An evaluation of the knowledge, attitude and practices of South African university students regarding the use of emergency contraception and of art as an advocacy tool

[a] **Kistnasamy EJ,** MTech: Environmental Health; BComm [a] **Reddy P,** PhD (Occupational and Environmental Health) [b] **Jordaan J,** BAFA
[a] Department of Community Health Studies, Durban University of Technology
[b] Department of Fine Arts, Durban University of Technology
Correspondence to: Emilie Joy Kistnasamy, e-mail: JoyK@dut.ac.za (Joy Kistnasamy), P O Box 1334, Durban, 4000. Tel: +27-31-373-2809
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Abstract

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Background: This study assessed the knowledge and use of emergency contraception (EC) against the background of current sexual practices among a multi-racial student population at the Durban University of Technology (DUT) in the province of KwaZulu-Natal, South Africa. In addition, the use of art as an advocacy tool in promoting awareness of EC and related sexual issues was also evaluated.

Methods: A random sample of 162 students with equal representation of race and gender was interviewed. The questionnaire used addressed knowledge, attitudes and practices regarding contraception, with emphasis on EC and current sexual practices. It was administered by trained interviewers at three different sites at the DUT, where the Kara Walker image was also displayed on banners by Art for Humanity (AFH).

Results: Over 77% of participants indicated that EC was some sort of birth control or contraceptive method. Only 51% of the respondents felt that EC was a good form of contraception and 27% of all students indicated that it should not be used at all. However, given a choice, 66% of African students would use it, compared to 46% Indian, 31% coloured and 52% white students. The various levels of undergraduate study (i.e. first to third year) did not impact on the level of knowledge of or attitude towards the use of EC among students. Students had health and social concerns, including that if more men were informed about EC, they may use it to pressure women into having unprotected sex. Over 90% of students knew that EC did not provide protection from HIV, AIDS and STDs. Of the 162 students questioned, only 21% had seen the Kara Walker poster and their responses to the banner were varied. While a few students thought that it was an inappropriate portrayal of women, most students who saw the banner thought it was effective in drawing attention to the consequences of unsafe sexual practices.

Conclusion: It is imperative that concise information and pre- and post-counselling be provided by health care professionals to empower individuals at tertiary institutions to make informed choices with respect to reproductive health. Proper dissemination of information will create awareness and enhance wider acceptance and the use of the arts as an advocacy tool may further promote health education.

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Introduction

The difference in sexual and reproductive health practices in developed and developing countries is vast, and disenfranchised populations of women seem to be worst affected by sexual diseases and unplanned pregnancies.[1] In sub-Saharan Africa, where a high maternal mortality rate and nearly 20 million unsafe abortions a year are of great concern, the use of emergency contraception (EC) offers a solution to unwanted pregnancies.[2] EC refers to methods that women use to prevent pregnancy after unprotected sexual intercourse, method failure or incorrect use.[2,3] The use of EC can inhibit or delay ovulation while others have suggested that its use may impair endometrial receptivity to implantation of the fertilised zygote.[4] The financial and social consequences of unwanted pregnancies, high rape incidence and soaring HIV/AIDS prevalence in South Africa (SA) are further extenuated by high rates of teenage pregnancy, with approximately 35% of teenage girls reported to be pregnant by the age of 19.[5] EC is available at no cost at public sector health facilities in SA and, as of 2000, has been available at private sector pharmacies without prescription. However, among the general population, low literacy levels, limited access to pharmacies or family planning services and traditional beliefs may hinder the use of EC and pose considerable challenges to its promotion. While more than 20 studies have explored the knowledge, attitudes and practices of EC among high school learners and tertiary students, mostly from the United Kingdom, and others from Kenya, Nigeria, Zambia, Mexico, Spain, Ireland, Canada and the United States, fewer studies have been conducted in sub-Saharan Africa as compared to developed countries.[10] What do people with access to this method know of its use, and do they consider it an effective or appropriate means of contraception? A university population is ideal for answering these questions, considering the students' free access to EC via university clinics and the notion that they may support the use of EC, given their desire to delay childbearing in order to complete their education.[6]

The use of the arts in the promotion of health is currently experiencing a revival. In 1999, the United National Education, Scientific and Cultural Organisation encouraged the world to explore "fundamental relationships between creativity, the arts, health, healing and culture".[7] Creative expression is pivotal to the ever evolving relationships between culture, artistic activity and social issues where it may be used in health education to facilitate new avenues of learning. This form of expression can transcend cultural differences, as a piece of art can

reach out to a group of people, not divided by race or class, but who share common issues.[8] The question is: "Can we use fine art to display graphic illustrations of sexual health and how effective is this?" In order to explore this notion, Art for Humanity (AFH) – an organisation that is affiliated with the Department of Fine Arts at the DUT – in partnership with the Denver Museum of Contemporary Art – hosted a billboard campaign in Durban, Johannesburg and Cape Town, featuring an image created by acclaimed and controversial African-American artist Kara Walker. It depicted a female figure down on her back with a dark cloud emerging from her.[9] This campaign intended to demonstrate how art can be a catalyst to promote interaction and dialogue about health and social issues. By asking people passing the billboards for their opinion of the image and their knowledge of EC, they were able to gather data to explore strategies for the dissemination of EC knowledge. This study intended to assess the knowledge and use of EC against the background of current sexual practices among a student population at the DUT in the province of KwaZulu-Natal, South Africa. Additionally, we evaluated the use of art as an advocacy tool in promoting awareness of EC and related sexual issues.

Methods

Population and data collection

The Kara Walker image (Figure 1) was displayed at DUT during May 2006 and remained on display for the duration of this study. This cross-sectional descriptive study was undertaken over the period 7 to 18 August 2006. For the purposes of this study, a sample size of 162 was calculated using the Power and Precision program (Biostat Inc). Random sampling was done until 54 participants, with equal gender distribution, were obtained from each of the three sites, namely the Isolempilo Wellness Clinic at the Steve Biko Campus and the ML Sultan and Steve Biko libraries.

Questionnaires were administered by trained personnel outside the three sites where the banners were displayed. Questionnaires were only administered in English as this is the medium used to teach at DUT. Informed consent was obtained from all participants prior to the interview process and the interviews were undertaken on a voluntary basis with confidentiality assured. The questionnaire included both closed and open-ended questions that assessed knowledge of EC, extent of use, traditional practices of EC, social and cultural acceptability of the use of EC, access to EC, current contraceptive practices as well as questions relating to the Kara Walker image. Demographics on age, gender, race, year of study and study interest were collected. Open-ended questions to solicit students' opinions on various issues regarding sexual health were included in the questionnaire. This study was approved by the Ethics Committee of the Faculty of Health Sciences, DUT.

Figure 1: Kara Walker 'untitled' digital print 20069

Data management and statistical analyses

All data was captured using Microsoft Excel® Software, with double entry. Examination of data including logic checks for ensuring answer validity and consistency was incorporated. After initial descriptive analysis, frequency distribution of categorical variables was evaluated. All analyses were done using the STATA version 9 (College Station, TX, USA).

Results

Knowledge, attitudes and practice regarding EC

Our sample was equally representative of gender and race (Table I). Just over 77% of participants indicated that EC was some sort of birth control or contraceptive method. Both males (47%) and females (53%) had similar knowledge that EC was some form of contraception, although only 51% of the respondents felt that EC is a good contraceptive method, while 27% of all students indicated that it should not be used at all. However, given a choice, 66% of African students would use it, compared to 46% Indian, 31% coloured and 52% white (Table I). Additionally, 51% of men would support the use of EC by their partners, compared to 53% of women. We could not compare knowledge of and attitude towards EC use across various faculties at the DUT as some faculties had inadequate representation in our study, thus not allowing us to make any conclusive statements.The various levels of undergraduate study (i.e. first to third year) did not impact on the level of knowledge of or attitude towards use of EC among students.

EC use was more frequent among the coloured and white groups than the Indian and African groups. More males indicated that their partners had used EC (35%) than females. Only 21% of females had used EC previously (Table II). Of the 45 students that had used EC previously, 70% indicated that they had not received information regarding the use

Table I: Demographic characteristics of study population

Demographics	Study no n = 162 (%)	Knew that EC was a form of birth control	Would use EC if given a choice
Age, yr[1]	20.9 (2.8)		
Sex			
Male	77 (47.2)	64 (83.2)	39 (50.7)
Female	85 (52.5)	62 (72.1)	45 (52.9)
Race			
African	47 (29.0)	38 (80.9)	31 (65.9)
White	42 (25.9)	34 (81.0)	22 (52.4)
Indian	44 (27.2)	30 (68.2)	20 (45.6)
Coloured	29 (17.9)	24 (82.8)	9 (31.0)
*Faculty			
Arts	8 (4.9)	6 (75.0)	3 (37.5)
Commerce	74 (45.4)	59 (79.7)	41 (55.4)
Engineering and Science	42 (25.7)	31 (73.8)	19 (45.2)
Health Sciences	35 (21.5)	28 (80.0)	17 (48.6)
*Year of study			
1st year	40 (24.5)	27 (67.5)	19 (47.5)
2nd year	73 (44.8)	58 (79.5)	38 (52.1)
3rd year	39 (23.9)	32 (82.1)	20 (51.3)

1: Mean and SD at study entry, note that 119 (73.1%) of the study population was ≤ 25 yrs and 44 (26.9%) was over 21 yrs.
* Postgraduate students were excluded from the sample group.

of EC and possible side-effects. This lack of information regarding EC was generally comparable among all race groups. With regard to time frames of EC administration, 65% of students indicated that EC should be taken within 24 hours. When stratified by race and gender (Table II), it was surprising to note that more males were aware of correct EC usage in terms of time frames than women (73% vs 58%).

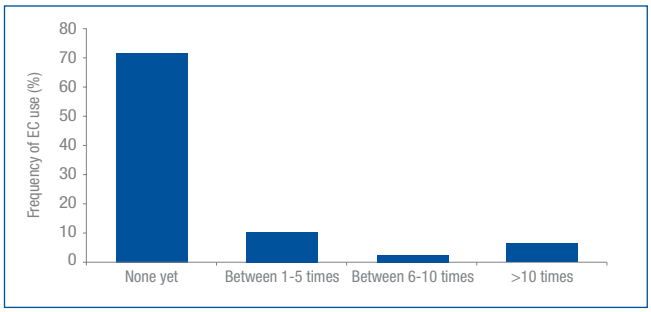
Table II: Knowledge of and attitudes towards use of EC among students stratified by race and gender

Knowledge of n (%) and attitude towards EC use	RACE n (%)				GENDER	
	African	Coloured	Indian	White	Female	Male
Time frames for use of EC						
Within 24 hrs	26 (61.9)	17 (60.7)	30 (81.1)	25 (58.1)	44(57.9)	54 (73.0)
Within 48 hrs	5 (11.9)	2 (7.1)	3 (8.1)	3 (6.8)	6 (7.9)	7 (9.5)
Within 72 hrs	9 (21.4)	8 (28.5)	3 (8.1)	12 (27.9)	19 (25)	12 (16.2)
> 72 hrs	2 (4.8)	1 (3.5)	1 (2.7)	3 (6.9)	7 (9.2)	1 (1.4)
How many times have you or your partner used EC previously?						
None yet	35 (74.5)	19 (65.5)	35 (79.5)	29 (67.4)	68 (79.1)	50 (64.9)
Between 1–5 times	5 (10.6)	8 (27.6)	6 (13.6)	12 (27.9)	3 (15.1)	18 (23.4)
Between 6–10 times	3 (6.4)	1 (3.5)	-	-	2 (2.3)	2 (2.6)
More than 10 times	4 (8.5)	1 (3.5)	3 (6.8)	2 (4.6)	3 (3.5)	7 (9.1)
Knew that EC may be obtained without a script	37 (78.7)	25 (86.2)	41 (93.1)	42 (97.6)	77 (89.5)	68 (88.3)
Have previously received any form of EC information	13 (27.7)	11 (37.9)	11 (26.2)	12 (27.9)	8 (33.3)	19 (24.7)

In response to the question "Do you or your partner use any form of contraception during sexual intercourse?" 44% of students responded that they did not. The condom was the most popular method of contraception; over 50% of sexually active students preferred this method while 15% used the contraceptive pill or injection and 35% students declined to comment. Only 28% of students (45 students in total) of our population had used EC previously (Figure 2). Of these 45 students, 14 had used it more than 5 times. When the rest of the students were asked why they chose not to use EC, many students voiced concerns over the safety of using these pills since they had little information on the side-effects involved. Several female respondents indicated that EC use might interfere with their menstrual cycles or have other harmful side-effects. Of significance was that over 90% of all students knew that EC did not provide protection from HIV, AIDS and other STDs.

In response to the question "How do you feel about the use of EC?" students had health and societal concerns, including that if more men were informed about EC, they may use it to pressure women into having unprotected sex. They believed that advocating EC use was tantamount to promoting risky sexual behaviour, which would contribute to the HIV/AIDS pandemic in KwaZulu-Natal. Some students supported the use of EC only in exceptional circumstances, such as in the instance of rape and sexual abuse. One student commented "Coming from an African township background like mine where you see unplanned pregnancies ruining teenagers' lives every day, EC could be a necessity". Students across ethnic groups had a myriad of concerns related to religion and morality. Some participants indicated that EC use was strictly against principles taught in the African culture where virginity is celebrated and sex before marriage is forbidden. Catholic students indicated that any form of contraception was not allowed and that EC was viewed as an abortion pill. They believed that the EC pill kills any foetus that may have

Figure 2: Frequency of EC use among undergraduate students at the DUT (n = 162)



been conceived. Other Christian students saw EC use as morally wrong since it promotes premarital sex. Indian students had qualms about accessing EC and indicated that it was demeaning and embarrassing to ask for it.

When students were questioned on access to EC, over 90% of students gave clinics and pharmacies as sources of EC. Approximately 89% of students knew that they did not need a script to obtain EC and this knowledge was comparable among all race groups and both genders. Of concern was that 73% of students interviewed were not aware that the DUT clinics provided EC (data not shown).

Arts as an advocacy to promote safe sexual health

Of the 162 students questioned, only 34 (21%) had seen the Kara Walker poster and their responses to the banner were varied. The response to the question "What message does the image convey to you?" obtained from students that saw the banner and reflected on it was mixed. While some thought that it was a disturbing and inappropriate portrayal of women, others thought it was effective in drawing attention to the consequences of unsafe sexual practices, i.e. not using contraception. However, interpretations varied: One student associated it with the need to protect women from "unforeseen circumstances" while another assumed that the image was of a women suffering a miscarriage. Several students associated it with abortion and one reiterated that "prevention is better than abortion".

Discussion

This low usage of EC (28%) among these students may be attributed to a lack of knowledge of its use and side-effects, reservations associated with cultural and societal beliefs and that many participants (73%) did not know that EC was provided free of charge at the DUT clinic. Even though most students were aware that EC involved taking pills post-coitally, they were neither familiar with the most effective time frames for taking EC pills nor with the side-effects associated with its use. Most students were aware that EC was available at clinics and pharmacies. Doctors and hospitals were chosen as less common sources, which may be attributed to the fact that they preferred the anonymity provided by obtaining EC from a pharmacy or a clinic. Clinics were a more popular choice than pharmacies since EC can be obtained free of charge from a clinic.

These findings are similar to other studies in Africa where it was found that even when knowledge of EC exists, understanding thereof is usually superficial.[2,6,11,12] Even though women usually hold more responsibility for contraceptive choices, an increased 47% of male respondents recognised EC as contraception and a larger number of men were aware of the correct time frames regarding the use of EC, which may indicate improved reproductive health practices. Nearly a quarter of our population thought that EC should not be used at all, even if given a

choice. This could be due to health, social, cultural and religious factors, with a major concern being that EC will encourage risky sexual behaviour, thereby potentially increasing the incidence of HIV and AIDS. However, it was gratifying to note that nearly 90% of our population knew that EC was not protective against AIDS or STDs. In developed countries such as the United States and Europe it has been shown that when adolescents have easier access to EC, they do not increase their sexual activity, abuse the method by using it frequently or decrease condom use.[13] However, this type of study has not been undertaken in the South African context. In Africa, EC is a relatively unknown contraceptive option and there are many misconceptions about its utilisation,[6,14] as was shown in this study. In addition, we encountered both religious and moral objections to using EC, especially with regard to the issues of premarital sex and the notion that EC was an abortifacient, which is a common perception among several populations studied, e.g. 49% of nurses and nursing students in Kenya considered EC to be an abortifacient.[15]

Over 65% of our student population indicated that they were sexually active and used some form of contraception. Of note was that over 50% of sexually active students preferred the condom as a contraceptive option over the pill or injection. Peer pressure and living away from family support structures may contribute to increased sexual activity. It is therefore essential to provide education regarding EC use and other contraception methods to enable young adolescents to make informed choices. Emergency contraceptive pills would be more widely accepted if they were promoted as a special method tailored for a particular situation. It should not be a substitute for barrier methods of contraception, but rather a complement if these methods fail.[16] A limitation of this study was that in some South African cultures, discussion of sexuality is frowned upon, which may have caused some participants to withhold information. Therefore, public health interventions need to overcome the uncomfortable aspects of sexual health communication by using different methods to challenge emotion and opinion. In this regard, artists may have the ability of using different styles to provide a bridging mechanism between sexual health and behaviour while interrogating attached social stigmas.

Artists and scientists express their understanding of sexual behaviour differently – artists use visual forms while scientists use data collection, analysis and interpretation.[17] Although the notion that these diverse approaches can be used in conjunction with each other in public health and social awareness campaigns has not been adequately explored, this idea has been successfully implemented previously. In 1991 the Medical Benefits Fund of Australia (MBF) used Rembrandt's Bathsheba in their breast health public relations campaign, which aimed to raise awareness of the importance of screening mammograms for women over forty. The painting starred in a public awareness campaign which illustrates perfectly (and literally) how art and science can work in unison for a successful health promotion outcome. The painting depicts Rembrandt's common-law wife with what is now known to be advanced breast cancer – dimpling and darkening of the left breast. The campaign resulted in the Breast Clinic Information Line receiving 2 500 calls within the first 10 days after the programme's launch, and a 700% rise in calls for clinic appointments.[18] The intention of displaying the Kara Walker image was that if these messages were conveyed in a more graphic and thought-provoking way, they may generate more interest. The image was disturbing – in a sedate, carefree learning environment the students were confronted with an unexpected and shockingly graphic image of a naked women lying on her back with a dark cloud emerging from her which alludes to her being abused and to the vulnerability of women in society.[9] The figure in black silhouette, as with a shadow, positions the image in a universal context since the abuse of women is widespread throughout developing and developed nations. The Kara Walker image is not unequivocal in its meaning and art is always open to different interpretations. However, in this study, it is important to note that the artwork made a thought-provoking impression on the students who saw it. Using arts as an advocacy to address health and social concerns may appeal to a broader audience across racial and ethnic boundaries and may be a creative and cost-effective way of stimulating dialogue on these issues.

Conclusion

It is imperative that concise information and pre- and post-counselling be provided by health care professionals to empower individuals at tertiary institutions to make informed choices with respect to reproductive health. Subsequent to this study, pamphlets on EC were distributed by the DUT clinic and were available on the EC hotline (www.not-2-late.co.za) designed and maintained by Stellenbosch University, SA. Proper dissemination of information will create awareness and enhance wider acceptance, and the use of the arts as an advocacy to promote health education may be a viable option. Other communication channels, including the media, women groups, various university clubs and societies, the counselling department, health facilities and peer educators may also be used to promote reproductive health education among young adults.

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