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The impact of self-concept and self-esteem in adolescents’ knowledge about HIV/AIDS

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Abstract

Background: A high self-concept fosters a better sense of self-efficacy, enhancing learning strategies that facilitate information processing. Risky sexual behaviours are highlighted among the attitudes and behaviours associated with low self-esteem or self-concept. Objectives: To determine the relationship between socio-demographic, school context and psychological variables (self-esteem and self-concept) with knowledge about HIV/AIDS among adolescents in secondary education in Portugal. Methods: Quantitative, cross-sectional, analytical, descriptive and correlational study, with a sample of 971 adolescents in secondary education. The evaluation protocol includes: the socio-demographic questionnaire, Rosenberg’s Self-Esteem Scale (Romano, Negreiro & Martins, 2007), the Self-Concept Clinical Inventory (Vaz Serra, 1984), and the Knowledge Scale about AIDS for Adolescents (Zimet et al., 1989). Results: Adolescents aged 14-21 have high self-esteem (47.40%) and high self-concept (45.30%). Adolescents with high self-esteem show more knowledge (mean = 15.36, sd = 4.28), and those who have low self-esteem have less knowledge (mean = 13.20, sd = 5.89). The differences between groups are significant (t = 21.695; p = 0.000). When we analyse self-concept we conclude, that adolescents with high self-concept are those which show more knowledge; on the other hand, adolescents with low self-concept are those with less knowledge. Furthermore, note that the differences are between low and moderate self-concept (p = 0.000) and low and high self-concept (p = 0.000). Conclusion: Among attitudes and behaviours related to low self-esteem and self-concept are risk behaviours in the context of sexuality – non-use or inconsistent use of condoms during sexual intercourse. The HIV/AIDS infection was responsible for significant changes in the health field giving rise to the discussion of sexual behaviours associated with beliefs, values and myths because it is a disease whose transmission is very directly related to sexuality.

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Adolescence is a stage of development in which there are physical, cognitive, psychological and socio-cultural changes. The physical and cognitive changes are crucial aspects because they precede and portend the psychological and social challenges that will confront adolescents to constitute the foundation of different ways for them to respond.

The early years are difficult for most young people as psychological growth does not accompany the rate of physical growth. Turner (1962) and Fonseca (2005) highlight the tasks and challenges that adolescence entails that make this phase of life difficult even when it is stable and healthy. The social expectations Turner (1962) mentions determine the nature of adolescence. Adolescent forms of being and tensions that may manifest depend upon those very expectations.

The conquest of autonomy, the so desired independence, is one of the tasks in this phase. In Western societies, as a result of their socio-economic situation, this challenge has been increasingly difficult. As a result adolescence has been extended and ends later. Sprinthall & Collins (2005) believe that industrialized societies have hampered this period on young people giving them a marginal status by increasing their period of dependence.

Erikson was the first author to identify it and assign it a fundamental importance in the process of adolescent growth, considering it an integrating process of personal transformation, social requirements and expectations for the future (Sprinthall & Collins, 2005). For most authors construction of identity is one of the main tasks of adolescence. Knope defines adolescence as a major discontinuity in the growth process and the resolution of the identity crisis, the main task of this stage (Sprinthall & Collins, 2005).

Self-concept has a dynamic nature: it starts in childhood and is structured along the different stages of life and development stages (Freitas, 2009). Hattiecit (quoted in Freitas, 2009) considers that the most significant changes and a more precise expression of self-concept occur in adolescence.

The importance of self-concept stems from the fact that this construct explains many other psychological variables; it is an indicator that measures the level of adjustment to life and emotional well-being, influencing how individuals are motivated, acquire and reach levels of success desired in different areas of their existence (Freitas, 2009).

This reflects the self-construction perception of their image on others and how others judge them. Individuals with a positive self-concept have a positive perception of themselves and consider others in a less threatening way, i.e., they have the best coping strategies, feeling better about themselves and others.

The analysis of self-concept in adolescence is important for its predictive capacity of various behaviours in different contexts of life, family, social, school, and those contexts which include the group of individuals that our study involves. Vaz Serra (1988) quoted in Santos (2009, p.6) states that self-concept has a strong influence on everyday life, since it is useful in evaluating expressions of inappropriate behaviour, allowing human behaviour to be predicted and to know the idea an individual has of himself.

Among attitudes and behaviours related to low self-esteem and self-concept are risk behaviours including sexual behaviour, which highlights a smaller care of adolescents in the practice of unprotected sex (Salazar et al., 2004 quoted in Naranjo, 2012).

A study by McNair et al. (2008) quoted in Neto (2012) showed that a student engaging in risky sexual behaviour varies according to gender, level of self-esteem and alcohol consumption. The author concluded that men with high levels of self-esteem had higher condom use. In contrast, women with low self-esteem adopted less protective behaviours, requiring their partners to use a condom less often. This attitude resulted in increased risks for themselves and their partners. In this study, the data showed that having high self-esteem is an agent of protection.

The experience of sexuality comprises beyond gender identity, self-concept, self-image and self-esteem. A positive sexual self-concept is characterized by self-acceptance, the self-comfort and self-worth for the male and
female. Physical and psychological changes in the individual can adversely affect sexual self-concept, especially in adolescence when the changes and adjustments are constant.

Sexuality is a significant element in the formation of adolescent identity, manifested by multiple identifications, such as body image, the discovery of the other as an object of love or desire and discovery of self and relationships with family members, and professional groups. Unlike the adolescents’ perception, experiencing sexuality is very complex and pervades cognitive aspects ranging from the most primitive (sensory) to more complex representation schemes, involving body language, facial and other signalling systems, to which we add extremely relevant cultural aspects (Romero et al., 2007).

In reviving interest in genitalia, eroticism, sexuality which in many ways seems to guide the attitudes and behaviour of young people, is a decisive contribution to the construction of identity and autonomy that characterize adulthood. The teenager, experiencing a stage of building autonomy and identity which is important in the passage of childhood sexuality to adult sexuality is, by his immaturity and sexual risk behaviours a particularly vulnerable being (Nodin, 2001; Matos et al., 2006;), and infection by human immunodeficiency virus is an important form of expression of this vulnerability. The vulnerability also stems from social and economic, cultural and gender factors.

Since 31 years ago in a global epidemiological scenario, the advent of AIDS has been the subject of numerous studies, including the adolescents’ knowledge, attitudes and behaviours. The findings have been responsible for significant changes in the health field bringing with it discussion of sexual behaviours, associated with beliefs, values and myths as AIDS is a disease related to sexuality. In this respect Tura (1998), quoted in Camargo (2007) states that the complexity of the HIV/AIDS phenomenon stems from its involvement with sexuality, affection, desire, the need for affirmation, norms, values and information.

AIDS is major threat to adolescents’ health, many of the new cases involve young people between 15 and 24 years old (41% of new cases in 2011) (UNAIDS, 2012).

HIV/AIDS has a different dynamic when it comes to teenagers and young adults compared to the general population. In adults of cases of HIV/AIDS mainly occur between men and among them, the primary mode of transmission is heterosexual. When we only consider the age group of 13 to 24 years, the reality is different. In the age group of 13-19 years most of the records of the disease are among the female adolescents. In young people, the main way HIV is transmitted is homosexual (accounting for 39.2% of the cases - when the adult population, this figure is 27.4%) (UNICEF, 2011).

There are some behavioural, socio-economic and biological characteristics that make young people prone to HIV/AIDS (UNAIDS, 2011; UNAIDS, 2012). Assuming AIDS is a social disease, which is behavioural in nature, it is worth revisiting the behavioural characteristics that increase adolescent susceptibility. These include: early onset of sexual activity, the discontinued use or non-use of condoms, often due to ineffective information owing to lack of trust in its sources, or just the will to live intensely which incapacitates condom use in moments of erotic and emotional intensity, duration of relationships and the practice of unprotected sex with multiple partners.

Comprehensive education on HIV and sexuality is a priority for UNESCO and UNAIDS. This is clearly expressed in the UNAIDS Strategy and Results Framework, establishing the support of youth as a priority, so that they have the ability to protect themselves from HIV through full knowledge about the virus, particularly in sexual education.

Access to information has been a way of excellence to train and empower the individual and the community in this clash of titans that at first glance appears uneven. In countries with generalized epidemics, a combination of behavioural changes, including reducing the number of sexual partners, condom use, first intercourse at a later age, and voluntary circumcision has reduced the number of new infections.

In the male universe, vulnerability is accentuated by the influence of cultural patterns that instigate the young teenager to prove their masculinity and sexual potency often meaning having multiple sexual partners (Pereira,
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2007) which ultimately places them at great risk of acquiring sexually transmitted infections including HIV/AIDS.

Adolescence is a time of change, discovery, conquering autonomy and building a new identity in that a new sexuality will be moulding and taking shape, from experience to experience, from discovery to discovery. For this edification to arise safely it is necessary that the social fabric in which the young person is immersed and growing is responsible for implementing a set of strategies to promote contiguous knowledge to be assimilated and processed, to empower young people, allowing them to engage consciously in safe practices also in the context of sexuality.

Although the analysis of several studies allow us to conclude that young people’s knowledge and attitudes about safe behaviours exist in this area, the same studies also lead us to infer that many young people still do not put them to use in their everyday practice. This gap can be attributed to the idea of invulnerability, anchored in their magical thinking, or by not processing the knowledge conveyed in the various sources to which they have access.

Favourable changes that operate within the HIV/AIDS may be responsible for changes in attitudes of young people against this health problem that has very marked social and behavioural components.

Knowledge about HIV/AIDS is important but not enough for young people to adopt protective behaviour. However, lack of information, coupled with other determinants adds to their vulnerability. Researchers claim that the subjects who have adequate information have more positive attitudes towards condom use (Giacomozzi & Camargo, 2011; Araújo, 2012; Albuquerque et al., 2012).

2. Material and Methods

A quantitative, cross sectional, analytical, descriptive and correlational study with a sample of 971 adolescents in secondary education. The evaluation protocol includes: a socio-demographic questionnaire and Rosenberg’s Self-Esteem Scale (Romano, Negreiro & Martins, 2007). This is a one-dimensional measure that explicitly assesses global self-esteem, measuring the value that individuals assign themselves as a person. It consists of 10 items. The Self-Concept Clinical Inventory (Vaz Serra, 1986), a Likert type scale consisting of 20 items to measure the emotional and social aspects of the self-concept, is also used. Classification of each item may be at least one (1) and at most five (5), since each item has five possible answers. The scale is generally constructed so that the scores increase from left to right, ultimately providing the sum of items that can range from a minimum 20 to a maximum of 100. Knowledge about AIDS Scale for Adolescents (Zimet et al., 1989) is used as well. It is a scale with 22 items in the form of a question. The answer to each item is given by indicating “Yes”, “No” and “Do Not Know” according to whether the hypothesis is considered correct. The correct answers are given a score of one (1); the remaining are given a score of zero (0). The total score of the scale is the sum of all the items and can range from zero (0) to twenty-two (22).

Objectives: To determine the relationship between socio-demographic variables, variables concerning school context and psychological (self-esteem and self-concept) variables with knowledge about HIV/AIDS among Portuguese adolescents in secondary education.

3. Results

In our study, the population is between 14 and 21 years old, with an average of 16.80 years, a standard deviation of 1.38 and a coefficient of variation (CV) of 8.21% which suggests low dispersion. The average age for males, 16.84 years, is higher than that of females (16.76 years) (Table 1).
Table 1 - Statistics regarding age and gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th>S</th>
<th>x</th>
<th>Min</th>
<th>Max</th>
<th>Dp</th>
<th>CV%</th>
<th>Sk/error</th>
<th>K/error</th>
<th>K/S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>493</td>
<td>16.84</td>
<td>14</td>
<td>21</td>
<td>1.41</td>
<td>8.37</td>
<td>5.500</td>
<td>0.682</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>478</td>
<td>16.76</td>
<td>14</td>
<td>21</td>
<td>1.35</td>
<td>8.05</td>
<td>6.161</td>
<td>2.484</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>971</td>
<td>16.80</td>
<td>14</td>
<td>21</td>
<td>1.38</td>
<td>8.21</td>
<td>8.282</td>
<td>2.096</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

The adolescents in the sample live mostly in rural areas (66.40%), with the remaining 33.60% living in urban areas. Application of the chi-square test allows us to conclude that there is no statistically significant relationship between the variables area of residence and gender ($\chi^2 = 0.563$, $p = 0.453$). 77.30% of students live with their parents, 53.20% live with sibling(s); 16.20% say they live with only one parent; 7.60% live with their grandparents and 2.90% with other relatives. 5.00% of the teenagers claim to live with people other than family. The educational level of most subjects’ fathers is mainly the 2nd and 3rd cycle (45.30%), followed by 23.80% with the 1st cycle of basic education and 19.90% with secondary education. Most mothers attained the 2nd and 3rd cycle (44.50%), followed by 20.80% who have education up to the 1st cycle, 19.80% with secondary education and 12.80% of the mothers have higher education. We found that 56.70% of households have an average medium-high or high income; the remaining 43.30% have a medium-low or low income.

The students whose household income was high or medium-high showed better average rates of self-concept. However, only in relation to factor 1 of the self-concept scale (social acceptance/rejection) were statistically significant differences found ($t = -2.901$, $p = 0.004$).

Students in the 12th grade show better self-concept, followed by students in the 11th grade; however, the differences found were not statistically significant ($p = 0.070$). It was the students who like school that showed the best self-concept, with statistically significant differences ($p = 0.001$).

Most students reveal good self-esteem (47.40%). The boys showed on average higher self-esteem than girls, both in the global scale ($t = -2.218$, $p = 0.027$) and for the self-esteem subscales ($t = -3.202$, $p = 0.001$) and negative self-esteem ($t = -0.874$, $p = 0.382$-n.s.). 17-year-old students showed the best average values of self-esteem in relation to others, both on the global scale and the subscales. However, the differences proved to be statistically significant only in the negative self-esteem subscale ($p = 0.001$) and overall scale score ($p = 0.004$). Students living in urban areas, with an average medium-high or high income, had a weekly average allowance for personal expenses exceeding €10 and less than or equal to €25. Students in the 12th grade who perceive themselves with the ideal weight show better self-esteem.

The statistics about HIV/AIDS knowledge indicate, for the overall sample and for both genders, a minimum value of 0 and a maximum of 22. The rates are higher for females (mean = 3.92 ± 15.41) leading to the conclusion that they have more knowledge about HIV/AIDS than male subjects (mean = 13.63 ± 5.75) and the differences were statistically significant ($t = 5.625$, $p = 0.000$) (table 2).

For the entirety of the sample the average found for HIV/AIDS knowledge stands at 14.51 with a standard deviation of 5.01, with a sampling error of 0.160 and confidence interval of 95%.
Table 2 - Statistics concerning knowledge about HIV/AIDS

<table>
<thead>
<tr>
<th>Knowledge about HIV/AIDS</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>0</td>
<td>22</td>
<td>15.41</td>
<td>3.921</td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td>22</td>
<td>13.63</td>
<td>5.75</td>
</tr>
</tbody>
</table>

Knowledge about AIDS 0 22 14.51 5.01

We analyzed the relationship between self-esteem, self-concept and knowledge about HIV/AIDS. With regard to self-esteem, the results indicate that adolescents with high self-esteem are those who have more knowledge about HIV/AIDS and adolescents with low self-esteem have less knowledge as shown in Table 3. Differences between groups are statistically significant. The post hoc tests indicate that the differences are located between the group with low and moderate self-esteem (p = 0.000) and low and high self-esteem (p = 0.000). The percentage of variance is low (4.0%).

When we analyse self-concept we conclude, by the values presented, that adolescents with a high self-concept are those which show more knowledge. In contrast, adolescents with low self-concept are those with less knowledge. Furthermore note that the differences are between the low and moderate self-concept (p = 0.000) and low and high self-concept (p = 0.000). The variability is at 6.3%.

Table 3 - Analysis of variance between self-esteem, self-concept and knowledge about AIDS

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>f</th>
<th>p</th>
<th>% V. E.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-esteem</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>13.20</td>
<td>5.84</td>
<td>21.695</td>
<td>0.000</td>
<td>4.3</td>
</tr>
<tr>
<td>Moderate</td>
<td>15.24</td>
<td>3.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>15.36</td>
<td>4.28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self-concept</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>12.86</td>
<td>5.68</td>
<td>32.41</td>
<td>0.000</td>
<td>6.3</td>
</tr>
<tr>
<td>Moderate</td>
<td>15.30</td>
<td>4.66</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>15.53</td>
<td>4.15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Discussion and Conclusions

Adolescence is a stage in the life cycle where the desire for experimentation and exploration of new sensations leads to risky behaviour. Low self-esteem in the family and school environments, connected to a high self-esteem in relationships with peers, is associated with an increase of risk behaviour (Naranjo, 2012). In our study we conclude that adolescents with high self-esteem show more knowledge about HIV/AIDS (mean = 15.36, sd= 4.28), with significant differences between groups (f = 21.695, p = 0.000). This conclusion will be a favourable factor in predicting positive attitudes and behaviour because, within healthy lifestyles and health promotion, research has shown that young people with low levels of self-esteem have worse physical health (William, Chan, Chung y Chui, 2010 quoted in Naranjo, 2012). Among attitudes and behaviours related to low self-esteem and self-concept are risk behaviours concerning sexuality, which highlights less care on the part of adolescents in practicing unprotected intercourse (Salazar et al., 2004 quoted in Naranjo, 2012). Because of its predictive capacity in relation to various behaviours in different contexts of life (family, social, school), the adolescent’s self-concept has a strong influence on everyday life. It allows human behaviour to be predicted and provides the
idea that an individual has of himself (Santos, 2009). Based on this premise, and based on the results of our study we can conclude that adolescents of lower-middle to low income families, students in the 10th grade and students who dislike school are those who are more vulnerable to risk behaviours as they present lower average levels of self-concept. The teenager by his immaturity becomes particularly vulnerable to adopting sometimes risky sexual behaviours (Nodin, 2001; Matos et al., 2006) and infection by the Human Immunodeficiency Virus. The vulnerability also stems from social and economic, cultural and gender factors. Poverty and social exclusion are obvious determinants of infection and provide life contexts that contradict preventive behaviours. Our study shows, with significant differences ($t = 5625$, $p = 0.000$), that girls have more knowledge ($x^2 = 15.41$, sd = 3.92) than boys. Teens aged 17 have more knowledge ($x^2 = 15.24$, sd = 4.73) with significant differences ($p = 0.003$). Students in the 12th year have more knowledge ($x = 15.62$, sd = 4.51) and those in the 10th year have less ($x^2 = 13.53$, sd = 5.40) with significant differences. Teenagers of families with higher monthly income have more knowledge (mean=14.80, sd = 4.77). A perspective of vulnerability, according to gender, based on the results published in several studies, allows us to say that the probability of infection is 2.5 times higher in female subjects (UNAIDS, 2012) and that this is associated with biological, economic, socio-cultural, legal and educational factors, activities that often compromise the ability of young women to protect themselves against HIV/AIDS transmission (UNAIDS, 2010). UNESCO (2012), states that the HIV/AIDS has had a devastating effect on young women, who represent 66% of infections in young people worldwide. It is the leading cause of death and disease among women of reproductive age (aged 15-49 years); infected women are more likely to be targeted for violence because of their condition with HIV/AIDS (UNESCO, 2012). The HIV/AIDS phenomenon is challenging and complex as it is structured on different factors such as sexuality, affection, desire, need for affirmation, as well as norms, values and information. The fight and struggle for its eradication requires a comprehensive education on HIV/AIDS, in order to increase knowledge, develop skills, promote positive attitudes and reduce risk behaviours.

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References


