16th International Summer School 2010

European Ph.D. on
Social Representations and Communication
At the Multimedia LAB & Research Center, Rome-Italy

"Social Representations and Sciences"

16th - 27th July 2010
http://www.europhd.eu/html/_onda02/07/18.00.00.00.shtml

Key Lecture

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Universidade Federal de Santa Catarina
Laboratório de Psicologia Social da Comunicação e Cognição (LACCOS)

Social Representations and Applied Sciences: the case of HIV prevention

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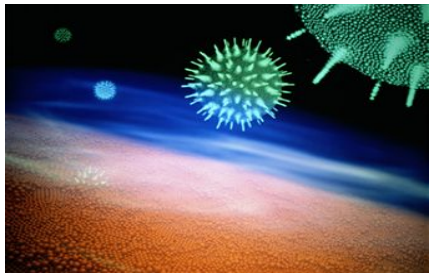
Aids is one of the most stigmatizing illnesses of the history of humanity. Since its emergence in Western societies, in 1981, it has represented much more than just a disease, becoming a phenomenon very fast (Sontag, 1993).

According to the World Health Organization (2005) there was no epidemic in the last 50 years more severe than aids, which gave it the status of pandemic.

The HIV/AIDS epidemic has hit all segments of society, regardless of socioeconomic conditions.



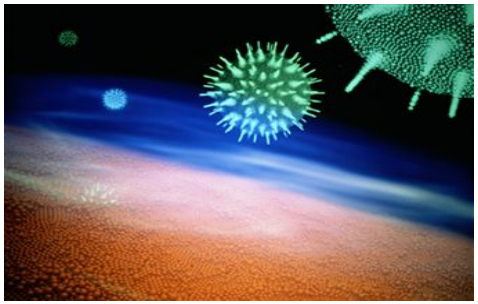
According to the statistics, 26 million of the 42 million people infected with HIV in the world are between 15 and 49 years old (WHO, 2009).

In Brazil, 544,846 cases of people with aids were registered from 1980 to June 2009.

The southern region of the country alone concentrates 19.21% of the notified cases, and the state of Santa Catarina was the second in the country in terms of incidence of aids by 100 thousand inhabitants in the year of 2009, with 33 new cases (Ministério da Saúde Brasil, 2010).

Laboratório de Psicologia Social da Comunicação e Cognição (LACCOS)

- The impact of different forms of scientific knowledge communication concerning HIV/Aids on the social representations about the illness, mainly on their information dimension.



Social representation on Aids

- In the 90s, studies about the structure of the social representation on aids demonstrated the centrality of the elements *sex*, *illness* and *death*.

- Morin and Vergès (1992) observed this double centrality of *death* and *illness* in the social representations of teenagers about aids from France and Belgium.

- Tura (2004) has observed that the following elements: *death, sex, condom* and *illness* composed the central core of a population of young people ranging from 14 to 18 years old from Rio de Janeiro, while *risk group, contamination, recklessness, loneliness, care, desperation, solidarity, cure, weakening* and *hospital* were the ones that formed the peripheral system of the social representation on aids.

Social representation on Aids

- Camargo (2000) observed, almost ten years after Morin and Vergès (1992) study, that the main central elements of the social representation on aids were *sex* and *prevention,* among others, characterizing the relationship of aids with the notion of sexual prevention.

- This change in the social representation seems to be related to the intense attention from the media about the prevention of the disease as the only form of protection.

Social representation on Aids

- Camargo, Barbará and Bertoldo (2007) in a research with students from the city of Florianópolis, pointed out the elements *death, illness, sex, preservative* and *prevention* as central and *prejudice, fear, sadness* and *drugs* as peripheral ones.

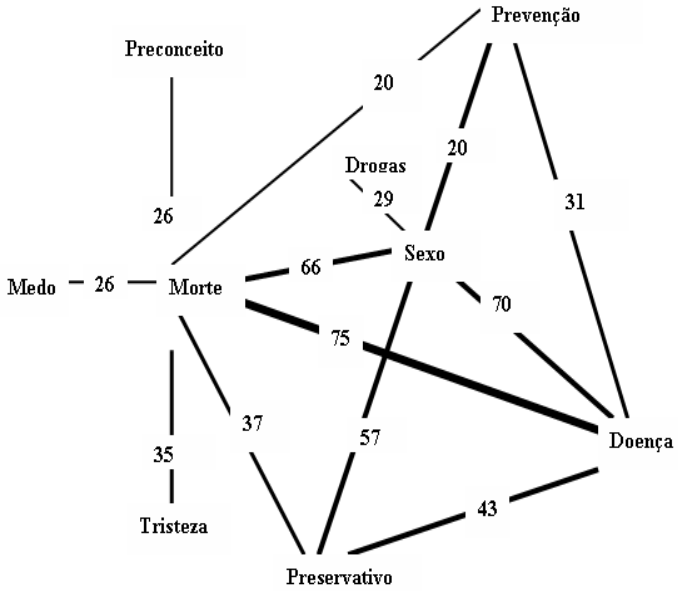


Figure 1. Social representation on aids – Cut-off 25

Social representation on Aids

- Barbará (2007) also carried out a study with secondary school students from Florianópolis and observed that other than the elements *sex* and *illness,* the element *prevention* shows up as central in the social representation on aids.
- The *death* element is still connected to aids, but in that study it had a peripheral status.

Social representation on Aids

- With the passing of time it has been observed that the functional elements that characterized aids as a mortal disease of sexual nature have gained an important element: the fact that it can be prevented.

- This also brought a normative quality to the elements: *sex* and *preservative,* the dissociation of the threat of the epidemic with a particular type of sex: the protected kind.

Knowledge about HIV/Aids

- Scientific knowledge is adapted as a new form of common sense, in which groups do not produce a scientific body of knowledge, but re-elaborate it according to their means and knowledge predispositions.

- Social representations have a fundamental role in the sense that they work to socialize scientific knowledge, introducing it in everyday communication and making it part of peoples' realities and lives.

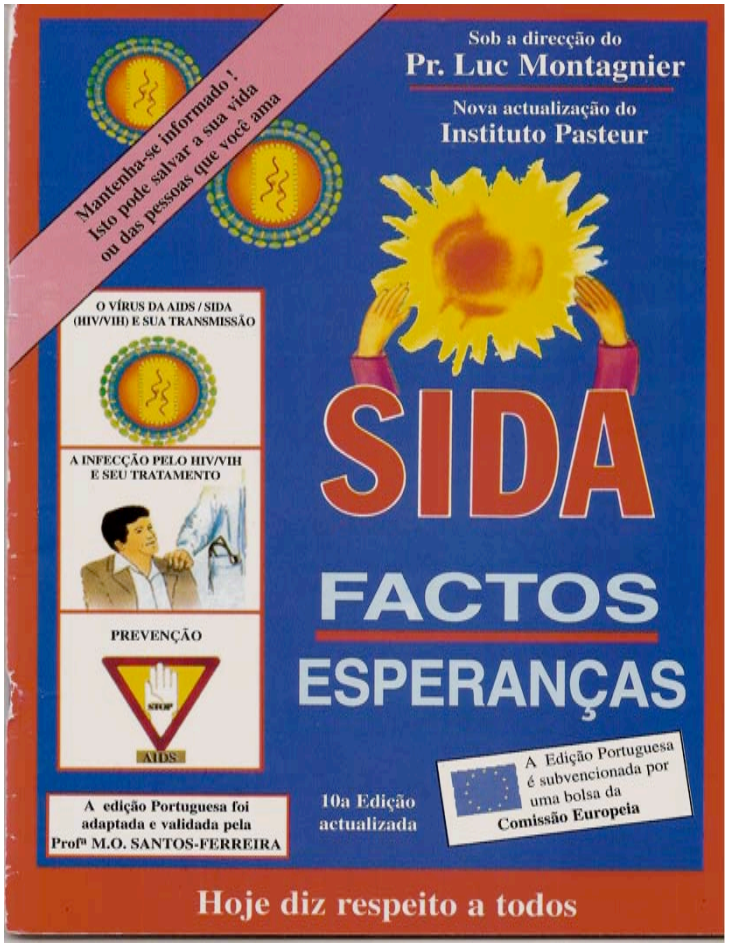
Knowledge about HIV/Aids

- Studies point out to a relationship between knowledge and preventive behavior (Almeida, Silva & Cunha, 2007); however, there are also other significant variables in the adoption of preventive practices (Camargo & Bertoldo, 2006; Camargo & Botelho, 2007; Trajman et al., 2003), such as affective commitment with the partner, having school as the main information source rather than television, among others.

- Most studies that evaluate knowledge about aids focus only correct and incorrect vectors in HIV transmission (Camargo, Botelho & Souza, 2001; Marquet, Zantedeschi & Huynen, 1998).

Knowledge test about HIV/Aids

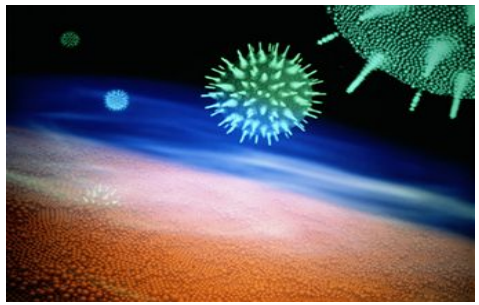
- This observation has led Camargo, Barbará and Bertoldo (2005) to elaborate a measurement instrument that evaluates more global knowledge of the contents about the topic, because knowledge on HIV/Aids involves also information about biology, infectology and treatment.
- Taking as reference the official publication of the Pasteur Institute, coordinated by Montagnier (1996), 24 items that had to be evaluated as being true or false.



Knowledge about HIV/Aids

- The items constituted 3 sub-tests, according to the classification proposed by the publication:
  1) the Aids virus and its transmission;
  2) HIV infection and its treatment and;
  3) prevention.

- This test of scientific knowledge on HIV/Aids (TSKHA) was administered in 262 public school students from the city of Florianópolis, with mean age of 17 years and 8 months, being that 56.9% were female and just 45% of the sample was considered well informed.



- Another more recent study, conducted in Brazilian and French suburban schools, employed only the first sub-test of the TSKHA, the one about the Aids virus and its transmission (Giacomozzi, 2008).

- The Brazilian participants had a mean of 5.80 correct answers (standard deviation 2.04) within 10 possible ones, while the French had a mean of 4.96 (standard deviation 2.16).

- The difference was statistically significant [$t = 4.34$; $df = 476$; $p < .001$].

Yet another knowledge test on HIV/Aids

- Also aiming at taking the global knowledge on HIV and aids into account, Natividade (2010) developed a test with 85 items to assess the level of scientific knowledge of people older than 18 years old about HIV and aids.

- Decomposed the knowledge on HIV and aids in six theoretical dimensions that described the theme:

  1. Aids and HIV description;
  2. History of the illness and HIV;
  3. HIV contagion and prevention forms;
  4. Aids symptoms and HIV functioning;
  5. Aids treatment and HIV control;
  6. Epidemiology.

- There were 480 participants with ages ranging from 18 to 63 years (*M* = 25.44 years; *SD* = 8.25 years), 67.7% were women. The mean of correct responses of the participants was 49.03 points (*SD* = 10.86 points; *Med* = 50 points).

- There were no differences of scientific knowledge level about HIV/aids between the sexes [*t*(478) = . 63; *p* = .53].

Knowledge, communication and aids prevention

- The presence of means for social communication is more intense in the contemporaneous lifestyle.

- The high rate of aids notification, mainly among the young, was one of the reasons that led the researchers from LACCOS to question the form with which the knowledge about the illness is being diffused.

Aids knowledge and communication through pamphlets

- Camargo and Barbará (2004) have conducted a study with 300 secondary school students from public and private schools of the cities of Florianópolis, Itajaí and Balneário Camboriú, in the state of Santa Catarina, about the effects of reading informative pamphlets about aids on the knowledge of that illness and on the attitudes towards preservative use.

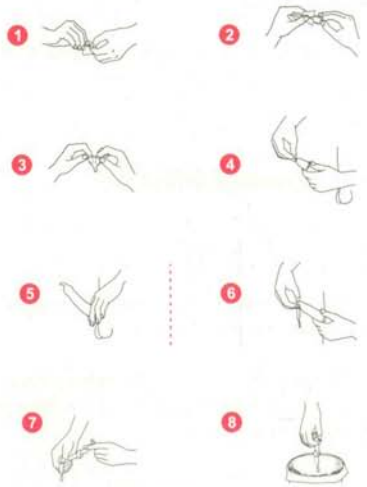
- Three experimental pamphlets were employed:
  - Pamphlet A (Adolescence and aids) did not emphasize any means of HIV transmission;
  - Pamphlet B (Adolescence, drugs and aids) linked the transmission of aids to drugs;
  - Pamphlet C (Adolescence, sexuality and aids) related aids transmission with sexually transmitted diseases (STDs).

- 7 items about the knowledge on HIV transmission and a scale of attitudes towards preservative use (Likert type with 4 points – medium point = 2.5) composed by 12 items.

Pamphlet A

Como utilizar o preservativo

- Verifique na embalagem: o selo de garantia do INMETRO, se está intacta e dentro do prazo de validade;
- Abra a embalagem com os dedos. Não use os dentes e nem as unhas. (1, 2 e 3)
- Com o pênis duro, coloque o preservativo desenrolando-o completamente e apertando sua ponta para sair o ar. Irá ficar um espaço vazio, pois é aí que vai ficar o esperma. Em caso de necessidade, use um lubrificante a base de água e não vaselina ou óleos (4 e 5).
- Retire o pênis quando ainda estiver duro. Segure o anel do preservativo junto à base do pênis para tira-lo (6)
- Dê um nó no preservativo, embrulhe em papel higiênico e jogue no lixo (7 e 8).



Endereços para informações complementares

Florianópolis

Secretaria Municipal de Saúde e Desenvolvimento
Tel: (48) 248-2401

Itajaí

Secretaria Municipal de Saúde
Tel: (47) 348-3313

Balneário Camboriú

Prefeitura Municipal
Tel: (47) 360-0309

São José

Secretaria Estadual de Saúde
Tel: (48) 246-1711

Blumenau

Secretaria Municipal de Saúde
Tel: (47) 326-6753

LACCOS *Laboratório de Psicossociologia da Comunicação e da Cognição Social*

UFSC - Universidade Federal de Santa Catarina

Adolescência e AIDS

Pamphlet A

Adolescência e AIDS

A Adolescência é uma fase da vida em que descobrimos muitas coisas novas, somos curiosos, queremos experimentar e viver intensamente tudo que é possível e que está ao nosso alcance. No entanto, o adolescente, muitas vezes, está aprendendo a lidar com vergonhas, culpas e medos associados, em nossa cultura, à prática sexual. Ele busca prazer e liberdade, que podem estar nos mais diferentes momentos da vida, como: ir à praia, ao cinema, ao shopping, praticar esporte, assim como namorar ou até mesmo usar drogas. Só que, muitas vezes, o resultado desses momentos de prazer e liberdade podem trazer conseqüências para o resto de nossas vidas, como uma gravidez não desejada, a dependência psicológica e química das drogas, doenças sexualmente transmissíveis, e a AIDS.

A AIDS (Síndrome da Imunodeficiência Adquirida) é uma doença causada pelo vírus HIV (Vírus da Imunodeficiência Humana), que destrói os mecanismos de defesa do corpo humano, provocando a perda da resistência (imunidade) natural das pessoas e o aparecimento de várias outras doenças chamadas oportunistas (tuberculose, pneumonia, câncer, meningite, etc.).

Atualmente, no Brasil, são 4.846 casos de adolescentes portadores do vírus da AIDS, na faixa etária de 13 a 19 anos de idade. Destes, 3.185 são meninos e 1.661 são meninas. A relação sexual sem preservativo e o uso de drogas injetáveis foram responsáveis por 94% do total de casos de AIDS na adolescência, entre aqueles onde se conhece a forma de contaminação.

Ainda não se descobriu a cura da AIDS. Por isso devemos nos informar sobre sua prevenção, como se transmite o vírus HIV, qual a relação da AIDS com as drogas e o que são as DST.

As DST

As doenças sexualmente transmissíveis (DST) são transmitidas através da troca de líquidos, secreções ou substâncias corporais, durante a relação sexual. O herpes genital, as verrugas (HPV), a hepatite B e a AIDS são DST transmitidas por vírus. A gonorréia, a clamídia, a sífilis, o cancro mole são transmitidas por bactérias. E a sarna, o chato e a tricomoníase são DST causadas por parasitas.

O sangue infectado também pode ser um meio de transmissão de DST, como a AIDS, a hepatite B e a sífilis. A presença de uma DST aumenta o risco de contrair ou transmitir o vírus HIV, devido às freqüentes feridas e inflamações nas mucosas e pele dos genitais. Como já vimos, mais da metade dos casos de AIDS, entre os adolescentes, tiveram como origem as relações sexuais sem preservativo, e geralmente outras DST antecedem a contaminação pelo HIV.

As drogas

As drogas são substâncias que, introduzidas no organismo, provocam alterações em uma ou mais funções do nosso corpo. Algumas podem ser consumidas livremente, sem que o usuário tenha problemas com a polícia ou a lei (lícitas), como o cigarro e o álcool. Outras não (ilícitas), como a maconha, a cocaína, o ácido lisérgico (LSD), o exctasy, o crack, entre outras. Tanto a droga lícita como a ilícita causam danos à saúde do usuário..

Quase metade dos casos de AIDS, entre os adolescentes, teve como origem o uso de drogas injetáveis, já que compartilhar seringas com pessoas contaminadas pelo HIV é um dos maiores riscos para o usuário. Como a maior parte das drogas reduz a capacidade de discernimento, seu uso pode também levar a práticas sexuais não protegidas ou outros comportamentos arriscados para quem a usa e para o seu grupo.

O vírus HIV é transmitido:

- Pelas relações sexuais sem o uso de preservativo com pessoas infectadas (sexo vaginal ou anal);
- Pelo contato com o sangue de pessoas infectadas, por transfusões (somente para o receptor), e principalmente quando os usuários de drogas injetáveis (UDI) compartilham seringas;
- Durante a gravidez, parto e/ou amamentação, da mãe que tem HIV para o filho.

O vírus HIV não é transmitido:

- Pelo abraço, aperto de mão, carinhos, beijo na boca, suor, lágrimas, saliva ou espirro;
- Pelo uso de banheiros públicos, piscinas, e pela picada de insetos;
- Pelo uso de copos, talheres, roupas e toalhas utilizadas por portadores do vírus;
- Pela doação de sangue.

Como posso me prevenir?

- Usando preservativo em todas relações sexuais (vaginal e anal);
- Não compartilhando agulhas e seringas. Use sempre material descartável;
- As mães HIV positivo, não amamentando seus filhos, e aderindo ao tratamento medicamentoso durante a gravidez e parto.

- A significant difference among the three measures about the knowledge indicator was verified ("time" variable) [F(1, 299) = 110,20; p< 0,001]. The interaction between “time” and “type of school” also affected significantly the AKI [F(1, 299) = 7,84; p< 0,001].
- There is a clear increase of the scores relative to knowledge between time 1 (before reading) and time 2 (after reading) for the three pamphlets, among the participants of private schools.
- The comparison of times 1 and 2 amongst the participants from public schools indicated an evolution similar to the one verified in the private school participants, but with lower intensity.
- The examined data demonstrate the existence of positive impact of reading the pamphlets on aids knowledge, but there were no changes relative to the attitudes toward preservatives and, in some cases, the favorability towards the object was reduced.
- Is possible to evaluate the use of pamphlets as preventive strategies regarding aids as positive.

Informative videos and scientific knowledge about aids

- In their study about informative pamphlets Camargo and Barbará (2004) have concluded that video is amongst the preferred media of teenagers to obtain information, and particularly information about HIV/Aids.

- Therefore, Camargo, Barbará and Bertoldo (2008), with the aim of verifying if watching informative videos about aids would increase the previous knowledge of the receptors about the epidemic, have conducted a field experiment that assessed the impact of two types of video (scientific and popularized) on adolescents' knowledge about aids (dependent variable).

Informative videos: scientific and popularized

- There were 141 teenagers who took part on the experiment, all secondary school students from a public school from Florianópolis.
- The control group was formed by 56 students, while Group 1 (scientific video) was constituted by 46 students and Group 2 (popularized video) by 39 of them.
- A self-administered questionnaire and the TSKHA (Camargo, Barbará & Bertoldo, 2005) were employed in a collective setting.

- Concerning the effects on knowledge associated with the exhibition of each video, the results were favorable to the scientific one.

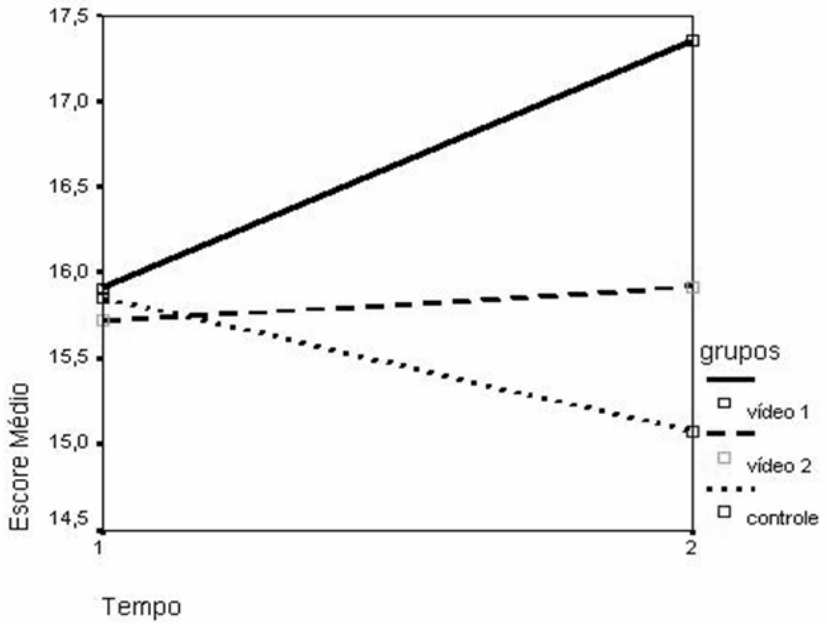


Figure 2. Mean scores in the TSKHA by experimental condition, before and after the video exhibition.

Conclusions based on the experience with the videos

- Group 1 – scientific video – had a statistically significant different between the first measure of knowledge and the second one [t=3.54 df=45 p<.001], as well as an increase in the mean score.
- Group 2 – popularized video – had an increase on the second measure that was smaller than group 1's, and that increase was not statistically significant [t=.52 df=38 p=N. S.].
- As for the control group, the impact of the time variable represented a small, albeit significant reduction in the mean score: 15.86 in time 1 and 15.08 in time 2[t=2.11 df=55 p<.05].
- The experiment could evidence that only the exhibition and understanding of the documentary video with a more scientific content implied a significant increase on the knowledge about HIV/ Aids.

Interaction and aquisition of scientific knowledge about aids

- With the aim of enhancing the study of the impact of different forms of diffusion of scientific knowledge about HIV/Aids on the attitudes towards preservative use and the knowledge of the disease, Barbará and Camargo (in press) have carried out research with 478 students of the 2nd grade of secondary school from two public state schools from the city of Florianópolis.
- For that purpose, two studies were conducted:

  1) one about two types of reception of an informative video (active and passive);

  2) another one about a simulated case involving a scientific controversy, in which participants took part of the construction of information itself.

Active and passive reception of na informative video

- The sample was composed by 378 students, with a mean age of 1 years and 8 months (SD = 2 years), formed by 51.05% of male participants.
- A total of 190 of those (50.3%) took part of the group with discussion (active reception); and 188 (49.7%) participated of the group without discussion (passive reception).
- The test of scientific knowledge on HIV/aids (TSKHA) (Camargo et al., 2005), and a scale of attitudes towards the preservative (Camargo & Barbará, 2004).
- Two meetings were conducted (Time 1 and Time 2) with each school group, in a time interval of seven days between them.

Results of TCKHA

- The participants from the active reception group had a mean in Time 2 clearly superior to the one from Time 1, and the dispersion of their scores decreased.
- In the passive reception group there was also an increase in the mean of correct responses, but it was smaller in comparison with what happened in the previous group.

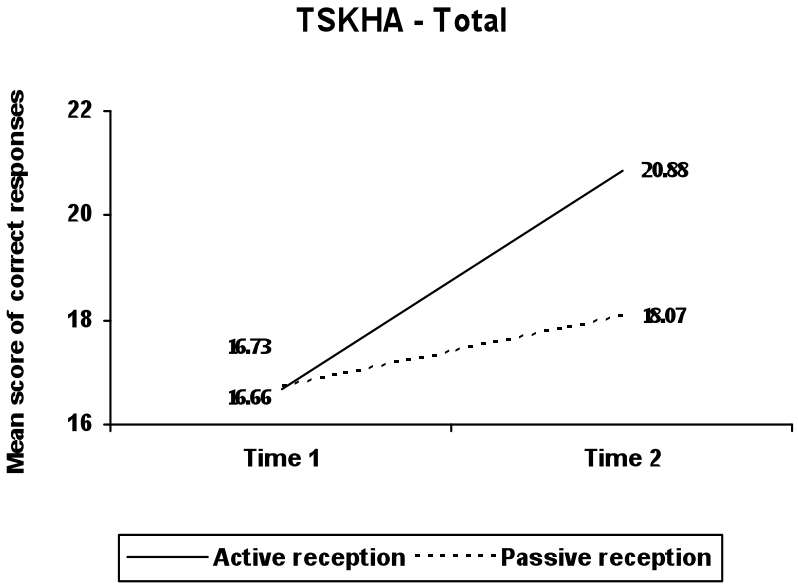


Figure 3. TSKHA by group and time.

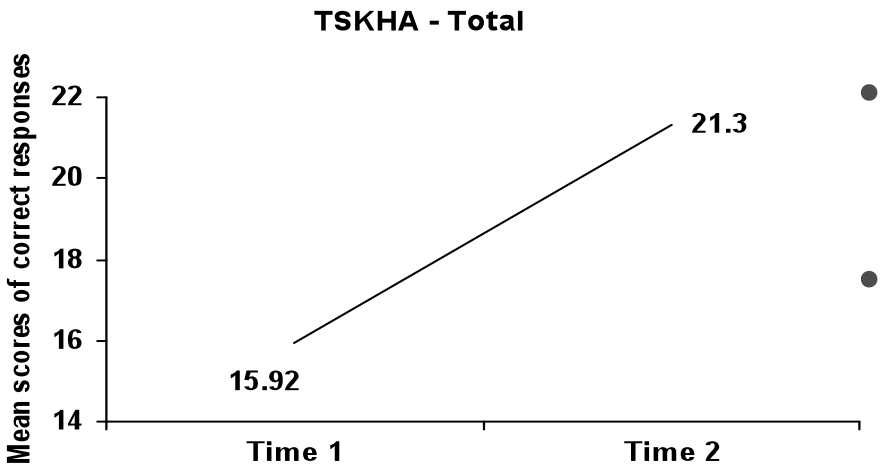


Figure 4. Simulated case – TSKHA by time

Simulated Case

- Simulated case – scientific controversy in the experiments about vaccines developed for HIV/aids combat (Martin Godillo, 2001; Bazzo & Pereira, 2005);
- 100 students took part, distributed in 5 groups with age means of 16 years and 9 months
- The difference of the initial mean of correct responses when compared with the final one presented a statistically significant difference [t = 17.445; df = 99; p< .0001].

Comparison between the informative videos' studies

In the two studies about pedagogic videos (Camargo, Barbará & Bertoldo, 2008; Barbará & Camargo, in press), the TSKHA was employed in its complete version (24 items).

Research Camargo and cols. (2008)	**Time 1**	**Time 2**	**Diference between scores**
Scientific video	15,91	17,16	1,25
Popularized video	15,72	15,92	0,2
Research Barbará and Camargo (in press)			
Video with debate	16,66	20,88	4,22
Video without debate	16,73	18,05	1,32

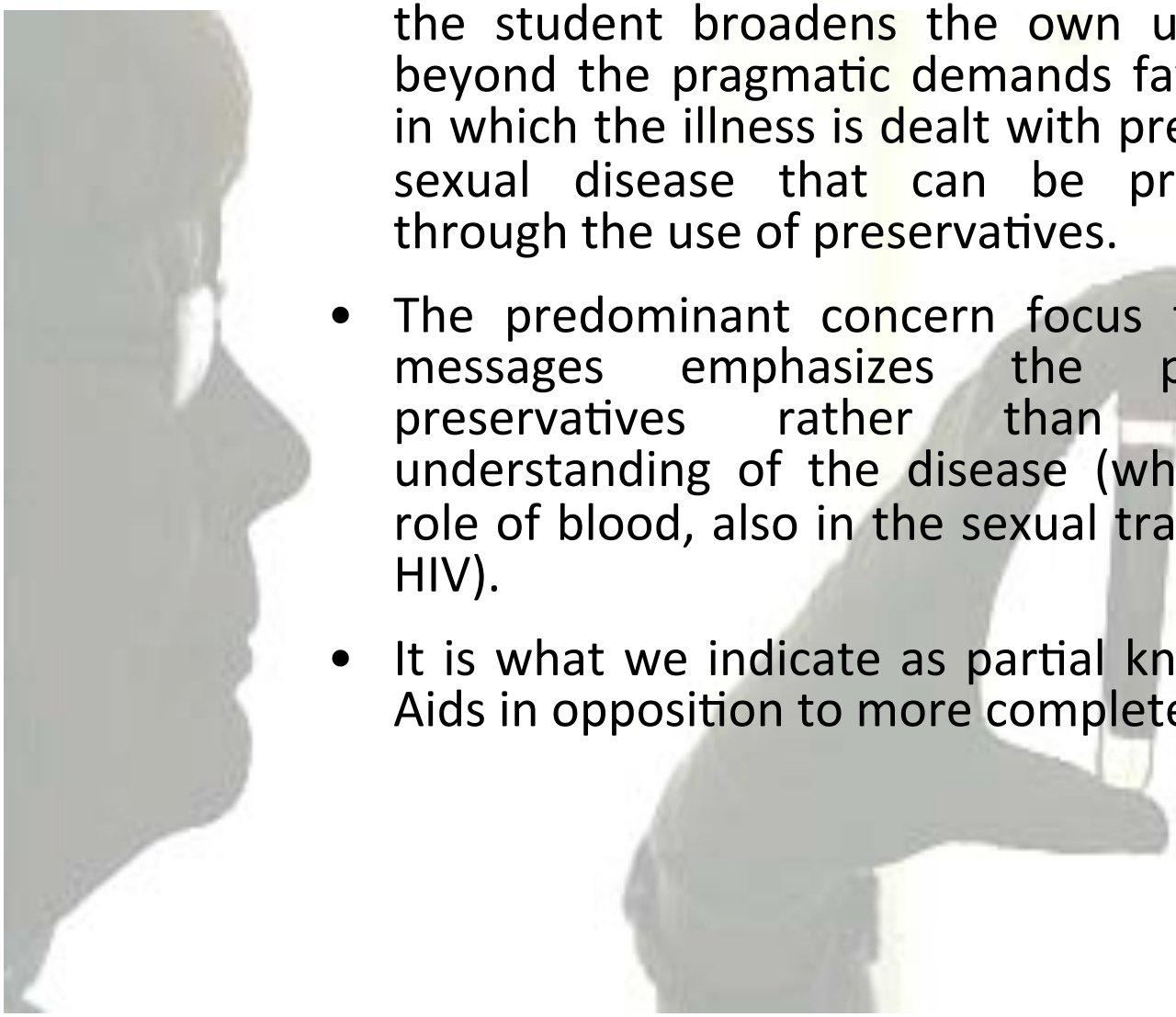
- It can be concluded that the video presents itself as an important mean of diffusion of scientific knowledge about HIV/Aids.
- The most significant contribution of those studies involves the efficacy of the interaction context in the sharing and capture of new scientific knowledge on HIV/ aids.

Social representations, scientific knowledge and communication about aids

Social representations theory (Moscovici, 1981) has contributed to the understanding of how the acquisition and sharing of different kinds of knowledge are processed, above all focusing the relationship between specialized (scientific) content and common sense content (social representations).

- The students who presented more scientific knowledge about the disease have evoked the word *blood* more often, and the students with less scientific knowledge, the word *sadness.*

- Camargo, Barbará and Bertoldo (2007), when investigating the relationship between the dimension of the representation field, by means of the diagnosis of the structure of the social representation of teenagers about aids, and the informative dimension of that representation by means of the measurement of scientific knowledge (TKSHA), could observe that the knowledge that adolescent groups have about this illness is hybrid, as it mixes scientific and common sense aspects.



- The most frequent evocation of the *blood* element indicates higher scientific knowledge about aids, as the student broadens the own understanding to beyond the pragmatic demands favored by media, in which the illness is dealt with predominantly as a sexual disease that can be protected against through the use of preservatives.
- The predominant concern focus from preventive messages emphasizes the prescription of preservatives rather than the in-depth understanding of the disease (which involves the role of blood, also in the sexual transmission of the HIV).
- It is what we indicate as partial knowledge of HIV/ Aids in opposition to more complete knowledge.

Social representations, scientific knowledge and aids communication

- The word *sadness* refers more to an attitude towards aids than to a proper social representation, as its attention is circumscribed to the experienced feelings associated with the disease object.
- Natividade (2010) also studied the relationship between social representations and the level of scientific knowledge about HIV/Aids.
- Amongst the participants who presented higher scientific knowledge, the five most frequent central elements, ranked by order, were the following: *illness, sex, prevention* and *preservative, transmission.* The order among those with lower scientific knowledge was: *illness, death, suffering* and *preservative, sex.*

- The group with less knowledge brought to light elements related to personal responsibility for the contagion of aids and the concern with death, differently from the group with more knowledge.
- The idea of death may hide the absence of information involving contents from antiretroviral therapy until the current tries for the creation of a vaccine.
- And personal responsibilization might also be connected to the lack of knowledge of the collective nature of the epidemic, while a topic related to the need of public policies.

Conclusions

- The current approach of the diffusion of knowledge about aids has not taken into account the information set about the epidemic of aids, since the contents are mentioned in an isolated and superficial way.
- And it is fundamental to make it possible that the person receives the message and is able to find a position towards it, for the acquisition of knowledge and attitudes favorable to preventive practices.
- This implies promoting an interaction between scientific representations and consensual representations in the framework of scientific popularization actions.

- There is the necessity to create prevention and diffusion strategies that are not concerned solely with transmitting scientific knowledge, but rather with providing a relationship (interaction) with knowledge that is able to serve the interests and needs of the individual to interact in society.

- Moreover, it is recommended that those strategies are tackled jointly with themes related to risk society and science diffusion, since the individual is immersed in the scientific happenings that surround this amplification of the presence of risk, at least in the sphere of social information.

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