

学位論文題名

Current HIV/AIDS Knowledge, Perceptions and Practices among the General Population in Kandy, Sri Lanka: Program Implications

(スリランカ・キャンディ市の一般住民における HIV/AIDS に関する知識, リスク認知, 行動に関する研究)

学位論文内容の要旨

**【Background and Objectives】**

While the prevalence of HIV infections in Sri Lanka is less than 0.1%, the number of people contracting the virus has been steadily rising. The HIV infections in Sri Lanka are attributed to lack of appropriate HIV/AIDS-related knowledge, perceptions and practices among most-at-risk population (MARPs). Recent strategic plans in Sri Lanka have stressed the need to focus prevention interventions on MARPs, but similarly laid out the importance of improving HIV/AIDS awareness among the general population due to the interaction among them. Programmatic attention has to be strengthened to effectively change HIV-related poor knowledge, low risk perceptions and risky sexual practices at the individual level among them, and avert an epidemic. While current data on at-risk populations are available to inform interventions, there is paucity of latest evidence for the general population programs.

Therefore, a survey was conducted among the general population to identify the current pattern of HIV/AIDS knowledge, perceptions and practice and predictors of poor knowledge, low risk perceptions and risky sexual behavior for future program implications.

**【Methods】**

A cross-sectional study was implemented in Kandy District, Central Province. Kandy is one of the most popular tourist destinations in Sri Lanka, with a population of approximately 1.2 millions in the district. The city of Kandy is well-urbanized, while the rest were rural. The study was carried out in April-May 2009. Residents aged 15-49 were randomly selected, and a total of 1,239 people agreed to join the study (response rate=87.2%).

After given instruction by systematically trained interviewers, the respondents filled in the informed consent form and a six-page, anonymous questionnaire in their local language, either Sinhalese, Tamil, or English. For those who were unable to read and write, the interviewers conducted a face-to-face interview instead. The questionnaire consisted of HIV/AIDS knowledge, perceptions and sexual practices as well as respondents' socio-demographic information such as age, gender, marital status, religion, and educational level. It was first created in English, translated into their local languages, and then back-translated into English. The complete questionnaire was returned in a sealed envelop and the HIV/AIDS awareness leaflet was given.

For the data analysis, Data were analyzed using univariate, bivariate and multivariate approaches.

## **【Results】**

Most respondents had heard of HIV/AIDS (95.6%) and STIs (81.0%). Among those having heard of STI (n=1,004), three-fourths (76.2%) had a low STI knowledge level in contrast to a fourth (23.8%) with high knowledge. They were about equally divided into being highly and poorly knowledgeable of transmission routes (55.3% versus 44.7%). However, people with a limited knowledge of prevention methods outnumbered those with ample knowledge (59.5% versus 40.5%). The respondents did not regard themselves at high risk. Eighty-two (82.0) percents did not think they were at risk, and 81.4% perceived themselves with a low risk level. Among sexually active respondents (n=601), most had never had sex with sex workers (88.4%) or with casual partners (87.7%). Three-fourths (72.7%) did not use a condom.

A multivariate logistic regression revealed that the predictors of poor knowledge were being single, non-high school graduate, non-Buddhist, with a low level of household appliance (LOHA), or being rural residents. Non-high school graduates, for example, were four times more likely to possess a low knowledge level of STI than their opposite group (AOR=4.11; 95% CI=2.84-5.94;  $p<0.001$ ). Three characteristics significantly predicted low risk perceptions: being a woman, married, or a high school or university graduate. Having intercourse with sex workers and with casual partners was each a significant outcome of being men, single, non-high school graduate, and an urban resident, and also of being younger than 30 (for those with sexual relations with sex workers). Men's propensity to have sexual relations with sex workers was particularly marked according to their adjusted odds ratio (AOR=24.58; 95% CI=5.67-106.68;  $p<0.001$ ). Non-condom users were women, married, non-Buddhists and rural residents. Married respondents, in particular, were three times more inclined not to use a condom compared to the single (AOR=0.30; 95% CI=0.16-0.57;  $p<0.001$ ). Gender, marital status, educational level, religion and residence were common predictors of knowledge, perceptions and/or sexual practices.

## **【Discussion】**

The study was pursued to collect current evidence on HIV/AIDS knowledge, risk perceptions and sexual practices and on the characteristics of population-based individuals at risk of infection among the general population in Kandy, Sri Lanka. Overall, respondents with poor knowledge had low risk perceptions, and those with low risk perceptions had low risk behaviors. The presence of substantive gaps indicates that the study population has so far received only inadequate information on HIV/AIDS. To sustain the country's low prevalence, the Sri Lankan government and its health sector should seek to develop a base of scientific knowledge among its general population to replace informal personal and social network knowledge. Also, those having poorer knowledge, lower risk perceptions and/or risky sexual practices could be identified on the basis of their gender, marital status, education, religion and residence. Findings suggest that these individuals would have varying needs and that interventions must tailor their strategies to respond to such needs. Segmentation, a process of dividing a population into relatively homogenous subgroups and developing interventions tailored to each segment, constitutes one strategy for effective knowledge formation and for preventing individuals from acting as bridges of HIV transmission.

The study population has a potential to contribute to increasing the number of local infections primarily because of the absence of sufficient and evidence-based knowledge of HIV/AIDS, the same risk factor facing the MARP in Sri Lanka. If this factor remains unaltered, the general population in Sri Lanka may contribute to the transmission and spread of HIV infections. The potential is further heightened by the bridging role of individuals - men, single, younger than 30, and urban residents - who are in sexual contact with MARP such as commercial sex workers, which along with non-condom use are the epidemic's key drivers, and by the passive role of women who would not use a condom. Non-condom use among women, especially those married, heightens the feminization of HIV infections in various parts of the world. The same risk factor also explains the rising cases of HIV infections among Sri Lankan women.

**【Conclusion】**

The gaps in substantive knowledge on HIV/AIDS suggest that it was insufficient to provide effective information and other related types of support to the general population in Sri Lanka. In the context of the need to contribute to sustaining the low prevalence of HIV in the country, a base of scientific knowledge among its general population should be developed.

# 学位論文審査の要旨

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南アジアの島国・スリランカにおける HIV 有病率は 0.1%未満であるが、新規感染者数はここ近年急増傾向にある。特に、感染リスクの高い集団は HIV/AIDS に関する知識やリスク認知が不足しリスク行動をとり続けることが示唆されているが、彼らとの接触がある一般住民への対策はスリランカ政府がその方針を示しているにもかかわらず置き去りにされている。そこで、今後の効果的な予防戦略策定に資するために、申請者はスリランカの一地方の一般住民の HIV/AIDS に関する社会医学的側面を調査した。

調査は 2009 年 4～5 月にスリランカ中央州キャンディ市およびその近郊で、無記名自記式調査票を用いて実施され、15 歳から 49 歳までの 1,239 名から回答を得た(回答率 87.2%)。質問項目は大きく、「HIV/AIDS に関する知識」「HIV/AIDS 感染リスクの認知」「感染の危険のある性行動」に関する 3 項目で、性別や宗教などの個人属性との関係を明らかにした。

その結果、ほとんどの回答者(95.6%)は HIV/AIDS に関する認識があったが、性感染症や感染経路、予防方法に関する知識は限られていた。また、多くの回答者(81.4-82.0%)は日常生活において自身は感染しない、または感染するリスクが低いと考えていることがわかった。一方、不特定多数のパートナーを持つなど、感染リスクを伴う行動をしている者は一部の回答者に限られていたが(7.7-8.5%)、直近の性行為でコンドームを使用した人の割合も 16.1%と低率であった。

個人属性との関係については、HIV/AIDS に関する知識は主に宗教、学歴、婚姻関係、所得との関連が示唆され、仏教以外を信仰する者、高卒未満者、独身者、低所得者は知識レベルが低いという傾向が見られた。また、リスク認知については、女性や既婚者は感染リスクが低いと考えていた。一方、男性、独身者、都市部に住む人々は、ハイリスク集団との性的関係を持つ割合が高いが、他の集団に比べてコンドームの利用率も高い傾向が現れた。

以上の結果から、スリランカの一般住民における HIV/AIDS に関する知識やリスク認知、

予防行動が不十分であること判明した。したがって、長期的な観点で見れば、今後、予防啓発活動が行われない限り、HIV感染者数は引き続き増加していくのではないかと考えられる。また、回答者の個人属性により各設問に対する回答へのばらつきが顕著であることから、全体の知識レベルの向上だけでなく、感染のリスクが高い集団ごとに、それぞれのニーズに応じた予防対策を講じていく必要性が示唆された。

質疑応答では、1) スリランカのような HIV 有病率の低い国々で成功した予防プログラムがあるか、2) 仏教という宗教バックグラウンドと HIV/AIDS に関する知識・リスク認知・行動との関連が示唆されたが、フィールドで実際に活動してどの様に感じたか、3) スリランカにおける HIV 有病率の低い要因は何か、4) 長期にわたる現地滞在およびフィールドでの経験や苦勞から今後の国際保健分野での研究を遂行する上で重要な点が何か、5) 本研究結果をどのように日本に適用するか、6) サンプルの取得方法（英語）、7) タイやインドなどの近隣諸国との比較、8) 本研究結果をスリランカ政府機関の予防対策などにどのように還元するか、の合計 8 点についての質問があった。申請者は、いずれの質問についても調査結果や先行研究などを引用し、また申請者自身の長期にわたる現地滞在の経験も含めて、個々の質問へ具体的に回答した。

この論文は、スリランカの一般住民を対象として、初めて実施された HIV/AIDS 調査である。同国の一般住民の HIV/AIDS に関する知識やリスク認知、行動を様々な角度から分析・検討した点が高く評価される。申請者がその調査結果を、一般住民を対象とした現地政府の予防対策プログラムに取り込むよう努力していることも高く評価された。申請者の開発途上国での経験は本人の将来への糧になるばかりではなく、続く後輩たちに対しても貴重なモデルを提供した。この経験は、申請者の将来のキャリアパスにも大きく貢献することが期待される。

審査員一同は、これらの成果を高く評価し、大学院課程における研鑽や取得単位なども併せ、申請者が博士（医学）の学位を受けるのに十分な資格を有するものと判定した。