Factors Effecting HIV Transmission Among Russian Women

By

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[Signatures]

Chair

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Abstract

Factors Affecting Condom Use Among Russian Women

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Problem: Human Immunodeficiency Virus (HIV) infection rate in Russia is exploding faster than anywhere else in the world (Webster, 2003). Although the epidemic affects the entire population, Russian women represent a particularly vulnerable population due to the increased rates of heterosexual transmission and low frequency of barrier contraception use.

Objective: To discuss the significance of the problem of HIV among Russian women, and the relevance of the Russian HIV epidemic to nursing. To provide information about current research regarding Russian women and HIV transmission, as well as the need for further research.

Methods: Reviewing and synthesizing literature using Becker’s Health Belief Model as a theoretical framework places the problem of HIV transmission among Russian women in a historical context, and discussing research findings regarding HIV among Russian women. Additional literature reviewed pertaining to HIV transmission in Honduras, Ecuador and Turkey prefaces a discussion of recent unpublished research results that examine the relationship between gender inequality and condom use among the women.
of Honduras, Ecuador, and Turkey. The research illustrates gender specific factors that correlate with women's decision to use condoms in other developing countries with HIV epidemics.

**Conclusion:** Although the literature review revealed the severity of the HIV epidemic in Russia, there is still much that has not been studied, particularly with regard to the unique cultural factors affecting HIV transmission among Russian women. Performing a study using the same methodology and the SRPS questionnaire utilized by Schumann, Grawe, and Schultz (Table 3) would contribute to the body of research and provide data for comparison with findings in other nations facing HIV epidemics.

**Relevance:** Reviewing the synthesis of available literature provides valuable information about the scope of the HIV epidemic facing Russia. A discussion of the need for further nursing research into the specific cultural factors affecting transmission, and determination of more accurate incidence rates will help guide interventions for healthcare workers and enable them to more effectively address the HIV crisis.
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Introduction

Factors affecting the transmission of Human Immunodeficiency Virus (HIV) have been studied extensively in the United States since the emergence of the disease in the 1980s. However, many other countries around the world facing HIV have not adequately examined the unique cultural factors that contribute to transmission within their country. Although condoms are currently the most effective means to reduce the rate of HIV transmission among sexually active individuals, condom use among Russians is low and the country is experiencing a rapid increase in HIV rates (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2006a) (Table 1).

The HIV epidemic facing Russia seriously threatens the future of their nation. It is believed that the HIV infection rate in Russia is exploding faster than anywhere else in the world (Webster, 2003). The official number of acquired immunodeficiency syndrome (AIDS) cases reported in Russia rose from 84 in 1991 to 87,614 in 2001 and it is believed that the reported cases represent only a fraction of the actual incidence, which is estimated to be closer to 1.5 million (Heubeck, 2004). The AIDS epidemic is expected to severely impact Russia’s population, affecting society, family, and the future workforce and livelihood of the nation. Projections show that Russia’s population could fall to as low as 80 million from the current 146 million as a result of the AIDS epidemic (Heubeck). Although Russia’s entire population is being affected by the growing HIV epidemic, women represent a particularly vulnerable group. Increase in heterosexual transmission, accompanied by low frequency of barrier contraception place women at an
increased risk of contracting HIV. In 2002, HIV-1 rates among women who gave birth in St. Petersburg, Russia were 100 times greater than in 1998 (Khaldeeva et al., 2003).

Nurses and other health care professionals are faced with the challenge of curbing a growing epidemic in a nation whose population is ill-informed regarding HIV transmission, and whose government lacks the resources to adequately address the crisis. In general, “The population’s understanding of HIV is poor and prevention is not a priority” (Webster, 2003, p.2132). Nurses can play a key role in educating the Russian population about HIV risk factors through developing and implementing educational programs to focus on prevention strategies.

Another factor that impacts Russia’s inability to control the HIV epidemic is the attitude held by the government. The government’s initial response to increasing HIV rates was, “characterized by indifference” (Field, 2004, p.117). Currently, the majority of funding for HIV education and prevention programs comes from non-governmental organizations (NGO’s) that struggle to make inroads against the spread of HIV (Heubeck, 2004). Nurses from the United States and other nations are greatly needed in Russia to provide HIV prevention education, HIV screening, and pre and post test counseling due to the lack of adequate healthcare staffing and resources to care for Russians affected by the HIV epidemic. Further nursing research into the specific cultural factors affecting transmission, and determination of more accurate incidence rates will help guide interventions for nurses and enable them to more effectively address the HIV crisis.
Purpose

The purposes of this literature review examining HIV transmission in Russia are:

1. To identify Russian women’s current HIV knowledge, and current epidemiological statistics.
2. To determine further recommendations for research focused on cultural influences on HIV transmission.
3. To develop more effective prevention strategies that take Russian cultural beliefs and practices into account based on the findings of research done in developing countries facing similar HIV epidemics. The hypothesis of this literature review is that there are specific cultural factors that impact Russian women’s understanding of HIV, and their ability to initiate condom use within their sexual relationships.

Conceptual Framework

The conceptual framework that will guide the literature review and synthesis process is Becker’s Health Belief Model (Figure 1). This framework, “postulates that health-seeking behavior is influenced by a person’s perception of a threat posed by a health problem and the value associated with actions aimed at reducing the threat” (Polit & Beck, 2004, p.124). This model is appropriately applied to this research problem, because the relationship that is being explored correlates Russian women’s perception of health threats and values associated with preventative strategies, such as condom use. The primary components of this model are: “perceived susceptibility, perceived severity, perceived benefits and costs, motivation, and enabling or modifying factors” (Polit & Beck, 2004, p.124). Perceived susceptibility pertains to each women's own description
of how HIV poses a health threat to them personally. The apparent impact HIV infection would have on the lives of the women represents the perceived severity. Motivation is a difficult concept to measure quantitatively. Research regarding how women's perceived susceptibility affects actions and health-seeking behaviors regarding HIV prevention, such as using condoms or not sharing needles, can provide some insight to motivation. Enabling or modifying factors identified by Russian women would include any outside influences that affect an individual’s ability to engage in behaviors that promote health. Examples of these factors include: educational status, financial resources, and access to healthcare, gender inequality, and cultural factors.

The Health Belief Model provides a framework that allows the researcher to focus on the relationships between the population's perceptions and modifying factors and health seeking behaviors. Following this model will assist the researcher in developing tools and methods to support the analysis of relationships to support or reject the research hypothesis.

The dependent variable is defined as, “the variable hypothesized to depend on or be caused by another variable, the outcome variable of interest” (Polit & Beck, 2004, p.716). In this review of literature the outcome variable of interest is HIV transmission among Russian women. The independent variable is defined as, “the variable that is believed to cause or influence the dependent variable.” (Polit & Beck, 2004, p.720). The cultural beliefs and practices identified by reviewing and synthesizing current literature as affecting preventative behavior are the independent variables in this literature review.
Review of Literature

A comprehensive review of the available scientific literature helps place Russia’s HIV epidemic within a historical context. Various online databases of scholarly journals including CINHAL, Proquest Direct, and PubMed were searched using the search terms: Russian women, STI’s, HIV, HIV transmission, AIDS, gender inequality, sex industry, HIV prevention, condom use, sex workers, prostitution, and violence against women. Fourteen research articles related to HIV transmission in Russia were identified. Only four of these articles specifically addressed women as a vulnerable population.

HIV emerged relatively late in Russia, partially due to the restrictive societal and political climate during the 1980s, when HIV prevalence began to rise in the United States and other countries with more freedoms. In fact, the Soviet Union did not make its first AIDS death public until 1988 (Specter, 2004). When HIV first emerged in Russia, “Some believed that HIV was developed in the United States as part of the Cold War to be, “tested” on marginalized persons who led a disordered sexual life” (Fields, 2004, p.117). The HIV rate grew slowly initially, and there is little research available regarding the increased momentum of HIV in Russia during the 1980s and early 1990s. Even after HIV and AIDS were recognized and discussed openly in Russia in the 1990s, the HIV crisis was largely ignored due to the other issues facing the nation. In the 1990s, “Communism had been replaced by a sort of criminal capitalism, a war in Chechnya, a stock market crash, and subsequent economic implosion, and also epochal environmental and health problems” (Specter, p.61). The perceived severity, one of the key values affecting health seeking behavior according to Becker’s Health Belief Model, of the evolving HIV epidemic among Russian citizens was minimized by social and economic
upheavals that affected many Russians’ financial stability and ability to provide for their families needs. The low perceived severity of HIV among Russians may also be attributed to the relatively low number of deaths from AIDS (Brown, 2006), although the low number of AIDS deaths will dramatically increase, if the epidemic progresses as projected.

As a growing awareness of HIV in Russia evolved, measures to obtain accurate data and implement prevention programs slowly began to emerge. Although the Centers for Disease Control (CDC) AIDS center recorded results of all HIV tests, and voluntary routine testing was offered to patients at all drug-treatment, sexually transmitted disease, tuberculosis, and prenatal clinics during 1987-2001 (“Rapid Increase”, 2003), the Russian government did not take aggressive action to combat the increasing HIV rates. The collapse of the political system resulted in a further decline in healthcare. The United Nations Development Program (UNDP) estimates that in the Russian Federation the current per capita expenditure for HIV/AIDS amounts to 5 rubles, the price of a pack of cigarettes (Field, 2004). Although antiviral therapy is currently the mainstay of treatment for those infected with HIV/AIDS, the lack of funding for HIV/AIDS interventions and treatments has resulted in poor access to antiviral therapy for those infected with HIV/AIDS. The WHO and UNAIDS, estimates that in 2005 there were approximately 100,000 individuals requiring antiviral therapy, with only 5000 receiving antiviral therapy by the end of the year (Table 2). This places antiviral therapy coverage in Russia at only 5%, a level of coverage that has not increased since 2003 (WHO and UNAIDS, 2006).
Motivation is another key to implementation of preventative strategies according to Becker’s Health Belief Model. The cultural views held by many Russians have a significant impact on motivation to allocate valuable and often scarce resources toward HIV prevention and treatment. Bobrick, head of the Globus programs in Russia, which operates ten HIV treatment and prevention programs throughout Russia states, “The general attitude toward HIV in Russia is still one of denial and widespread stigmatization even in health facilities” (Brown, 2006, 438).

The prevalence of stigmatization of HIV is a significant modifying factor that contributes to Russian’s perception of the health threat associated with HIV. Russians who are known to be HIV positive are often denied dental care and operations. Many Russians are reluctant to seek treatment for HIV due to lack of confidentiality and their fear of subsequent stigmatization (Brown, 2006).

The literature also highlights some of the cultural elements contributing to the HIV epidemic in Russia. The fall of communism has resulted in greater access to illicit drugs, leading to an alarming increase in substance abuse. The recent surge in heroin use among Russian young people places them at a serious risk for contracting HIV. The number of intravenous drug users (IDU’s) in Russia is estimated to be between 1 to 2.5 million (Heubeck, 2004). As previously mentioned, another demographic group struck by the epidemic are women. Women are often in relationships with men who participate in high-risk behaviors. Approximately 30% of Russia’s sexually active men, aged 15-25 years, are sleeping with prostitutes (Heubeck) and often do not have the knowledge related to HIV transmission and condom use to adequately protect themselves. A study examining HIV-1 seroprevalence rates in women relinquishing their infants to the state in
St. Petersburg, Russia reported, “Increases in heterosexual transmission accompanied by low frequencies of barrier contraceptive use place women at risk for both the acquisition of HIV-1 and for unintended pregnancy” (Khaldeeva et al, 2003, 1982).

Economic depression and gender inequality contribute to a high unemployment rate among Russian women that has been the catalyst for a significant increase in the number of women engaging in prostitution. In a recent study, 32 sex workers in Moscow were interviewed and the majority indicated willingness to enter into sex work, many even relocating to Moscow to seek work in the growing sex industry. All of the survey respondents said sex work was their sole source of income (Stachowiak, Sherman, Konakova, et al, 2005, 19). Relocation to seek work in the sex industry can be viewed as a modifying factor affecting health seeking behavior, “this migration keeps women from receiving social services such as police assistance, medical and psychological care because they lack legal residency.” (Stachowiak, Sherman, Konakova, et al, 2005, 23). Applying Becker’s Health Belief Model principle of perceived costs to benefits, many of the sex workers feel the risk of physical violence and/or contracting HIV or another STI are worth the financial security that working in the sex industry provides.

Sex workers have traditionally been viewed as a bridging group with regard to HIV transmission, “they bring HIV infection into the heterosexual population through contact with injecting drug users where HIV is rapidly moving” (Shakarishvili, Dubuvskaya, Okan, and Lewis, et al, 2005, 57). Russian accounts of HIV prevalence among sex workers vary widely; some experts claim as many as 25-50% are infected with HIV (Stachowiak, Sherman, Konakova, et al, 2005). In a recent study conducted at homeless detention facilities and juvenile detention facilities, the rates of HIV among the
200 female detainees was 30-120 times higher than the generally population and only slightly lower than the HIV infection rate among IV drug users (Shakarishvili, Dubuvskaya, Okan, and Lewis, et al, 2005). Of the female homeless detainees surveyed, 41% responded they never used condoms and 23% reported they sometimes used condoms. The researchers who conducted this study concluded, “In view of the substantially raised infection rates and behavioral risks in females compared with males in our study, and the increasing rates of HIV infection in women in the Russian Federation the potential for perinatal and heterosexual transmission is high.” (Shakarishvili, Dubuvskaya, Okan, and Lewis, et al, 2005, p.60). Stachowiak’s aforementioned interviews with the 32 sex workers in Moscow found a similar trend regarding condom use that exemplifies Becker’s perceived susceptibility relationship to preventative behaviors. Although awareness of the importance of condoms was extremely high, 25% of respondents do not use condoms with regular clients, and the majority interviewed described sporadic condom use with regular clients (Stachowiak, Sherman, Konakova, et al, 2005, 21).

Work conditions in the sex industry present a unique set of cost to benefit perceptions that affect Russian sex worker’s health beliefs. Stachowiak’s interviews identified a sobering example of these perceptions, stating, “A sex worker who has unprotected sex because a client refuses to wear a condom may perceive herself to be successful in preventing violence, even if she becomes infected with an STI or HIV.” (Stachowiak, Sherman, Konakova, et al, 2005, 23). Current HIV prevention strategies focused on condom education are often ineffective, because they fail to take into account
the perceived cost to benefit ratio that the risk of physical violence is associated with a much greater perceived severity and susceptibility than that of contracting HIV or STI’s.

In addition to describing factors contributing to the current HIV crisis, the literature provides recommendations for further research and interventions to slow infection rates. Kamaletidova (as cited in Webster, 2003), an epidemiologist with the AIDS Foundation East West states: “We need to know a lot more about how the epidemic is spreading, both so we can focus our AIDS prevention programs, and so we can convince the Russian government the problem is big, but controllable through prevention and harm reduction strategies” (p. 2133). The aforementioned study describing seroprevalence rates among mothers in St. Petersburg, Russia recommends the implementation of a sentinel surveillance system for HIV-1 infected women giving birth, and for increased use of rapid HIV serum tests among women without prenatal care (Khaldeeva, et al., 2003). Field (2004) proposes specific interventions to suppress the epidemic. These interventions include: investing more financial resources to support well-equipped facilities and effective drug treatment, and educational interventions specifically aimed at informing young people about high-risk behaviors, and overcoming cultural barriers that contribute to the stigma of HIV among Russians who view HIV positive individuals as perpetrators who should be punished (Field).

In summary, available literature indicates a rapidly increasing HIV epidemic, the potential impacts on Russia, and the need for further research and interventions aimed at vulnerable populations, and the risk factors and cultural beliefs and practices that influence their transmission rates. The infection rate is expected to continue to rise because of continued increase of high-risk behaviors. Intravenous drug use is on the
rise, the sex industry continues to grow, while barrier contraceptive use levels remain low. Russia is unprepared to provide antiretroviral therapy for those infected with HIV as there is already a serious lack of access to medications at the current infection rate. Russia's economy is currently struggling and the HIV epidemic is expected to further hinder the nation financially as the majority of those infected are young people that are vital to the work force. Serious social implications are possible as well as the number of mothers living with and dying from HIV/AIDS will affect the children of Russia. Cultural factors, such as the stigmatization associated with HIV infection, prevent infected individuals from obtaining access to medical and social programs that are available. There is very little governmental financial support for HIV education, prevention, testing, or treatment. Although women have been identified as a vulnerable population with regard to HIV transmission, there are few interventions aimed at this group. Further research and development of culturally competent interventions are absolutely essential to alter the course of the Russian HIV epidemic and prevent the impending devastation that would result if infection rates continue to rise.

Although much information is gained by analyzing available literature, there are many knowledge gaps. Accurate incidence rates are not currently available, and current strategies being employed to combat the epidemic are not described in detail. Several studies cited the lack of condom use among Russians, but fail to identify the specific factors contributing to low rates of barrier contraception usage. Additionally, information about the relationship between gender inequality, domestic violence, and sexual beliefs and practices among Russian women have not been adequately examined to determine how they correlate with the rising infection rates.
can contribute to violence against women, “In many situations, women who ask partners to use condoms risk being considered unfaithful, resulting in physical and/or sexual abuse” (WHDP).

Similar data is found in Honduras, a nation with growing HIV infection across all demographics, with women as a particularly vulnerable population. Honduras and Russia face similar widespread drug use and an extensive sex industry. PAHO data shows 54,000 adults in Honduras are living with HIV, 27,000 are women (WHDP, n.d.). According to the 2004 UNAIDS update, AIDS is the leading cause of death for Honduran women (UNAIDS, 2005). Although Honduras is now allocating more resources to combat the HIV epidemic as prevalence has begun to move from high-risk groups, such as commercial sex workers and IV drug users, into the general population (Beecharry, Schwab, Akhaven, Hernandez and Perez, 2002) there is evidence that the epidemic is continuing to grow at a rapid rate. Epidemiological data from as far back as 1999 showed HIV infection among pregnant women to range from 2.9% in urban areas to 3.6% in rural areas, which is indicative of a mature epidemic with HIV circulating in the general population (UNAIDS, 2005). These rates, coupled with high rates of other sexually transmitted infections are considered by WHO researchers to indicate favorable conditions for the continued growth of the HIV epidemic in Honduras (UNAIDS/WHO 2004).

Although HIV transmission is on the rise in Turkey, reliable epidemiological data is not as readily available as Turkey’s HIV epidemic is relatively young in comparison to Central and South America. The UNAIDS/WHO working group on HIV/AIDS surveillance states, “As in most countries in the initial stage of the epidemic,
stigmatization and discrimination are widespread in Turkey, making vulnerable groups hard to reach and targeted prevention difficult to implement” (UNAIDS/WHO 2006). Published data from 2000 showed 1067 cases of HIV, an estimate of less than 0.1% (Schumann, 2006). Similar risks to Turkish women as discussed in Honduras, Ecuador, and Russia exist, making Turkish women a vulnerable population with regard to HIV transmission. Turkey, like Russia, has a large commercial sex industry, and condom use has been shown to be low. Heterosexual contact is the primary route of transmission at roughly 50% of cases compared with only 6% infected through IV drug use, and among those infected one-third are women (UNAIDS, 2006b).

Although there is an effort being made to educate the population about HIV transmission, these interventions may not be adequate. A 2003 study surveying 120,034 married Turkish women, aged 15-49, regarding clinical knowledge of HIV indicated current province-based prevention programs consisting largely of visual aids and printed material appear to be inadequate in educating Turkish women about HIV/AIDS (Genc Gunes, Karaoglu & Egri 2005).

Thus, the literature illustrates an international crisis of HIV transmission among women and the need for further research to identify interventions that take specific gender and cultural factors that affect HIV transmission into account to improve the efficacy of the interventions.

**Implications for Nursing Practice**

Although the literature reveals the severity of the HIV epidemic in Russia, there is still much that has not been studied, particularly with regard to the unique cultural factors affecting HIV transmission among Russian women. Further research regarding Russia’s
HIV epidemic is very significant to nursing practice, because the epidemic is not well defined, and current efforts to curb infection rates have not been effective. Further research and implementation of new prevention strategies are needed. Currently, there is a lack of research among Russian women with regard to factors affecting HIV transmission. It is vital for nurses working with an at-risk population to understand the factors driving disease transmission in order to develop and implement effective strategies to combat the epidemic. There is also a lack of research regarding sexual power and relationship control within the Russian population. In order for nurses to provide culturally competent care, it is important to have an understanding of the cultural factors that impact health-seeking behavior. Currently, very little financial investment is made by the Russian government to curb the growing HIV epidemic. More research will draw awareness to the topic, as well as allowing nurses to know how to better utilize scarce financial resources to best serve the population at risk.

Recent research conducted at Washington State University Intercollegiate College of Nursing addressed the research question of how cultural factors, specifically gender inequality, affected condom use among the women of Ecuador, Honduras, and Turkey (Grawe, 2006; Schultz, 2006; Schumann 2006). The results of these studies indicated a significant correlation between sexual relationship power and women’s ability to engage in preventative behavior such as condom usage, (see Table 3). These researchers used a quantitative, non-experimental, cross-sectional, descriptive correlational research design utilizing a questionnaire developed by Pulerwitz called the Sexual Relationship Power Scale (SRPS), a 23 item survey scored on a four point likert scale (Pulerwitz, Gortmaker, & DeJong 2000). The questionnaire contains two subscales addressing decision-making
dominance and relationship control (Pettifor, Measham, Rees, and Padian, 2004).

Pettifor (research director of the Adolescent Health Research Program at the
Reproductive Health Research Unit, University of Witswatersand) also successfully used
the SRPS in similar research in South Africa.

Data analysis was similar to the methods used in Pettifor's study. SPSS was used
for factor analysis, and reliability analysis to determine internal consistency (Pettifor et
al., 2004). The researchers used chi-square tests for categorical variables and t tests for
continuous variables to analyze the relationship between condom use consistency, sexual
power, HIV-risk behavior, and sociodemographic factors (Pettifor et al., 2004).

Performing a similar study in Russia would provide valuable information about
whether or not such a correlation exists in Russia, as well. Although the proposed
research would be done on a small scale, it has the potential to educate health care
professionals, identify needs for further research, and bring awareness to a serious health
crisis affecting Russia. Health care professionals making the HIV epidemic a priority
through their contributions to research and clinical practice focusing on upstream
thinking and interventions related to primary prevention that take into account the unique
health beliefs regarding perceived susceptibility and severity held by Russian women that
contribute the HIV epidemic in Russia.

Although the aforementioned research will provide valuable information about
developing culturally competent and gender specific interventions for future
implementation, current research does provide information regarding transmission
patterns that provides recommendations for nursing interventions that may be
implemented immediately. Due to scarce national resources and cultural stigmatization
of HIV infection, most of the interventions will need to be implemented by NGO's, such as UNAIDS or WHO. The intravenous drug epidemic is relatively new to Russia and rapidly spreading. Education regarding health risks associated with IV drug use, increasing access to substance abuse treatment and developing needle exchanges have the potential to slow infection rates among this high risk group. As previously mentioned, sex workers represent a bridging group between high risk groups and the heterosexual population. Research indicates a low frequency of condom use between sex workers and their regular clients. Education regarding the need for consistent condom use with each encounter targeted at both men who have sex with prostitutes, as well as the sex workers, would address this apparent knowledge deficit.

Many high-risk behaviors have complex cultural factors that will take years to adequately address. Sex work will continue to flourish in Russia as long as the perceived cost to benefit ratio is a positive one. For many Russian sex workers, the financial benefits of the sex industry make it difficult to leave, for the majority of sex workers prostitution is their sole means of providing for their family. Programs to provide women with education, vocational training, and job placement would be highly effective in encouraging women to leave the sex industry, but are quite costly and require a great deal of time to implement. Many sex workers report not using condoms out of fear of physical violence. Educational programs for both men and women about interpersonal violence, as well as educating Russian children about domestic violence and gender inequality are possible interventions, although they may have little immediate effect as these behavior patterns are deeply engrained in Russian culture. Providing women with both education and resources, such as access to police protection (women who have
migrated from rural areas are often denied access to police services) and domestic violence shelters, would provide more immediate assistance for Russian women who have been victimized. Although the challenges of developing and implementing programs that address cultural factors affecting HIV transmission are immense, they are essential to protect Russia’s vulnerable populations.

**Summary**

The HIV epidemic in Russia poses a serious threat to the livelihood of the nation and current prevention programs have been shown to be largely ineffective at slowing transmission rates. Women represent a vulnerable population due to an exponential increase of infection among this group, as well as a decrease in preventative behaviors, such as barrier contraception usage. Although current research identifies this vulnerable population, there is little research available regarding the specific gender and cultural factors that increase susceptibility among the population. Recent research conducted in Ecuador, Honduras, and Turkey using the SRPS questionnaire shows a significant correlation between sexual relationship power and condom usage among women in these nations. Performing a similar study in Russia would help determine, if such a correlation exists among Russian women and provide healthcare workers with valuable information to develop more culturally competent HIV prevention programs that address the specific factors affecting condom use among Russian women.
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Table 1, Epidemiological Fact Sheet for The Russian Federation

Estimated number of adults and children living with HIV/AIDS, end of 2003 and 2005

These estimates include all people with HIV infection, whether or not they have developed symptoms of AIDS.

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults (15+) and children</td>
<td>760 000</td>
<td>940 000</td>
</tr>
<tr>
<td>Low estimate</td>
<td>460 000</td>
<td>560 000</td>
</tr>
<tr>
<td>High estimate</td>
<td>1 300 000</td>
<td>1 600 000</td>
</tr>
<tr>
<td>Adults (15+)</td>
<td>760 000</td>
<td>940 000</td>
</tr>
<tr>
<td>Low estimate</td>
<td>450 000</td>
<td>560 000</td>
</tr>
<tr>
<td>High estimate</td>
<td>1 300 000</td>
<td>1 600 000</td>
</tr>
<tr>
<td>Children (0-14)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Low estimate</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>High estimate</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Adult rate (15-49) (%)</td>
<td>0.9</td>
<td>1.1</td>
</tr>
<tr>
<td>Low estimate</td>
<td>0.5</td>
<td>0.7</td>
</tr>
<tr>
<td>High estimate</td>
<td>1.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Women (15+)</td>
<td>160 000</td>
<td>210 000</td>
</tr>
<tr>
<td>Low estimate</td>
<td>80 000</td>
<td>110 000</td>
</tr>
<tr>
<td>High estimate</td>
<td>280 000</td>
<td>370 000</td>
</tr>
</tbody>
</table>

Source: 2006 Report on the global AIDS Epidemic
Table 2, HIV Positive Russians Receiving Antiviral Therapy Compared to HIV Positive Russians that Need Antiviral Therapy

**Estimated number of adults (15+) in need of treatment**

Total number of people needing antiretroviral therapy

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both sexes</td>
<td>64 000</td>
<td>110 000</td>
<td></td>
</tr>
<tr>
<td>Low estimate</td>
<td>39 000</td>
<td>70 000</td>
<td></td>
</tr>
<tr>
<td>High estimate</td>
<td>95 000</td>
<td>170 000</td>
<td></td>
</tr>
</tbody>
</table>

*Source: WHO and UNAIDS, March 2006*

**Estimated number of people receiving antiretroviral therapy**

Total number of people receiving antiretroviral therapy at end of each year

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both sexes</td>
<td>3000</td>
<td></td>
<td>5000</td>
</tr>
</tbody>
</table>

*Source: Based on the most recent calculated ART need estimates by WHO and UNAIDS, as of March 2006.*

**Coverage**

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
</table>
Table 3, Comparison of Mean Relationship Power Scores in Ecuador, Honduras, and Turkey

<table>
<thead>
<tr>
<th>Country</th>
<th>Honduras</th>
<th>Ecuador</th>
<th>Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean relationship power Score</td>
<td>2.62</td>
<td>2.22</td>
<td>2.03</td>
</tr>
</tbody>
</table>

Scores are classified as follows: High (2.83-4.0) Medium (2.44-2.82) and Low (1.0-2.43), Pulerwitz, et al 2006.

Data from Schultz (2006), Schumann (2006) and Grawe (2006)
Figure 1- Becker's Health Belief Model

The "Health Belief Model" as predictor of preventive health behavior