






Human trafficking, health care systems and sexually transmitted infections

Tráfico humano, sistemas de saúde e infecções sexualmente transmissíveis

Milena Cristina Duarte de Almeida^{1,2} , Aliete Cristina Gomes Dias Pedrosa da Cunha-Oliveira³ , Thaísa Góis Farias de Moura Santos Lima² , Jordana Crislayne de Lima Paiva² , Jéssyca Fabiola Ribeiro Ataliba² 

ABSTRACT

Introduction: Data about the increase in human trafficking around the world are worrisome. Although there is legislation on the subject, its scope does not cover all forms and victims of trafficking. Thus, many women, children and men remain in a vulnerable situation. **Objective:** The purpose of this paper was to elucidate and understand, based on the literature, the relationship between human trafficking, health care systems and the increase in sexually transmitted diseases, and also to point out what is being done to combat the problem. **Methods:** A documentary research was conducted through an integrative review for the period from 2010 to 2020. The literature search was carried out on the basis of the CAPES journals portal using the keywords “human trafficking”, “sexually transmitted diseases”, “health care systems” and “education”. **Results:** The results obtained indicated that the absence of access to information, health care and education are intrinsic to the process of illegal immigration and the destination of women and children for exploitation, whether sexual, for organ removal or forced labor, and that situations of violence, absence of health care or education and coercion, among others, are common both for the conditions of trafficking and for the conditions of the increase in sexually transmitted diseases. **Conclusion:** Given the information obtained, it is concluded that more research must be carried out together with the agencies that investigate and apply current laws to determine what are the most effective measures to combat human trafficking. Furthermore, we highlight the need for information on policies and projects that are able to reach vulnerable populations, with the promotion of education, health care and better living conditions.

Keywords: human trafficking; sexually transmitted diseases; health systems; education.

RESUMO

Introdução: Os dados sobre o crescimento do tráfico humano em todo o mundo são preocupantes. Apesar de haver legislação sobre o tema, seu escopo não abrange todas as formas e vítimas do tráfico. Assim, muitas mulheres, crianças e homens seguem em situação de vulnerabilidade. **Objetivo:** Compreender e elucidar, com base na literatura, a relação entre o tráfico de seres humanos, os sistemas de saúde e o aumento das infecções sexualmente transmissíveis, assim como apontar o que está sendo feito para combater o problema. **Métodos:** Pesquisa documental feita por meio de revisão integrativa no período de 2010 a 2020. A busca pela literatura foi realizada na base do portal de periódicos da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) com a utilização das palavras-chave “tráfico humano”, “infecções sexualmente transmissíveis”, “sistemas de saúde” e “educação”. **Resultados:** Os resultados obtidos indicam que a falta de acesso à informação, à saúde e à educação são intrínsecos ao processo de imigração ilegal e à destinação de mulheres e crianças para a exploração, seja sexual, seja para a retirada de órgãos ou o trabalho forçado, e que situações de violência, falta de assistência à saúde, educação, coerção, entre outras, são fatores comuns tanto para a condição do tráfico como para a condição do aumento das infecções sexualmente transmissíveis. **Conclusão:** Diante das informações obtidas, conclui-se que mais pesquisas devem ser realizadas em conjunto com os órgãos que investigam e aplicam a legislação vigente a fim de analisar quais as medidas mais eficazes para o combate do tráfico de seres humanos. Outrossim, destacamos a necessidade de formulação de políticas e projetos que consigam alcançar as populações vulneráveis, com a promoção da educação, a assistência à saúde e melhores condições de vida.

Palavras-chave: tráfico de pessoas; doenças sexualmente transmissíveis; sistemas de saúde; educação.

INTRODUCTION

Human trafficking is growing more and more in the world and, currently, it has become the third most profitable activity, only behind drug and arms trafficking. The situation is increasingly worrisome, since national and international policies and guidelines do not seem to be sufficient to control the actions of criminal organizations⁽¹⁾. According to the report produced by the United Nations Office on Drugs and Crime (UNODC)⁽¹⁾, in 2014, more than 90% of countries in the world had specific laws for the criminalization of human trafficking, but these laws do not cover all forms of trafficking and its victims.

Between 2010 and 2012, 152 victims of different nationalities were identified in 124 countries around the world. In addition, 510

routes were found from countries of origin to countries of destination. These numbers are from official records, so they are a tiny fraction of what actually takes place. Another finding brought out by the report was that the traffic flow occurs in the same region, which makes it difficult to identify its center⁽¹⁾.

In this study, it is assumed that human trafficking is a global occurrence related to the search of individuals in a situation of social vulnerability for better living conditions. It is intended to answer the following questions:

- how is human trafficking discussed in the academic literature?;
- what is the relationship of this content with health care systems and sexually transmitted infections (STIs)?

Thus, it is hypothesized that human trafficking, as it is an illegal practice, is related to the increase in STIs among victims, which can burden health care systems.

¹Universidade de Coimbra – Coimbra, Portugal.

²Universidade Federal do Rio Grande do Norte – Natal (RN), Brazil.

³Escola Superior de Enfermagem de Coimbra – Coimbra, Portugal.

OBJECTIVE

The aim of the study was to describe and analyze the evidence published with regard to the relationship between trafficking in human beings and the responses of health care systems to the increase in STIs, in an attempt to demonstrate possible gaps in the process of identifying victims and the need for the training of health care professionals to deal with the situation.

METHODS

A literature review was conducted for the period between 2010 and 2020, covering research that had as sources books, reports and articles published on the subject. For the search in the scientific database, the keywords “human trafficking”, “sexually transmitted diseases”, “health care systems” and “education” were used. The search platform for articles was that of the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (Coordination for the Improvement of Higher Education Personnel; CAPES), which has an integrated access to the main journals in the world.

Thus, the search was carried out with the combination of keywords, considering the inclusion criteria according to the aforementioned time period in English, so the most relevant articles were selected in the intended scope, as well as official documents from international organizations reporting on the contemporary scenario of the problem and reported evidence of human trafficking associated with health care systems and STIs.

RESULTS

Human trafficking

According to the United Nations Protocol⁽²⁾, the trafficking of human beings is characterized by:

recruiting, transporting, transferring, harboring or receiving people, through threat or use of force or other forms of coercion, kidnapping, fraud, deception, abuse of power or position of vulnerability or the granting or receipt of payments or benefits to obtain the consent of a person who has control over another person, for the purpose of exploitation. Exploitation must include, at a minimum, the exploitation of third-party prostitution or other forms of sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude or removal of organs.

The Palermo Protocol⁽²⁾ aims to prevent and combat human trafficking, with an emphasis on women and children, given that they are the main target audience of criminals; to protect and help victims, with respect for human rights; and, finally, to promote cooperation among the States Parties to identify the routes and reach of the objects mentioned herein. The publication and adoption of the Protocol were of utmost importance to support the creation of legislation and guidelines for countries around the world.

In view of this, and with the implementation of laws, actions and plans, several investigators have carried out studies to identify and analyze which factors and variables contribute to making crime happen. Thus, according to Wrabetz and Penedo⁽³⁾, some facts contribute to the proliferation of human trafficking, which are not only

linked to conditions of poverty (one of the most accepted causes) or border control, but also to issues of local origin and where these exploitations take place. In this study, possible variables were listed and related to human trafficking, such as gender, poverty, social and cultural exclusion, limited education, political instability, war and conflict, social, cultural and legal structures, and movement under coercion and demand. Thus, the authors questioned how these data can be studied and analyzed without being isolated⁽³⁾.

However, what can be seen is that there is no consensus regarding the variables that promote crime, as this depends on the characteristics of the regions studied, from the current laws—such as, when prostitution is not considered a crime, the victim often suffers coercion and violence and the fact is not registered by the authorities and/or control agencies, which creates complexity for the analysis and the fight against human trafficking.

A look at South America

With regard to South America, 80% of human trafficking involved women in 2016. While women represent the majority of detected victims (51%), there is also a significant portion of detected child victims (37%). Girls are detected much more often than boys⁽⁴⁾.

Andean countries report large quotas of child trafficking. In Bolivia and Peru, more children have been trafficked than adults. In Ecuador, children represent just under half of the victims of trafficking detected⁽⁴⁾.

Still, according to UNODC⁽⁴⁾, Argentina, Uruguay and Chile have large proportions of trafficked women (over 60%). The same goes for Colombia and Venezuela. Comparing the 2012 and 2014 reports, the profile of victims remained similar, with no major changes.

With regard to the type of exploitation, the UNODC⁽⁴⁾ report noted that sexual was the one that represented the greatest severity, making up 58% of the total detected. The “other” forms of exploitation detected in this subregion included illegal adoption and forced begging. In particular, Bolivia reported 170 detected victims of trafficking for illegal adoption purposes between 2014 and 2017. Some of the people trafficked from South America are destined for the Latin American countries themselves, but also Central America and the Caribbean — all with some geographic proximity.

Sexually transmitted infections

According to the Pan American Health Organization (PAHO)⁽⁵⁾, every day there are more than 1 million new cases of curable STIs among people 15 to 49 years old. This is equal to more than 376 million new cases annually of four infections—chlamydia, gonorrhea, trichomoniasis and syphilis.

It is important to point out that STIs increase the chance of being infected by the human immunodeficiency virus (HIV)⁽⁶⁾ by up to 18 times. This is because to be infected with HIV, it is necessary, in the relationship, to have contact with blood in addition to secretions.

STIs, such as syphilis, gonorrhea and chlamydia, for example, can cause death, fetal malformations and abortion, among others. STIs have a direct impact on reproductive and child health, as they can cause infertility and complications in pregnancy and childbirth, in addition to causing fetal death and harm to the child’s health⁽⁷⁾.

Health consequences related to human trafficking

A study by Zimmerman et al.⁽⁸⁾ in Europe presented findings regarding health problems and risks involved in human trafficking, which were divided into nine categories: physical health, sexual and reproductive health, mental health, substance abuse and misuse, social well-being, economic well-being, legal security, occupational and environmental well-being, and access to health care.

Not surprisingly, of all reported health problems, gynecological complications were among the most common. As clinical examinations were not performed for this study, the descriptions reflect the reports of women interviewed in the survey and who claimed symptoms or memories of the test results. Half of them reported symptoms commonly associated with STIs and other signs of gynecological health problems, which ranged from unusual or heavy discharge, pelvic pain, and pain or bleeding during intercourse, to amenorrhea and irregular bleeding. Several women reported STIs, including hepatitis B, syphilis and papillomavirus (HPV or genital warts)⁽⁸⁾.

Years later, Wirth et al.⁽⁹⁾ conducted a survey in India, in Karnataka, to link the risk of contracting HIV and the relationship with human trafficking to sexual exploitation. In their study, Wirth et al.⁽⁹⁾ found that the relationship between forced prostitution and HIV infection is stronger when sexual intercourse involves violence.

Women forced into prostitution are 11 times more likely to become infected with HIV than women who enter prostitution voluntarily. Sexual violence can increase the risk of transmission as a result of open wounds and vaginal lesions. In addition, sexual violence can negatively affect self-esteem, which could then prevent victims from pleading more strongly for condom use⁽⁹⁾.

Health care systems and response to trafficking of human beings

The existing literature shows that sexually exploited youth experience considerable trauma and that these youth have a unique set of health risks, which includes rape, sexual injuries, STIs, pregnancy and various mental health problems, according to Barnert et al.⁽¹⁰⁾.

The study by Beck et al.⁽¹¹⁾ in the United States, with physicians, nurses, social workers, lawyers, and patients and family members in urban areas, and suburban and rural health care services, showed that 63% of respondents to the survey reported having had no prior training in the identification of victims of sex trafficking. The survey concluded that, in this sample, the greatest difficulty in identifying victims of sex trafficking was due to lack of training (34%) and awareness (22%).

The study by Ross et al.⁽¹²⁾ in England corroborated the results and trends reported by Beck et al.⁽¹¹⁾. The survey was conducted through questionnaires on websites at ten health institutions, including one emergency, and showed that 13% of these professionals had had previous contact with victims of sex trafficking. However, 86.8% (n=679) reported lack of knowledge of what questions to ask to identify potential victims, and 78.3% (n=613) reported that they had insufficient training to help trafficked persons.

In Mexico, Acharya⁽¹³⁾ published some data after the administration of questionnaires to 60 women between 2007 and 2013. This author concluded that the ability of these women to protect

themselves from STIs such as HIV was drastically weakened by the threat of pimp violence.

Fear of violence exposes trafficked women to many risks, such as unprotected sex, unwanted pregnancy, forced sex, mental trauma and substance abuse. Their ability to negotiate condom use by their male partners is inversely related to the extent or degree of abuse in their relationship. Physical and sexual violence against trafficked women has greater consequences on physical, sexual and mental health conditions.

Peck⁽¹⁴⁾, in 2018, published a rapid security protocol No. 42, which proposes ways to identify victims of human trafficking. The need was due to the fact that the United States is one of the largest markets and destinations for victims of human trafficking in the world.

If employees of a health care organization have not yet found a victim of human trafficking, they most likely will. Knowing how to identify victims of human trafficking, when to involve law enforcement, and what community resources are available to help the individual is important information for all health care professionals⁽¹⁴⁾.

Under the protocol, over a ten-year period (2007–2017), the National Human Trafficking Resource Center (NHRTC) received 40,200 human trafficking case reports in the United States, where the largest numbers were from California (1,305), Texas (792), Florida (604), Ohio (365) and New York (333).

DISCUSSION

The results showed that human trafficking is related to lack of access to information, health care and education. Such factors are intrinsic to the process of illegal immigration and the destination of women and children for exploitation, whether sexual, or for the removal of organs or forced labor.

Identifying and helping victims of this crime can be difficult and put the victim at greater risk. In some cases, victims from different countries or cultures do not realize that their exploitation is unusual or criminal.

In addition, some victims of human trafficking bond with their exploiter, a condition called trauma bonding, which is similar to Stockholm syndrome. Victims may remain silent about their exploitation out of shame or fear of humiliation. As medical care is occasionally needed for victims of trafficking, health care professionals are in a unique position to help them⁽¹⁴⁾.

Thus, human trafficking is a global problem, and countries, the public, universities, researchers and society in general must be concerned and help so that there is a fight against this crime and the problems arising from it.

The condition of vulnerability is something widely discussed by scholars of human trafficking. In the UNODC Reference Document for the Vienna Forum 2008, a definition of vulnerability is proposed as “a condition resulting from how individuals negatively experience the complex interaction of social, cultural, economic, political and environmental factors that create the context for their communities”. It is important to understand the concept of vulnerability, as protocols, guidelines and legislation condition victims of human trafficking in this type of situation.

An example of this is found in the manual against trafficking in persons for professionals in the criminal justice system carried out by

UNODC⁽¹⁵⁾. The choice of victims belonging to vulnerable groups can be relevant as an aggravating factor for at least two reasons: it reflects greater censorship of the agent's conduct by purposefully taking advantage of the victim's situation of vulnerability; and it calls into question the special protection that society owes its most vulnerable citizens.

In article by Martinelli⁽¹⁶⁾, human trafficking is addressed with an emphasis on sexual exploitation and the implications of the living conditions of these people in vulnerable situations. The consent of victims, according to the author, should not be used as an argument to avoid criminalization. This author presented some reflections and pointed out that it is difficult to define the situations in which the prostituted individual is in a situation of vulnerability, but that it cannot be ignored that some of the alleged victims of human trafficking are able to consciously choose a way of life for themselves.

However, human trafficking is an issue that goes beyond individual freedom because of the sex trade. In the Brazilian case, since prostitution is legal, it becomes even more complex to typify the crime of human trafficking. As noted earlier, the question of free will or not comes into play, and, when considering the threats to the family, retention of documents, violence and coercion, the process is increasingly abstruse.

One of the contributions in this study was to show that, in several articles, health care professionals are key players in the fight against human trafficking, as well as for the reduction and treatment of STIs.

Among the parties involved, promoting the education of these professionals throughout their lives on how to identify possible victims and their performance before the competent institutions of each State Party can be one of the solutions and strategies for fighting this crime. However, there is still a lack of policies, projects and action plans that can be implemented in the places of origin and destination.

The limitation of the work was due to the fact that some articles found spoke in a specific way, without integrating the relationship of human trafficking with the process of resilience of health care systems. This is so that authorities, international organizations and health care professionals can draw up joint policies and protocols to promote the reduction of crime and STIs, as well as better reception, treatment and health education for victims.

CONCLUSION

According to the data cited and discussed in this article, what can be said is that more research should be carried out together with the investigating agencies that apply the current laws, to develop more effective measures to combat the trafficking of human beings.

This is of paramount importance, as the topic must urgently leave the theoretical part and work with predictive data to understand how traffickers act to recruit their victims. Another point is the formulation of policies and projects that are able to reach vulnerable populations, with the promotion of education, health care and better living conditions. Such measures will act to curb criminal organizations and their respective traffickers.

Thus, after the analyses worked out in this study, it is suggested that future work develop methods aimed at the integration of health care professionals with the other parties involved in human trafficking, since the hypothesis presented could be confirmed in view of the studies presented in the present study.

PARTICIPATION OF EACH AUTHOR

Milena Cristina Duarte de Almeida: study design, data and article collection, analysis and interpretation of results and drafting of the manuscript;

Álvaro Francisco Rodrigues Garrido: guidance and revision of the manuscript;

Aliete Cristina Gomes Dias Pedrosa da Cunha-Oliveira: guidance and revision of the manuscript;

Tháisa Góis Farias de Moura Santos Lima: analysis and interpretation of the results and revision of the manuscript;

Jordana Crislayne de Lima Paiva: revision of the manuscript and adjustments to standards;

Jéssyca Fabiola Ribeiro Ataliba: revision of the manuscript and adjustments to standards.

Funding

UFRN's Laboratory of Technological Innovation in Health through TED 54/2017 signed between UFRN and the Ministry of Health.

CONFLICT OF INTERESTS

Authors have none to declare.

REFERENCES

1. United Nations Office on Drug and Crime. Global report on trafficking in persons [Internet]. UNODC; 2014 [cited on Feb 24, 2020]. Available at: <https://www.unodc.org/unodc/en/human-trafficking/publications.html?ref=menu#latest>
2. Organización de las Naciones Unidas. Protocolo de Palermo. Geneva: Organización de las Naciones Unidas; 2000.
3. Wrabetz-Daniel J, Penedo R. The illegal business of human trafficking. In: Guia MJ, editor. Trafficking in human beings in time and space: a socioecological perspective. Switzerland: Springer International; 2015.
4. United Nations Office on Drug and Crime. Global report trafficking in persons [Internet]. UNODC; 2018 [cited on Feb 24, 2020]. Available at: <https://www.unodc.org/unodc/en/human-trafficking/publications.html?ref=menu#latest>
5. Organização Pan-Americana de Saúde, Organização Mundial da Saúde. A cada dia, há 1 milhão de novos casos de infecções sexualmente transmissíveis curáveis [Internet]. 2019 [cited on Feb 20, 2020]. Available at: <https://www.paho.org/pt/noticias/6-6-2019-cada-dia-ha-1-milhao-novos-casos-infecoes-sexualmente-transmissiveis-curaveis>
6. Rabelo J. Brasil está preparado para conter avanço das doenças sexualmente transmissíveis. [Internet]. Ministério da Saúde; 2019 [cited on Feb 20, 2020]. Available at: <https://www.gov.br/saude/pt-br/assuntos/noticias/brasil-esta-preparado-para-conter-avanco-das-doencas-sexualmente-transmissiveis>
7. Brasil. Ministério da Saúde. Campanha inédita aborda doenças sexualmente transmissíveis [Internet]. Ministério da Saúde; 2019 [cited on Feb 20, 2020]. Available at: <http://www.aids.gov.br/pt-br/noticias/campanha-inedita-aborda-doencas-sexualmente-transmissiveis>
8. Zimmerman C, Yun K, Shvab I, Watts C, Trappolin L, Treppete M, et al. The health risks and consequences of trafficking in women and adolescents trafficking in women and adolescents: findings from a European study. Proceedings of the 35th Annual Conference of the Cognitive Science Society. London: London School of Hygiene & Tropical Medicine; 2013.
9. Wirth KE, Tchetgen EJ, Silverman JG, Murray MB. How does sex trafficking increase the risk of HIV infection? An observational study from southern India. *Am J Epidemiol* [Internet]. 2013 [cited on Feb 24, 2020];177(3):232-41. Available at: <https://academic.oup.com/aje/article/177/3/232/101069?login=true> <https://doi.org/10.1093/aje/kws338>

10. Barnert E, Iqbal Z, Bruce J, Anoshiravani A, Kolhatkar G, Greenbaum J. Commercial sexual exploitation and sex trafficking of children and adolescents: a narrative review. *Acad Pediatr* [Internet]. 2017 [cited on Feb 24, 2020];17(8):825-9. Available at: https://www.sciencedirect.com/science/article/pii/S1876285917304333?casa_token=rMhser789rEAAAAA:2OLHNuvkdBWjudr3H154U0-PDdVfw4MCc2_Y-k4VyH4Ltac5hiEz2HRUJIB6BDwQaHay-WwHaPw#! <https://doi.org/10.1016/j.acap.2017.07.009>
11. Beck ME, Lineer MM, Melzer-Lange M, Simpson P, Nugent M, Rabbitt A. Medical providers' understanding of sex trafficking and their experience with at-risk patients. *Pediatrics* [Internet]. 2015 [cited on Feb 24, 2020];135(4):e895-902. Available at: <https://pediatrics.aappublications.org/content/135/4/e895.short> <https://doi.org/10.1542/peds.2014-2814>
12. Ross C, Dimitrova S, Howard LM, Dewey M, Zimmerman C, Oram S. Human trafficking and health: a cross-sectional survey of NHS professionals' contact with victims of human trafficking. *BMJ Open* [Internet]. 2015 [cited on Feb 24, 2020];5:e008682. Available at: <https://bmjopen.bmj.com/content/5/8/e008682?cpetoc> <https://doi.org/10.1136/bmjopen-2015-008682>
13. Acharya AK. Trafficking of women in Mexico and their health risk: issues and problems. *Soc Incl* [Internet]. 2015 [cited on Feb 24, 2020];3(1):103-12. Available at: <https://www.cogitatiopress.com/socialinclusion/article/view/179> <https://doi.org/10.17645/si.v3i1.179>
14. Peck J. Guidance on spotting possible victims of human trafficking. Briefings Hospital Safety [Internet]. 2018 [cited on Feb 24, 2020];26(9):10-7. Available at: http://hospitalsafetycenter.com/content/331696/topic/WS_HSC_HSC.html
15. United Nations Office on Drug and Crime. Manual contra o tráfico de pessoas para profissionais do sistema de justiça penal [Internet]. UNODC; 2009 [cited on Feb 20, 2020]. Available at: <https://www.unodc.org/unodc/en/human-trafficking/publications.html?ref=menu#latest>
16. Martinelli JPO. The illegal business of human trafficking. In: Guia JM, editor. Trafficking in human beings for sexual exploitation in the Brazilian criminal law and the consent of the victim. Switzerland: Springer International; 2015.

Address for correspondence

MILENA CRISTINA DUARTE DE ALMEIDA

Avenida Capitão Mor Gouveia, 2488, bloco PN 74 – Cidade da Esperança
Natal (RN), Brazil
CEP: 59070-400
E-mail: milena.duarte@lais.huol.ufrn.br
Received on: 06.14.2021
Approved on: 09.14.2021

ERRATUM

<https://doi.org/10.5327/DST-2177-8264-20213318ERRATUM>

In the manuscript “Human trafficking, health care systems and sexually transmitted infections”, DOI: 10.5327/DST-2177-8264-20213318, published in the *J bras Doenças Sex Transm.* 2021;33:e213318, on page 1:

Where it reads:

Milena Cristina Duarte de Almeida^{1,2}, *Álvaro Francisco Rodrigues Garrido*¹, *Aliete Cristina Gomes Dias Pedrosa da Cunha-Oliveira*¹, *Tháisa Góis Farias de Moura Santos Lima*², *Jordana Crislayne de Lima Paiva*², *Jéssyca Fabiola Ribeiro Ataliba*²

¹Universidade de Coimbra – Coimbra, Portugal.

²Universidade Federal do Rio Grande do Norte – Natal (RN), Brazil.

It should read:

Milena Cristina Duarte de Almeida^{1,2}, *Aliete Cristina Gomes Dias Pedrosa da Cunha-Oliveira*³, *Tháisa Góis Farias de Moura Santos Lima*², *Jordana Crislayne de Lima Paiva*², *Jéssyca Fabiola Ribeiro Ataliba*²

¹Universidade de Coimbra – Coimbra, Portugal.

²Universidade Federal do Rio Grande do Norte – Natal (RN), Brazil.

³Escola Superior de Enfermagem de Coimbra – Coimbra, Portugal.

