

Information needs of young Italians accessing the AIDS/STI Helpline at the Italian National Institute of Health

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Abstract

Introduction. HIV/AIDS and sexually transmitted infections (STI) have a relevant impact on health and sexual behavior of adolescents and young adults (range of age between 13 and 19 years). The AIDS and sexual transmitted infections (STI) Helpline of the Italian Istituto Superiore di Sanità (National Institute of Health), and also funded by the Italian Ministry of Health, has been active since 1987 providing personalized counselling interventions on HIV/AIDS and STI.

Aim and Methods. The present study gathered data and questions issues from calls at AIDS/STI Helpline in the period 1987-2014, with the specific aim of assessing the level of awareness and information needs on HIV/AIDS and STI among people aged under 25 years, in relation to potential risky behavior.

Results. Data show that young subjects who called the helpline in the period considered are about the 26% of the total users, with a decreasing trend over the years. The 28% of young users reported a "risky behavior" for STI, with a chance statistically higher in the age range 15-19 years and in the MSM (men who have sex with men)/bisexuals users, which tended to decrease in the last years. Of note, a marked increase of the amount of young users not displaying behaviors at risk for HIV or STI has been observed in the years.

Key words

- young people
- HIV
- helpline
- sexual transmitted infections
- prevention

INTRODUCTION

It is estimated that about 5 million of young people, aged between 15 and 24 years, are today living with HIV infection. Among them, nearly 80% (4 million) live in Sub-Saharan Africa and young women account for 66% of infections worldwide [1]. Besides, over half of other sexually transmitted infections (STI) – more than 180 million out of a total of 340 million new infections annually in the world – occur among people aged from 15 to 24 years [2].

Young persons under 25 years are markedly exposed to the risk of STI due to the early sexual activity and the increase in the use of drugs and alcohol, together with a low perception of infections risk [3]. Of note, the age of first sexual intercourse in Italy, such as in Developing Countries, is gradually decreasing, no longer related to marriage but antecedent of about 2/3 years [3].

Recent studies [4-7] show that, among young people, the link between sexual behavior and HIV infection is not yet clearly defined. UNAIDS (The Joint United Nations Programme on HIV/AIDS) has identified, within youth, some highly vulnerable groups such as injective-

drug users, sexual abuse victims, teenage prostitutes, homeless, males having sex with males, orphans. In particular, in these people groups the risk of HIV infection results higher than in general population target groups where psychological distress and social exclusion occur. Although a relative increase of HIV infection diagnoses ascribed to sexual transmission has been recorded in Italy over the last 30 years [8], the majority of people between 15 and 24 years are not adequately informed on the HIV and STI risk the sexual behaviors. Indeed, the "Youth, HIV and Disinformation" issue has become in the last years central in public health strategies targeted to young population [9-11].

Young Italians – regardless of gender or sexual orientation – have a natural tendency to adopt sexual behaviors at risk for STI and adolescence is a critical age in which inadequate information and perception of risky behaviors generally occurs [9-12]. Within this scenario, there is an urgent need for easily accessible interventions addressed to young population which can provide reliable and standardized information on STI prevention. Specifically, the counselling approach for

HIV/ AIDS and STI information, already exploited for preventive strategies addressed to young people [13], meets these requirements.

The importance of counselling services related to HIV infection has been highlighted by major international organizations since the early years of the epidemic. Since 1989, the Global Programme on AIDS (GPA) of the World Health Organization (WHO) has been considering counselling as a precious tool to provide people, directly or indirectly affected by HIV infection, a real support, a practical and psychological help and proper information [14]. Although in the last 20 years the clinical course and the social impact of the infection has significantly changed, the intervention of HIV/AIDS/STI counselling still represents a fundamental tool for information, prevention and psychological support.

Actually, the basic purpose of HIV/AIDS/STI counselling is to provide personalized information (informational counselling) in order to activate a process of awareness and personal empowerment. In this way, upon adequately provided information in relation to personal needs, the person/user is facilitated in taking decisions on potentially risky behaviors or the opportunity to undergo HIV or STI testing (decision-making counselling). Furthermore, the enhancement of individual resources can also improve, in HIV-infected persons, the adherence to therapy and the capability to face emerging problems (problem-solving counselling) as well as moments of crisis (crisis counselling). The choice of a specific operational strategy is made by adequately trained operators who provide a counselling service based on the person's history and specificity, in the "here and now" interview context [15].

The objective of this work was therefore to understand the level of knowledge and awareness about HIV/ AIDS and STI and the occurrence of potential risky sexual behavior among young people accessing the AIDS/STI Helpline (800861061), a daily free and updated counselling service managed since 1987 by the *Research psycho-socio-behavioral, Communication and Training Unit* of the Italian Istituto Superiore di Sanità (National Institute of Health). Indeed, the analysis of data collected in the period 1987-2014 enable a broad and detailed drawing of the behavior, information needs and awareness about HIV and STI by young people accessing this service.

MATERIALS AND METHODS

Data referred from users aged between 10 and 24 years who have accessed the AIDS/STI Helpline in the period June 1987- June 2014 have been considered in the study. Data related to nationality, Italian province, gender, age, eventual risky behavior and any significant information declared by the users have been acquired in an anonymous fashion and gathered into a file management software ensuring protection of sensitive data [15]. Descriptive analysis was performed for users' demographic characteristics (gender, age, Italian province), referred behavior and question issues. The definition of "risky behavior" was based on the report of unprotected sexual intercourse (receptive/insertive anal, vaginal, receptive oral sex).

The risky behavior target group was specifically analyzed through univariate and multivariate logistic regression in order to evaluate the impact of the following variables: gender, age range, typology of questions asked classified in "Information on HIV or STI testing", "Information on HIV or STI transmission ways", "Psychosocial aspects", "Disinformation regarding the HIV transmission", "Prevention issues", "HIV characteristics", "Relevant symptoms", "Information on therapy/research", users' profile including "Heterosexuals-no injective-drug users", "No risky behavior referred", "MSM (men who have sex with men) and bisexuals", "Injective-drug users", "People living with HIV". Variables which displayed a p-value of less than or equal to 0.05 were considered statistically significant and were also included in the multivariate analysis. Odds Ratios [ORs] associated to different variables were estimated and presented at 95% CI.

The results were analyzed through the version 3.5 of *Epinfo* software and *Stata* 13.0.

RESULTS

During the period considered (1987-2014) the AIDS/STI Helpline received 731300 phone calls, among which 196043 (about 26%) from users between 10 and 24 years of age. Among these, a large prevalence of male gender was observed, as 139976 (71.4%) and 55689 (28.4%) calls came from males and female users, respectively, while transsexuals/transgender represent less than 0.2% of total sample. Of note, calls from young users decreased from 72875 in the time period 1996-2005 to 29648 in the time period 2005-2014.

As shown in *Table 1* the total number of questions made by young users was 528363 and a prevalence was found for questions regarding "information on HIV or STI testing" (145811, 27.5%) and "information on HIV or STI transmission ways" (135838, 25.7%), while questions related with "disinformation regarding the HIV transmission" were 11.6% (61180) of totals.

By the analysis of age range distribution, 2803 (1.4%) phone calls came from people between 10 and 14 years, 44639 (22.8%) from people between 15 and 19 years and the remaining 148601 (75.8%) from people between 20 and 24 years. Interestingly, a decrease of the proportion of calls from users under 19 years and an increase from those in the range 20-24 was observed after the 2005 while the relative number of female users markedly decreased throughout the period investigated [data not shown].

About geographic distribution, 85878 (43.8%) phone calls came from Northern Italy, 54077 (27.6%) from the Center, 41165 (21.0%) from Southern Italy, 14709 (7.5%) from Sardinia and Sicily Islands, while for 203 calls (0.1%) data are not available (*Table 1*). However, due to different geographical distribution of population, adjusted rates evidenced that, in relation to the number of inhabitants, most calls/person came from Center (3325.3), followed by South (1728.9) and North (824.6). Of note, calls from young women were higher from Northern Italy (data not shown).

Based on the behavior referred, young users were classified in "Heterosexuals – no injective-drug users"

Table 1

Characteristics and questions within calls from the AIDS/STI Helpline users under 25 years in the period 1987-2014

		Number	Percentual (%)
Calls		196 043	
Questions		528 363	
Gender	Male	139 976	71.4
	Female	55 689	28.4
	Transsexual-Transgender	378	0.2
Age range	10-14	2803	1.4
	15-19	44 639	22.8
	20-24	148 601	75.8
Geographical distribution	Northern Italy	85 878	43.8
	Central Italy	54 077	27.6
	Southern Italy	41 165	21.0
	Sardinia and Sicily Islands	14 709	7.5
	Not reported	203	0.1
Users profile	Heterosexuals (no injective drug users)	114 772	58.5
	No risky behavior referred	57 111	29.1
	MSM and bisexuals	11 109	5.7
	Injective drug users	3438	1.8
	People living with HIV	2450	1.2
	Others	7068	3.6
Question issue	Information on HIV or STIs testing	145 811	27.5
	Information on HIV or STIs transmission ways	135 838	25.7
	Psycho-social aspects	69 058	13.1
	Disinformation regarding the HIV transmission	61 180	11.6
	Prevention issues	44 289	8.4
	HIV characteristics	33 047	6.3
	Relevant symptoms	14 848	2.8
	Information on therapy/research	4206	0.8
	Others	20 086	3.8

(114772, 58.5%), "People not referring risky behavior" (57111, 29.1%), "MSM and bisexuals" (11109, 5.7%), "Injective-drug users" (3438, 1.8%), "People living with HIV" (2450, 1.2%), "Others" (7068, 3.6%) (Table 1). A relevant number of young males (23580, 12.0%), but only 0.06 % of women, declared sexual intercourses with sex workers (data not shown).

Within the persons in the age range of 10-24 years, 28 317 women (50.1%) and 91 192 men (65.2%) reported sexual intercourses with more than 1 partner (including stable partner and partners out of the couple). Among users who did not report any behavior associated with a potential risk for STI transmission, males were prevalent (62.2%).

Based on the report of unprotected sexual intercourses, users with potential risky behavior for STI were 50360 (about 26% of total), of which 36411 males

(72%) and 13899 women (28%), with a markedly decreasing trend within the different time-periods considered (1987-1996, 1996-2005, 2005-2014). Among users who reported risky behavior, males were prevalent within all the age ranges, particularly in the 20-24 years range (75% vs 25% for males and females, respectively) (data not shown). Further, for all age ranges, risky behavior were reported mostly in the period 1987-96 with a decreasing trend with the years (data not shown).

To evaluate the relationship between risky behavior and the other variables as demographic characteristics, sexual behavior and typology of questions asked, both univariate and multivariate logistic regression analyses were performed within the calls from young users.

All variables which in the univariate analysis resulted to have a p-value < 0.05 were also included in the multivariate logistic regression model (Table 2). In this model

Table 2

Multivariate analysis of the relationship between referred data, questions issues and risky behavior by the AIDS/STI Helpline users under 25 years in the period 1987-2014

*OR = odds ratio. **95% CI = Interval of confidence at 95%. ***Dichotomic variable. The reference is not applicable.

		OR*	95% CI**
Gender	Male	1	Reference
	Female	0.99	(0.97 - 1.02)
	Transsexual-Transgender	0.73	(0.54 - 0.99)
Age range	10-14	0.56	(0.49 - 0.64)
	15-19	1	Reference
	20-24	0.84	(0.82 - 0.86)
Users profile	Heterosexuals (no injective drug users)	5.44	(5.25 - 5.64)
	No risky behavior referred	1	Reference
	MSM and bisexuals	9.24	(8.78 - 9.72)
	Injective drug users	2.50	(2.30 - 2.72)
	People living with HIV	0.56	(0.46 - 0.69)
	Others	3.67	(3.53 - 3.81)
Question issue***	Information on HIV or STIs testing	1.22	(1.19 - 1.25)
	Psycho-social aspects	1.03	(1.01 - 1.05)
	Disinformation regarding the HIV transmission	0.79	(0.76 - 0.81)
	Prevention issues	1.22	(1.18 - 1.25)
	HIV characteristics	0.80	(0.69 - 0.93)
	Relevant symptoms	0.85	(0.81 - 0.88)
	Information on therapy/research	0.37	(0.32 - 0.43)
Time period	1987-1996	1	Reference
	1996-2005	0.42	(0.41 - 0.44)
	2005-2014	0.25	(0.24 - 0.26)

a risky behavior resulted significantly less probable for the transsexual and transgender population compared to male users (OR = 0.73), taking into account all the other variables included in the model. Further, young callers in the 10-14 and 20-24 age ranges resulted to have a significantly lower risk compared to the reference category 15-19 years (OR = 0.56 and OR = 0.84, respectively). A slightly higher chance of risky behaviors was found with young users asking for "Information on HIV or STI testing" (OR = 1.22) or for "Prevention issues" (OR = 1.22) while asking questions related to "Disinformation regarding the HIV transmission" (OR = 0.79), "HIV characteristics" (OR = 0.80), "Relevant symptoms" (OR = 0.85), and in particular "Information on Research therapy" (OR = 0.37) resulted associated with a reduced risky behavior chance.

Regarding the users profile, the MSM and bisexuals (OR = 9.24) had a markedly higher risky behavior chance than heterosexuals no injective-drug users (OR = 5.44) and injective drug users (OR = 2.50). Of note, people living with HIV (OR= 0.56) displayed a lower risky behavior chance since they just asked for information on HIV therapy and research. Finally, the chance of risky behavior by young users appeared to decrease

over the years (OR = 0.42 and OR = 0.25 for 1996-2005 and 2005-2014, respectively, in relation to 1987-1996 period).

DISCUSSION

The data from the present study evidence a decreasing trend, within the last 27 years, of young users reporting sexual risky behavior at the AIDS/STI Helpline with a relative increase of those asking for information in absence of a real infection risk. Further, as already evidenced in other studies [16-20], the amount of phone calls received by the AIDS/STI Helpline from young people has remarkably decreased over the years. This suggests that, compared to past decades, young people from the general population may not have an adequate perception of the risk of STI transmission, due to inadequate information by either family, school or health structures, and scarce reception of informative-educational campaigns on the behavioral risk for STI [12, 21]. Besides, in the last years, young people mostly refer for their informative needs to Internet sites and social networking whose contents may be discordant and not adequately verified.

In the AIDS/STI Helpline experience a relevant de-

crease of the calls from young people has been observed since the end of 2005 with a marked reduction relative to persons under 19 years and females. This may also be due to the fact that young women do not easily refer to phone helplines regarding health risks associated with sexual behavior, maybe searching for information through Gynecologists or Internet sites [22].

Based on the report of unprotected sexual behavior, about 26% of young users, mostly males, had a potential "risky behavior" for STI. Interestingly, this amount tended to decrease over the years, with the lowest value found in the time period 2005-2014. The multivariate regression analysis showed that the chance of risky behavior was statistically higher for users in the age range of 15-19 years, those reporting unprotected homosexual and bisexual sexual intercourses and those asking information on HIV/STI testing or prevention, while users asking questions linked to HIV-related disinformation, associated symptoms or characteristics resulted to have a lower risky behavior chance. This suggests that young people who called the helpline in the last years may have a higher perception of sexual risk and increase the use of sexual protection. Conversely, the calls from users not displaying risky behavior with a relevant disinformation on HIV transmission are increasing. However, since calls from young people have been decreasing with time it is evident that only a minority of these refers to the AIDS/STI Helpline for their informative needs.

Based on our and other's experience, phone counselling is still an extremely effective tool both in terms of primary and secondary prevention. Indeed, the counselling approach allows to establish personalized contacts with users, providing answers aimed to facilitate the activation of individual empowerment processes [23-24]. Moreover, the large number of available data allows the monitoring of users' informative needs and awareness about AIDS and STI. This may provide essential information to be exploited to set up effective preventive interventions in the field of HIV/AIDS and STI. Although the AIDS/STI Helpline users do not represent the whole Italian population between 10 and 24 years of age, the use of effective communication tools through the institutional helpline may contribute to the

prevention or management of STI in a population particularly vulnerable and not easily accessible by conventional informative programs.

CONCLUSIONS

According to the UNAIDS Strategy 2011-2015, the evidence of clear disinformation and inadequate risk perception among young people makes necessary the identification of effective specifically-targeted informative interventions on HIV/AIDS. To this aim, the following specific steps should be implemented by: a) providing clear information on HIV infection ways, focusing the attention on the need of a safe sexual behaviors adoption; b) stimulating the adoption of measures preventing the infection; c) promoting the increase of risk perception in youth.

Since the achievement of these objectives requires a scientifically correct and updated information, the counselling approach offered by the Italian AIDS/STI Helpline could provide messages able to adequately access young people, preventing the informative redundancy and disinformation on HIV/AIDS and STI potentially found in uncontrolled internet sites. Indeed, a specific study has recently shown that the 50% of web users consider the internet as the real center of information and communication on many different fields, particularly those concerning public health [20]. This evidence strongly suggests that, to enable an adequate reception of STI information and prevention interventions, specific helplines on STI, although remaining an essential tool for large-scale information targeted to young people, should be integrated by innovative information systems exploiting social networking or interactive web devices.

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Conflict of interests statement

There are no potential conflicts of interests.

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