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Disseminating On-line Reproductive Health Information in Arabic: Results from a Survey of Users of an Emergency Contraception Website

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Abstract

In May 2003, Ibis Reproductive Health and the Office of Population Research at Princeton University launched the first Arabic-language website dedicated to emergency contraception. During the first 19 months of the website's operation, 212 individuals completed an on-line Arabic-language survey dedicated to visitor demographics, website quality, and priorities for additional health information and venues for dissemination. This paper presents the results of this survey. The responses suggest that readers are not only eager to obtain accurate information about emergency contraception but that there is also considerable enthusiasm for the development of on-line Arabic-language resources dedicated to additional aspects of sexuality and reproductive health.

Keywords:

social aspects, gender, websites, information and communication technology

Introduction

Over the past decade, internet access has expanded rapidly worldwide. In the Arab world, the proportion of the population with access to the internet nearly tripled from 1 percent in 2000 to 2.8 percent in 2002 (UNDP and AFESD, 2003; UNDP, 2004). The proportion of internet users in the Arab world is significantly lower than the proportion of internet users in Organization for Economic Co-Operation and Development (OECD) countries, Latin America and the Caribbean, and East Asia and the Pacific (reported in 2002 as 38.3 percent, 8.1 percent, and 6.1 percent, respectively) (UNDP, 2004). However, the growth in internet access in the region offers a new avenue for disseminating health information to both clinicians and potential users of services.

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The internet has become an increasingly important vehicle for providing information about sexual and reproductive health. Websites dedicated to issues such as sexually transmitted infections, contraception, and pregnancy have been demonstrated to be particularly popular (Kanuga and Rosenfeld, 2004; Borzekowski and Rickert, 2001; Rideout, 2001; Goold, Ward and Carlin 2003). Internet-based resources have the potential to expand access to accurate reproductive health information to individuals who have limited access to health service professionals. As the internet provides users with relative anonymity, individuals can obtain information about sensitive reproductive health issues without fear of censure.

Given the popularity of the internet in providing sexual and reproductive health information and the increase in internet access in the Arab world, in May 2003, Ibis Reproductive Health and the Office of Population Research (OPR) at Princeton University jointly developed and launched the first Arabic-language website dedicated to emergency contraception (http://ec.princeton.edu/Arabic). Emergency contraceptives are medications or devices that can prevent pregnancy after unprotected sexual intercourse has occurred. Postcoital ingestion of pills containing higher doses of the hormones found in oral contraceptive pills (birth control pills) and the postcoital insertion of the copper T-IUD constitute the two primary methods of emergency contraception (EC). Many oral contraceptive pills (OCPs) can be used as EC, although the number of pills required to obtain the appropriate dose of hormones depends on the formulation of the individual pill brand. However, over the last decade, dedicated emergency contraceptive pills (ECPs), pills packaged and sold to be used specifically as EC, have become available. ECPs, both in dedicated product and OCP form, have been repeatedly demonstrated to be safe, effective, and acceptable to users worldwide (Glasier, 1997; Stewart, Trussell and Van Look, 2004).

EC is not a new technology. The postcoital use of high-dose estrogen began in the 1960s as a treatment for rape survivors and in 1974 Albert Yuzpe developed guidelines for using a combined estrogen-progestin formulation of post-coital contraception (Van Look and von Hertzen, 1993; Yuzpe et al,

1974; Yuzpe and Lancee, 1977). However, the development of dedicated ECPs ushered in renewed efforts to increase awareness of and expand access to EC worldwide. The internet has been demonstrated to be a particularly effective method of disseminating accurate information about EC to both providers and the general public (Wynn and Trussell, 2005; Gainer et al. 2003; Foster et al, 2005).

Approximately one-fourth of all pregnancies in the Arab world are unintended (Daulaire et al, 2002). Although contraception is widely accessible and accepted throughout the region, the legal status of abortion varies significantly. However, the legality of abortion does not correlate strongly with the abortion rate and in areas of the region where abortion is less accessible, many women resort to illegal, unregulated, and often unsafe methods of pregnancy termination. Unmarried women and women from lower socioeconomic classes often have the least access to safe abortion services. Thus the prevention of unintended pregnancy with EC has the potential to reduce both the unintended birth rate and the number of unsafe and/or clandestine abortions. In 2001, Tunisia became the first country in the Arab world to register a dedicated ECP (NorLevo®) and over the last four years dedicated ECPs were also registered in Algeria, Egypt, Lebanon, Libya, and Yemen, as well as Israel. OCPs that can be used for EC are also widely available throughout the Arab world and often available directly from pharmacies without a doctor's prescription. Thus there is considerable access throughout the region to medications that can be used postcoitally to reduce the risk of pregnancy. Although there is evidence to suggest that ECPs would be culturally, religiously, and socially permissible and acceptable throughout the region (Wynn et al, 2005), to date, few Arabic-language resources dedicated to EC have been developed.

We adapted our Arabic-language website from Not-2-late.com, a peer-reviewed EC website available in English, French, and Spanish, that is jointly operated by the OPR and the Association of Reproductive Health Professionals (ARHP). Derived from the medical literature, the website includes information about EC and answers to 42 frequently asked questions and targets both providers and potential users of EC. The website includes

a directory, searchable by country, of all known brands of OCPs that can be used for EC and the countries where they are available, the levels of the estrogen ethinyl estradiol (if any) and the progestin levonorgestrel in the pills, and the proper dose needed for use as EC. The website also contains a group of pages with information about specific pill brands that can be used for emergency contraception (referred to here as the "pills directory"). Several questions and answer pages were created specifically for the Arabic version of the website, which underwent an extensive review process prior to its launch.

The response to the website, including the use patterns and user profiles, has been documented and described elsewhere (Foster et al, 2005). By way of brief summary, from June 1, 2003 to December 31, 2004 the Arabic website received over 39,000 visits, for a monthly average of 2,064 visits. The frequently asked questions section of the website was the most frequently visited (45.5% of all page requests), followed by the homepage (25.8%) and the country and pills directories (11.6%). Analysis of the use patterns also revealed that pages created specifically for the Arabic-language website were highly popular, a finding that reinforced the importance of culturally adapting health information resources.

In order to obtain demographic information about website visitors and feedback about the website, we posted a link to a short on-line survey on the website's homepage. This paper presents the results of the on-line surveys completed during the first 19 months of the website's operation.

Materials and methods

The on-line survey consists of a series of 12 close-ended questions related to respondent demographics, including sex, age, occupation, and nationality, respondent opinions about the quality of the website content and layout, information about respondent internet use and access, and respondent interest in additional on-line health information. The survey also consists of two open-ended questions in which respondents are asked to provide written comments about the website and their personal experiences with

EC. Completed surveys were recorded using a program custom-designed by Germán Rodríguez to run under Microsoft's Internet Information Server (ISS) using ASP.NET. We examined the survey data collected from June 1, 2003 through December 31, 2004 (inclusive).

Results

Over the first 19 months of the website's operation (June 1, 2003 to December 31, 2004), 212 visitors completed our on-line survey. With respect to gender, 84 percent (n=179) of the survey respondents identified as male and 16 percent (n=33) as female. Regarding nationality, 73 percent of respondents identified as being from an Arab country; 23 percent (n=49) identified as Saudi Arabian, 12 percent (n=26) as Egyptian, 7 percent (n=14) as Iraqi, 6 percent as Syrian, 5 percent (n=10) as Moroccan, and the remaining 20 percent as from another country in the region. Nearly 19 percent of respondents (n=40) identified as US nationals and the remaining nine percent identified as European, "other", or did not respond. Fifty percent (n=106) of the survey respondents identified as age 20 through 29; 28 percent (n=60) as age 19 or younger; and 17 percent (n=36) as age 30 through 39. The largest group of survey respondents (32 percent) identified as students, followed by health professionals (26 percent) and professionals outside of the health fields (27 percent). Nearly 60 percent of survey respondents reported that they were accessing the website on a computer at home, 25 percent reported that were using a computer in an internet café, and 11 percent reported using a computer at work. The remaining respondents reported using a computer from school (two percent) or from a location defined as "other" (two percent).

The survey also contained three questions regarding the content, layout, and quality of the website (relative to other Arabic-language health information websites). Over 80 percent of the survey respondents rated the content of the website as "excellent" (57 percent) or "good" (24 percent) and 5 percent of the respondents rated the website content "poor" (1 percent) or "very poor" (4 percent) The remaining 15 percent of respondents evaluated the website content as "fair" (5 percent) or had "no opinion" (10 percent). With

respect to website layout, nearly three-quarters of respondents rated the layout as "excellent" (51 percent) or "good" (23 percent) and 8 percent of respondents rated the layout as "poor" or "very poor". The website compared favorably to other Arabic-language websites dedicated to health issues, with 65 percent of respondents reporting that the Arabic-language version of Not-2-late.com was "better" than other websites. Nearly 10 percent of respondents reported that our website was "similar" to other websites, and 3 percent reported that our website was "worse" than other websites. Nearly one-fourth of respondents offered no opinion.

The vast majority of survey respondents (83 percent) reported that they learned about the website through the internet. When asked to identify important sources of health information, 55 percent of respondents cited the internet, 26 percent identified magazines, 24 percent identified newspapers, and nearly 20 percent cited physicians. Finally, survey respondents identified female sexuality, male sexuality, contraception, pregnancy, violence, and lesbian/gay/bisexual/transgender health issues as priority areas for additional on-line health information.

Discussion

Over the first 19 months of the website's operation only 212 visitors completed the on-line survey, representing 0.5 percent of all visitors to the website during this period. Despite the small number of respondents and the limitations of an on-line survey, the information gleaned allows for some reflections on both the demographics of the website visitors and their interest in additional on-line health information.

Based on self-reporting, the majority of respondents identified as being male, Arab nationals, and in their twenties. Surprisingly, male respondents outnumbered female respondents by over five to one. This finding is in stark contrast to use patterns reported for the English-language version of the website (Wynn and Trussell, 2005). Given both the topic of the website and the use patterns of English-language website, it is unlikely that this result represents true gender-use rates of the website overall. However,

it may be a function of gendered internet use patterns in the Arab world or perceptions regarding the confidentiality and potential consequences of completing an on-line survey.

Another interesting finding of the on-line survey involves nationality. Nearly three-quarters of respondents identified as Arab nationals. When we examine the country-specific breakdown, it is notable that 50 percent of the survey respondents identified as being from a country in which a dedicated ECP is not available, including Saudi Arabia, Iraq, Syria, Morocco, Jordan, and other Gulf States. Although one might expect that requests to the website would be more likely to come from Arab countries in which a dedicated EC pill has been registered and social marketing efforts have been undertaken, our survey finding is consistent with the overall website use patterns (Foster et al, 2005).

This confirms that there is interest in EC throughout the region and suggests that there is a need for expanding access to dedicated ECPs. However, it is important to recall that OCPs, widely available throughout the Arab world, can serve as EC if used in specified doses. In the future, it would be interesting to learn more about the ways individuals from countries in which dedicated ECPs are not registered are using the website. It would be particularly valuable to determine if visitors from these countries are accessing information about the process of "creating" EC from available OCP brands and to find out more information about the website visitors' experiences with and need for EC.

The majority of respondents identified the internet as an important source of health information and expressed significant interest in the development of additional on-line resources dedicated to reproductive health. This is perhaps not surprising given that our survey respondents accessed the survey on a health information website. The survey results also reveal that there was considerable satisfaction with both the content and layout of the website and that Not-2-late.com compared favorably to other Arabic-language health information websites. These results

reinforce the importance of producing on-line health resources that are both culturally adapted and linguistically accessible.

Finally, our survey reveals that there is interest in and a potential need for additional on-line Arabic-language health information resources. Among our survey participants, there appears to be considerable interest in information dedicated to sexuality, contraception, pregnancy, issues of violence, and lesbian/gay/bisexual health issues. Sexuality and sexual health issues continue to be highly sensitive in Arab world, particularly for unmarried populations. As many individuals may be reluctant to raise questions or concerns with their health service providers, the internet has the potential to provide Arabic-speaking populations with a confidential method of accessing health information. By providing medically accurate internet-based resources, we have the potential to disseminate information about and expand awareness of a number of reproductive health issues in a non-judgmental manner throughout the region.

Certainly there are significant limitations to on-line health information resources. The digital divide in the Arab world remains considerable and urban populations, men, (university) students, well-educated populations, and groups of high(er) socioeconomic status are more likely to have access to both computers and the internet. That sixty percent of our survey respondents reported that they were accessing a computer at home and that seventy-five percent described themselves as students or professionals is reflective of these biases. The creation of on-line health information resources should be viewed as part of a multi-modal effort to prove medically accurate reproductive health information to both providers and potential users of services. The fact that access to the internet is not uniform across demographic groups requires that internet resources be coupled with other culturally adapted and linguistically accessible educational materials that allow for broader dissemination. The importance of ensuring the medical accuracy of those resources cannot be underestimated.

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