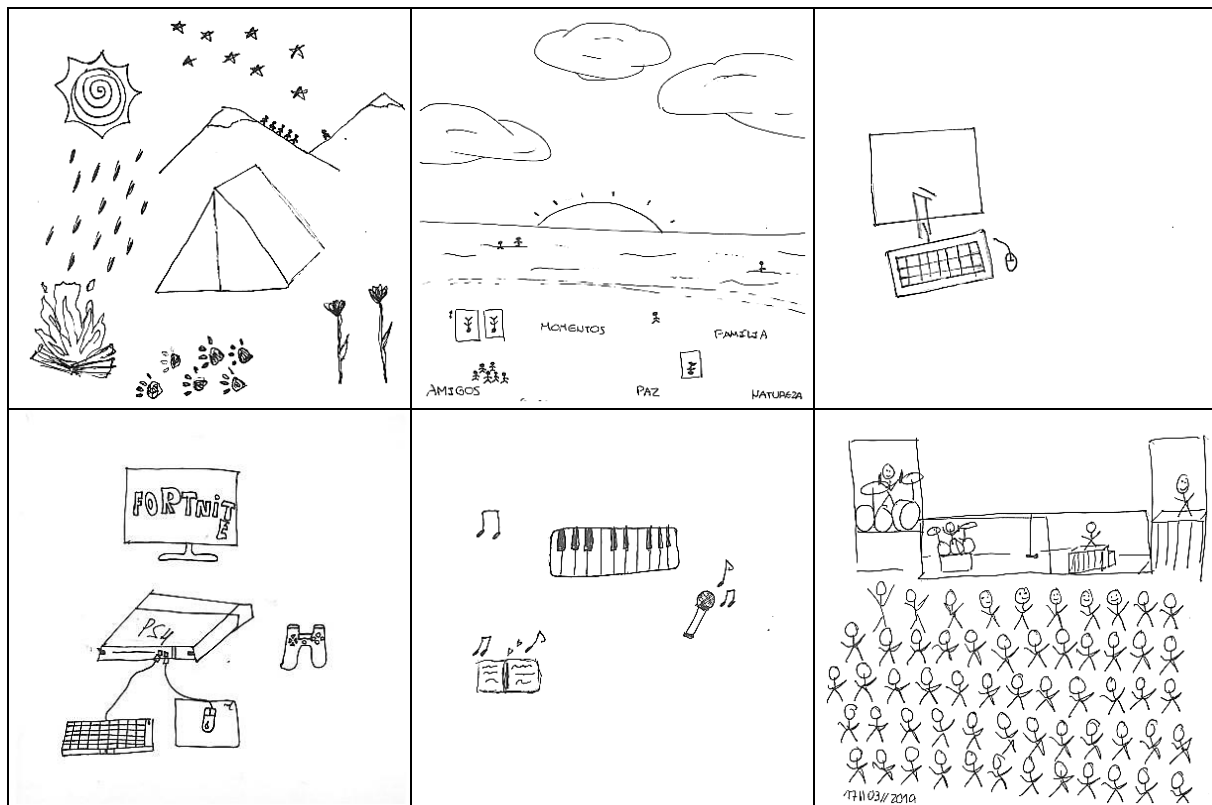


Figure 2. Examples of images focusing on “hobbies” (The 1<sup>st</sup> and 2<sup>nd</sup> represent “outdoor activities”, the 3<sup>rd</sup> and 4<sup>th</sup> “technologies” and the 5<sup>th</sup> and 6<sup>th</sup> “music and reading”)

**Happiness as *love* (n = 79).** This theme was formed due to hearts drawn in the images, as seen in Figure 3. Sometimes only a simple heart was drawn and other times the heart was accompanied with other hearts or elements (e.g., the Earth, sun, stars).

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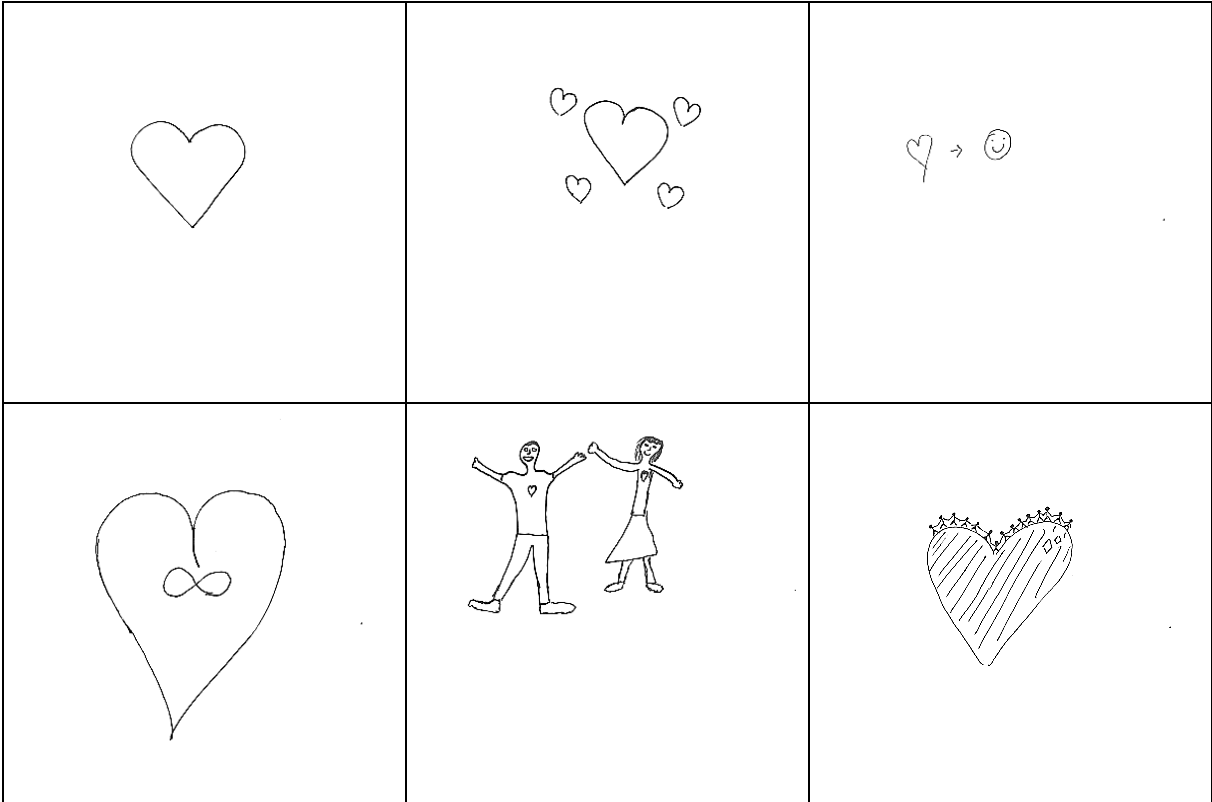
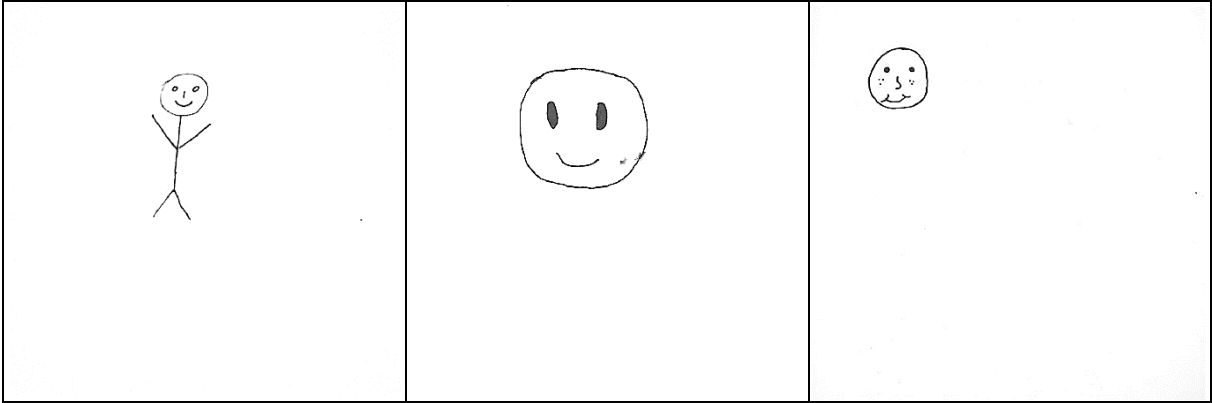


Figure 3. Examples of images focusing on "love"

**Happiness as smile (n = 76).** "Smile" is constituted by the simpler images and have always the elements of two eyes and a single smile, as verified in Figure 4. Some drew only a face and others had more complex features as nose, eyebrows, eyelashes, hair, ears and freckles.



## VISUAL REPRESENTATIONS OF HAPPINESS IN ADOLESCENTS

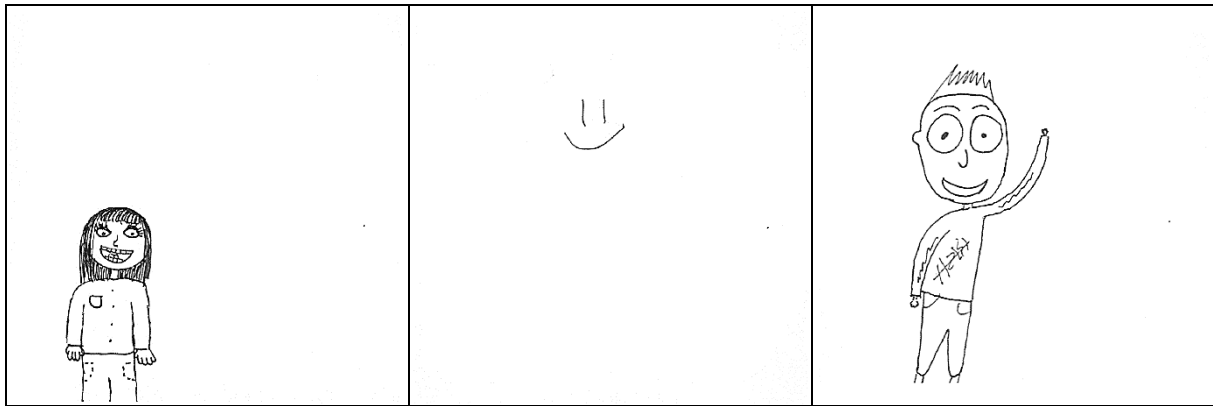


Figure 4. Examples of images focusing on "smile"

**Happiness as sports (n = 44).** In this theme, the focus was a person or a group of people doing a sports activity, as demonstrating in Figure 5. Although the characteristics named in the themes "people" and "smile" were present, sports were given more emphasis.

Soccer was the main sport drawn (n = 30). Most participants drew a group of two or three people with a ball on the ground and some complexify the drawing with some scenario (e.g., sun, goal). Other sports were mentioned (n = 14) but usually only by one person (e.g., swimming, skating, cycling), except for basketball that was characterized by two people.



Figure 5. Examples of images focusing on "sports" (the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> represent "soccer", and 5<sup>th</sup> and 6<sup>th</sup> "other sports")

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**Happiness as *basic needs* (n = 36).** As it comes to basic needs different content emerged, as seen in Figure 6, as money, time, clothing, food, drinks, health and a house. Money was represented by coins and bills and time was represented by a clock. Food and drink were drawn as a food plate and a cup. Clothing through some piece of clothing as pants and a shirt. Health was represented by a cross and sometimes by a hospital and the houses with walls, doors and windows.

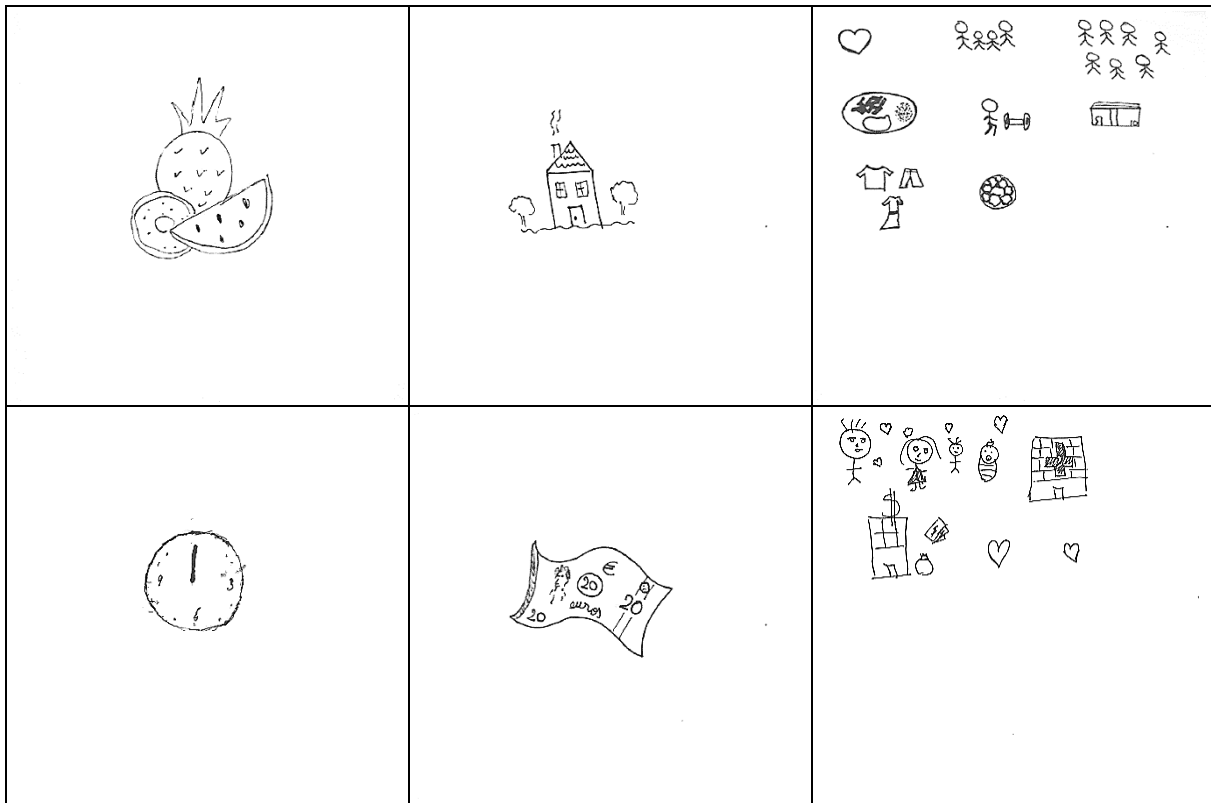


Figure 6. Examples of images focusing on "basic needs"

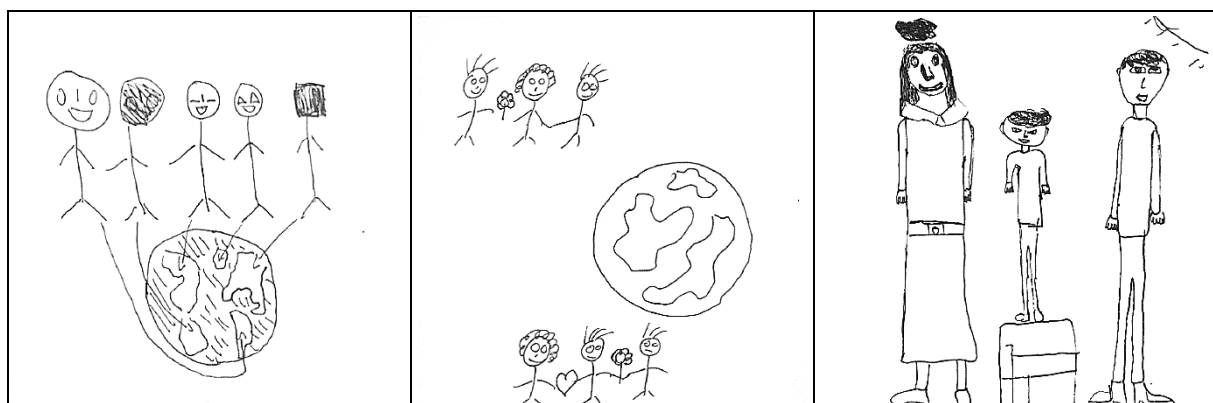
**Happiness as *inner harmony* (n = 25).** This thematic focused on psychological variables such as self-realization, accomplishing goals, self-esteem and mental sanity. These are represented in Figure 7. Self-realization and achieving goals were represented through having a job and a home, accomplish the dream job (e.g., becoming a veterinary and a doctor), hands up in the air, gain trophies and medals, climb stairs and a road with obstacles. Self-love and self-esteem were drawn through smiling looking in the mirror and a heart in the chest. Mental sanity was constituted by elements such as a brain, given emphasis to this with an arrow.

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Figure 7. Examples of images focusing on "inner harmony"

**Happiness as *human rights and equality* (n = 16).** The images contained in this theme meant happiness as something bigger than the individual and his direct context, as represented in Figure 8. In some drawings, the Earth was drawn, sometimes with a lot of people holding hands around it. In others, world peace was represented by the peace symbol and by a bird. Also emerged the sense of equality through the analogy of different heights and the short one with a stool.



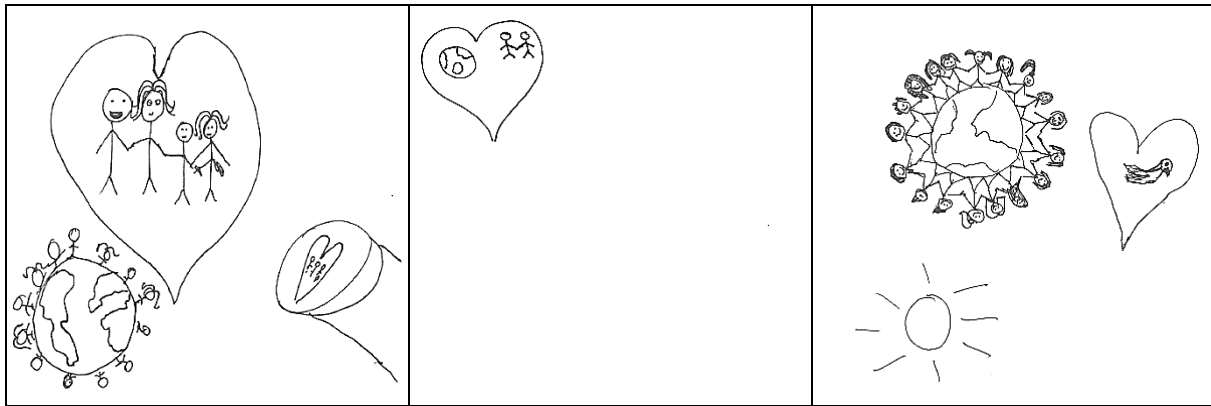


Figure 8. Examples of images focusing on "human rights and equality"

**The remaining hSquares (n = 16).** The remaining squares did not fill the criteria to belong to a theme (e.g., only a flower, the sun). Others were just blank and some only had the word "happiness" written on them.

### Thematic Analysis according to the Level of Subjective Happiness

In the item 1 - "In general, I consider myself: (1) not a very happy person, (7) a very happy person" - (n = 330,  $M = 5.55$ ,  $SD = 1.18$ ), the happy adolescents sample (n = 272,  $M = 5.96$ ,  $SD = .81$ ) focused the drawings mostly on "people" (32.8%), being the main focus "family and friends" portrayed in the images (13.0%) and "friends" less (9.8%). "Hobbies" were next (14.6%), being the "outdoor activities" more accented (7.3%) and "technologies" less portrayed (3.1%). Next, was the theme "smile" (14.4%), "love" (14.4%) and "sports" (8.5%). The themes less emphasized were "basic needs" (6.1%), "inner harmony" (4.0%) and "human rights and equality" (2.9%).

Regarding to the unhappier sample (n = 58,  $M = 3.64$ ,  $SD = .64$ ), also the "people" theme was more drawn (39.8%), but "friends" were highlighted by these adolescents (21.4%) and "family" less (8.2%). Again, "hobbies" were next (18.3%) but more focused on "music and reading" (7.1%) and less on "outdoor activities" (5.1%). Then, it was followed by "love" (12.2%), "smile" (7.1%) and "basic needs" (7.1%). Here, fewer draws represented "inner harmony" (6.1%), "sports" (2.0%) and "human rights and equality" (2.0%).

In the item 2 - "In comparison with most people of my age, I think I am: (1) unhappier, (7) happier" - (n = 329,  $M = 5.09$ ,  $SD = 1.18$ ), the first group (n = 212,  $M = 5.82$ ,  $SD = .71$ ) maintained the same pattern as in item 1. The main theme was "people" (33.5%) and "family and friends" was the main subtheme (13.9%), as opposed to only "family" (9.7%). "Hobbies" were next (15.3%), being "outdoor activities" the main dimension (8.8%) and "technologies" less prioritized (2.7%). Then comes "love"



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(14.7%), “smile” (13.7%) and “sports” (8.6%). “Basic needs” (6.1%), “human rights and equality” (3.5%) and “inner harmony” (3.2%) themes were the less mentioned in this group.

The second group on this item ( $n = 117$ ,  $M = 3.75$ ,  $SD = .52$ ), “people” was again more emphasized (35.0%), being “friends” the main subtheme (15.5%) and “family” the one less mentioned (9.5%). “Hobbies” were next (15.5%) and “reading and music” was the main subtheme (6.5%) as opposed to “outdoor activities” (3.5%). Next, “smile” (12.5%), “love” (11.5%), “basic needs” (6.5%), “inner harmony” (6.0%) and “sports” (6.0%) appeared. The less enumerated theme was “Human rights and equality” (1.5%).

### **Thematic Analysis according to Age**

When combining the themes with age, it is observed that younger adolescents tend to represent only a theme in their images than older adolescents who focused more in two or more themes. As seen in table 1, it appears that only smile theme was more mentioned in younger ages. The 17-year-old participants were the ones who represented more variables in their images. The “people” and “hobbies” themes seem to be represented more as increasing age, showing that, although mentioned in all ages, later adolescents lean more to these two contextual factors. When observed the “people” subthemes is detected that only “family” tend to disappear from the ages 14 and 15 being substituted by only “friends” and “family and friends”. The hobbies subthemes showed that “outdoor activities” and “music and reading” were rarely expressed in the under 15-year-old adolescents, being “technologies” constantly mentioned across ages. “Inner harmony” did not appear until 13-year-old but when it did, the frequency of its representation increased as adolescents grow older, exceptionally on the age of 15.

The other themes seem to show more variance and different patterns between ages. The “love” and “basic needs” themes had the pattern which tend to increase across age, but the 15-year-old group represented less this theme in their images. When it comes to “smile”, it achieved its maximum at the age of 14, reducing in the age of 15, being more represented in 16-year-old participants and decreasing again at 17. The “sports” tend to be represented in the younger ones and older ones, being less focused in the middle adolescence. The “human rights and equality” theme was strongly represented by 13-year-old, being the 14 and 15-year-old less focused on these variables.

Table 1.

*Themes mentioned across ages (%)*

| Themes | <u>11</u> | <u>12</u> | <u>13</u> | <u>14</u> | <u>15</u> | <u>16</u> | <u>17</u> | <u>18</u> |
|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|

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|                              | n = 1 | n = 46 | n = 34       | n = 60       | n = 44 | n = 68       | n = 64       | n = 13 |
|------------------------------|-------|--------|--------------|--------------|--------|--------------|--------------|--------|
| People                       | 0.51  | 11.73  | 8.67         | 14.80        | 14.29  | 20.41        | <b>23.98</b> | 5.61   |
| Hobbies                      | 0     | 6.82   | 6.82         | 11.36        | 13.64  | 19.32        | <b>37.50</b> | 4.55   |
| Love                         | 1.27  | 3.80   | 8.86         | 22.78        | 12.66  | <b>25.32</b> | 24.05        | 1.27   |
| Smile                        | 0     | 15.79  | 11.84        | <b>26.32</b> | 13.16  | 21.05        | 9.21         | 2.63   |
| Sports                       | 0     | 22.83  | 4.55         | 11.36        | 6.82   | 25.00        | <b>29.55</b> | 0      |
| Basic Needs                  | 0     | 5.56   | 8.33         | 22.22        | 8.33   | 22.22        | <b>30.56</b> | 2.78   |
| Inner Harmony                | 0     | 0      | 4.00         | 16.00        | 12.00  | 32.00        | <b>36.00</b> | 0      |
| Human Rights and<br>Equality | 6.25  | 12.50  | <b>25.00</b> | 6.25         | 12.50  | 18.75        | 18.75        | 0      |
| Remaining                    | 0     | 0      | 6.25         | 25.00        | 18.75  | <b>31.25</b> | 12.50        | 6.25   |

### Quantitative Analysis

This analysis had as main aim to identify differences in the two items of the Subjective Happiness Scale, in terms of gender and age. To accomplish this analysis, non-parametric tests were made, more specifically U-Mann Whitney. In the variable gender, there were not any results statistically significant, showing that there are not differences between sex as it comes to subjective happiness, in any of the items.

As it concerns the variable age, the participants were divided in two independent groups: the younger adolescents (n = 141) and older adolescents (n = 189). In item one, there were identified statistically significant differences between the younger and older adolescents,  $U = 11192.50$ ,  $p = .01$ .

In item 2, the same pattern was verified, being again identified statically significant differences in the two groups,  $U = 11392.00$ ,  $p = .02$ . The results showed that the younger participants pointed significantly higher level of subjective happiness than older participants in the two items.

### Discussion

This study intended as a first aim to identify the definitions of happiness among adolescents. The specific purposes consisted in comparing these visual concepts between happier and unhappier adolescents and finding out differences in the corresponding ages of adolescence.

Regarding the main aim, all the responses were categorized in themes to proceed the analysis. It was verified that the specific theme "people" was present in more than half of the sample, more precisely "family", "friends" and "family and friends". This theme was characterized by social

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interactions, people holding hands and the presence of some scenarios which demonstrate the importance of family and social context in adolescents' happiness. The role of family is known in research showing that when the familial relationships are positive, adolescents report higher levels of happiness compared to positive peer experiences (Dew & Huebner, 1994). Furthermore, the start of the independence from parents increases the importance of social relationships, verifying a positive relation between relationships with peers and happiness (Oberle, Schonert-Reichl, & Zumbo, 2011). The conjugation of the two types was common, possibly because of two factors: (1) Positive relationships with parents increase the odds of positive relationships with friends (Theran, 2010) and (2) Family and friends are two settings where adolescents prove their capability to interact effectively with others (Caprara, Steca, Gerbino, Paciello, & Vecchio, 2006).

As it comes to "hobbies", the subthemes identified were "outdoor activities", "technologies" and "music and reading". The importance of the natural environment in happiness is not very clear for adolescents as it is for children (Mainella, Agate, & Clark, 2011). As adolescents typically defined their leisure according to less structured and highly social activities, as demonstrated on the amount of people drawn in this subtheme, is not surprising that nature activities contribute to positive development (Larson & Seepersad, 2003; Mainella et. al, 2011). "Technologies" appear as an important part of adolescents' activities due to the increase of screen time as technologies develop and, if they use this mean to seek new opportunities of interaction, well-being increases (Rideout, Foehr, & Roberts, 2010; Gross, Juvonen, & Gable, 2002). Music and reading show importance as self-selected activities like the previous ones (Todd Bartko & Eccles, 2003). Music specifically is considered the most pleasurable and satisfying artistic activity in adolescence (Roberts, Henriksen, & Foehr, 2009).

"Love" appeared to be an important illustration among the images as hearts. Through them it is difficult to ascertain what type of love adolescents were trying to express, but this focus is unsurprising. Adolescents tend to attribute a fundamental role to love when evaluate their happiness, being family, friends and partners' love considered a key element (Park, 2004; Montero, 2006). Love is a manifestation of the human need to attachment and affiliation, being crucial to psychological adjustment (Park, 2004).

The theme "smile" was underlined by the vision of positive emotions and feelings, demonstrated in the *hSquares* as faces smiling. This emergence is consistent with previous research, being this one of the most mentioned variables (e.g., López-Pérez et al., 2016). As smiling is the behavioral manifestation of happiness, being something that can be seen, the demonstration of positive affect is a central concrete element for its conceptualization in adolescents (Datu & Valdez, 2012).

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“Sports” were present in some drawings, showing the role of this activity in adolescents’ happiness, specially soccer. It is known the positive effect of playing a sport, not only in physical and mental health, but also in the development of certain abilities as leadership and communication (Yavuz, 2019). A more recent analysis exposed that positive attitudes towards sports had a direct and negative correlation with loneliness in adolescence (Yavuz, 2019). Furthermore, it was verified a direct and negative association between loneliness and happiness (Yavuz, 2019). These results show that the sport context is an environment where the interpersonal relationships are facilitated and, as verified previously, the social context has a lot of impact in adolescent’s happiness (Yavuz, 2019; Oberle et al., 2011). This relation is accentuated when is talked about collectivist sports as soccer, being communication and socialization competences developed (Yavuz, 2019). The fact that Portuguese adolescents focus more on soccer is not clearly studied. Nevertheless, soccer is a part of the Portuguese culture, being appreciated in all age groups. Thus, it seems that cultural factors also have impact on happiness.

The specific theme “basic needs” does not appear in a lot of previous studies as an important variable for adolescents, being in the present study focused on physiological (e.g., food, drink) and security needs (e.g., health, money, house). Some investigations showed that homeless children had lower life satisfaction, exposing that this variable is influenced by the basic needs met or not (e.g., Cummins, 1997). According to Maslow (1943), only when basic needs are assured, the individual can progress to more complex needs. Studies show that adults of a lower socioeconomic status emphasize more basic needs than the medium status who refer more complex needs (Gratton, 1980). Although the research on adolescents is scarce, the same pattern can occur, being the adolescents who mentioned this variable the ones with the physiological or/and security needs compromise or previously compromised.

“Inner Harmony” represented positive intrapersonal variables, such as self-esteem, self-love, success and accomplishing goals, appearing in the drawings through diverse analogies. Navarro and colleagues (2017) also found an association between happiness and the themes “feelings towards yourself” and “life aspirations”. Furthermore, investigation shows that when these factors are positive, happiness tend to increase (e.g., Malo, Navarro, & Casas, 2012). Some of these concepts (e.g., optimism, achieve goals, self-esteem) are related to hope as a form of positive thinking which is a key force to the development of adolescence, acting like a protective role and predicting future well-being (Blanca, Ferragut, Ortiz-Tallo, & Bendayan, 2017).

The last theme “Human rights and equality” was portrayed by happiness as something beyond themselves, representing altruistic emotions. This result appears to be preliminary due to the absence of

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this concept in previous research and its emergence could be facilitated by the drawings. Studies in adults show that altruistic emotions can improve positive emotions as feeling good towards themselves and others and can contribute to dominate the negatives ones as depression and anxiety (Post, 2005; Anderson, 2003). More specific findings in adolescence found that who has more frequency of positive emotions is more willing to commit beyond self, showing more concern with the society (Magen, 1996). Thus, this variable produces positive affect which is a component of happiness.

Regarding to the subjective happiness, it is verified that, in general, adolescents evaluate themselves as happy, although this perception decreases when comparing themselves with peers. It was verified no sex differences in subjective happiness. This result appears also in López-Pérez and colleagues (2015) which explained that as children grow older, the gender effects tend to disappear progressing to adults also with no differences. Furthermore, it was also identified that younger adolescents have higher levels of subjective happiness than older adolescents, portraying some previous results (e.g., Csikszentmihalyi & Hunter, 2003). Moneta and colleagues (2001) explain this tendency by older adolescents experience higher levels of conflict mostly associated with identity.

When it comes to the themes represented, it seems that “people” was the main concept having some variations between groups in the subthemes. Happier adolescents tend to prioritize “family and friends” and unhappier adolescents emphasize “friends”. Navarro and colleagues (2017) also found similar results, showing that when adolescents are unhappier, the family contributes less for their happiness than friends. This result can be explained by the emotional need of adolescents to detach themselves from parents to start creating their autonomy (Steinberg, 2001). The detachment can lead to some form of parent-adolescent conflict, revealing less positive familial relationships (Steinberg, 2001).

“Hobbies” also present some variations in the groups, showing that happier adolescents focused more on “outdoor activities” and the remaining on “music and reading” and “technologies”. As the first variable was drawn with focus on relationships, it is not surprising that this activity is among the happier adolescents (Larson & Seepersad, 2003). By contrast, both “music and reading” are more lonely activities, which are negatively related to happiness (Yavuz, 2019). Furthermore, music can induce happiness and unhappier adolescents can use it to improve their emotional status (Juslin & Sloboda, 2010). “Technologies” were less represented by the first group and, in comparison, more by the second. As technologies develop, nature activities tend to decrease and screen time to increase (Mainella et al., 2011; Richard, McGree, Williams, Welch, & Hancox, 2010). Besides, it was verified that more online time is related to less connection with parents and peers (Richards et al., 2010). With poorer social and familial

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relationships, happiness tends to decrease (Diener & Tay, 2017). Additionally, the use of internet is also associated with an increase of depression (Gross et al., 2002).

“Sports” appeared in different frequencies between the groups, being less mentioned in the unhappier group. Results of Yazus (2019) explained that less positive attitudes toward sports, can predict loneliness and, as mentioned before, loneliness is inversely related to happiness. As sports have a very present social context and a lot of physical and mental benefits, it makes sense that this variable is more mentioned by happier adolescents (Yazus, 2019).

The next themes did not have major differences between the groups but can indicate a pattern. “Smile” appear slightly less on unhappier adolescents, showing that this behavioral manifestation of positive affect may be less represented on these adolescents’ concept (Datu & Valdez, 2012). “Love” had the same pattern which can represent again the potential deficits in their direct context (Diener & Tay, 2017). “Inner Harmony” was a little more mentioned by unhappier adolescents, some already seen in previous investigations (e.g., Proctor, Linley, & Maltby, 2010; Navarro et al., 2017). This result is important because it shows that these adolescents could benefit of more specific interventions focused on the intrapersonal variables (Proctor et al., 2010). The remaining themes did not differ much between the groups.

In terms of variations across age, the main result found indicates that younger adolescents usually represent only one theme and older adolescents represented typically two or more themes. This shows that more complex concepts of happiness emerge throughout adolescence, progressing to more eudaimonic conceptions (López-Pérez et al., 2016). With the development of abstract thinking during adolescence, it is possible that this conceptualization is complexify over time and viewed as the interaction of multiple factors (Gelman, 1969). Being so, it is understandable that only “smile” appeared more on younger ones due to the gradual passage of concrete thinking to abstract thinking during adolescence (Gelman, 1969). On the contrary, older adolescents, as the 17-year-old ones, can make more cognitive evaluations portraying more themes (Coffey, Wray-Lake, Mashek, & Branand, 2014).

The themes “people” and “hobbies” were mentioned across all ages, results consistent with the literature which indicates the central aspect of the context in this age group (e.g., Chaplin, 2009). The disappearing of only “family” throughout 14 and 15-year-old can indicate the emotional detachment as previously mentioned and can coincide with the sample of unhappier participants (Steinberg, 2001). “Technologies” are also represented in all ages possibly due to the increase of screen time during the entire adolescence (Rideout et al., 2010).

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When it comes to the remaining themes and subthemes, it appears some changes in the age of 15, age that literature refers an increase of depression (Brooks-Gunn & Peterson, 1991). It seems that the subthemes “outdoor activities” and “music and reading” rarely appeared before this age. The comparison between groups showed that the first hobby was more represented by happier adolescents and the second one by the unhappier. Thus, the appearance of this pattern can indicate the hobbies which define the path of happiness or unhappiness in adolescence. Nevertheless, further investigation is needed.

When it comes to “inner harmony”, it is verified a tendency to increase through adolescence, which is something expected (Coffey et al., 2014). Again, older adolescents can make cognitive evaluations about abstract concepts, indicating that they can use fewer concrete examples (Coffey et al., 2014). The concept of achieving goals is also predicted due to an increase of extrinsic motivation and decrease of intrinsic motivation typical in older adolescents (Gillet et al., 2012). Additionally, it seems that the pattern was modified at 15. This can be explained due to the achieving goals part is attach to the intrapersonal variables, which tend to appear in even older adolescents (Chaplin, 2009). “Love” and “basic needs” also present that same pattern, being something that gains importance as age increases, except on 15. The increase can mean the emergence of more complex concepts, and in this age is possible that these two themes are not seen as a priority. These results also can be explained by the smaller sample of 15-year-old, so further research is needed.

“Sports” seem to appear more in the younger and older adolescents. The positive effects of sports in early adolescence are already known, being one of the most constructive and enjoyable hobbies in this stage (e.g., Kirshnit, Ham, & Richards, 1989). This effect tends to decrease with age due to the development of new interests’ non-sports related and the appearance of social comparison between peers (Kirshnit et al., 1989; Roberts, 1986). This is not consistent with the importance of sports in older adolescents, but the emergence of this theme can be related to the importance of achieving goals in the late adolescence, being these goals linked to sports aims (Chaplin, 2009).

The “human rights and equality” theme appear more on the age of 13 and less on 14 and 15-year-old. Concerns with society and morality starts to emerge on adolescence, meaning that probably the younger adolescents are the ones who focus more on this (Eisenberg, 1986). With the decreasing of positive emotions associated with the development of adolescence, this variable can diminish the readiness to commitment beyond self (Moneta et al., 2001; Magen, 1996).

### **Conclusions and Limitations**

It was verified that, in general, adolescents perceive themselves as happy, contradicting some older visions focused on the deficit. By understanding, their visual representation of happiness it is possible to identify what are the protector factors or recognize what is needed to achieve happiness. Not only is possible to improve well-being on unhappier adolescents as well increase the levels of subjective happiness on already happy adolescents.

As something completely new when it comes to psychological concepts, it is understood that the “draw-and-write” technique can be used successfully with psychological measures, providing additional information to previous theoretical frameworks. Nevertheless, this study presents some limitations that future research can consider. Other studies using this technique emphasize the difficulty of drawing in participants with fewer artistic skills, who feel the need to attach subtitles. Some participants also can demonstrate this inability not drawing the initial thought and changing the plan to achieve better performance. Also, it was verified that the written part was constituted by full descriptions of happiness, sometimes escaping what was drawn. Some forms to control this can be used, being firstly explained in the description of the task. As only thematic analysis was utilized, further analysis in these images can provide even a more complex vision on happiness, including the written part. Furthermore, is needed new research to find out if the decrease of themes on 15-year-old adolescents is due to changes in this age or because the sample size was smaller.

The present investigation shows that is needed innovative methods to achieve the understanding and the processing of abstract concepts, influenced by so many factors. Regardless, this method brings a new important cognitive component in terms of visual representations. Happiness is such a complex construct that understanding how adolescents perceived and interpreted it appears to be something important to happiness studies. With the arising of new factors, it is possible to view happiness as different to adolescent to adolescent and what are the factors more associated to happiness and unhappiness. With this broader vision, it is possible that the decrease of subjective happiness in adolescence can disappear with specialized intervention, diminishing the depression rates. The emergence of “people” as central to adolescents shows that interventions focused on familial and social relationships can be the first two factors which potentially can improve well-being and diminish some type of psychopathology.

This study shows importance because it provides a broader concept of happiness, being these the major factors subjacent to happiness. The results and further research not only have implications for clinical practice with adolescents, but also promote higher knowledge on something so hard and unique to describe.



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