

Contraceptive Use Across Cultures: A Cross-Cultural Comparison of Contraceptive Use in
Women Seeking Care at Sun Yat-sen University Hospital, China and Monduli District Hospital,
Tanzania.

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ABSTRACT

Objective: The purpose of this study was to determine and compare contraceptive choices in women in China and Tanzania and to assess the factors associated with their contraceptive choice.

Study Design: A prospective cohort trial was performed at Sun Yat-sen University in Guangzhou, China (06/2013 - 08/2013) and the Monduli District Hospital in Monduli, Tanzania (08/2015 - 09/2015). Women were approached during either an inpatient or outpatient visit with an Obstetrics/Gynecology practitioner and asked to complete a survey in their native language (Mandarin or Kiswahili) after obtaining verbal consent. The survey included demographic and social data, socioeconomic status (SES), obstetric history, and contraceptive choice. Data were analyzed using Student's T-test and Chi-square test for continuous and categorical data, respectively. A $P < 0.05$ was considered statistically significant.

Results: During the study period, a total of 128 Chinese women and 61 Tanzanian women completed the survey. Most women chose to use condoms with very few women using long acting reversible contraceptives. However, in the Tanzania population, other popular methods of contraception included LARCs such as implants as well as injections. In addition, elective abortion rates were significantly higher in Chinese women than Tanzanian women ($P < 0.05$). Chinese women < 21 and > 35 years of age used some form of contraception compared with women in the 21-35 year old range who were more likely to not use contraception, while very few Tanzanian women in the < 21 had ever used contraceptives. In addition, those in higher socioeconomic classes/with higher education were less likely to use contraceptives in the Chinese population, but more likely to use contraceptives in the Tanzanian population.

Conclusion: Contraceptive use in China and Tanzania was clearly influenced by many factors. The high rate of condom use compared to longer, more sustainable methods of contraception highlight a need for better contraception education in both developing countries.

INTRODUCTION

Women's Health & Maternal Mortality

The topic of women's health is very broad. It includes issues such as maternal mortality, but also encompasses family planning and contraceptive use, sexually transmitted diseases, gynecological and breast cancers as well as socioeconomic issues such as unequal access to health care and domestic violence (Nour, 2008). Disparities in women's health exist across the globe. One key preventable disparity is maternal mortality, which is defined as "the death of a woman whilst pregnant or within 42 days of delivery or termination of pregnancy, from any cause related to, or aggravated by pregnancy or its management, but excluding deaths from incidental or accidental causes" (Say et al., 2014).

Millennium Development Goals

In 2000, the United Nations developed a set of goals to try to meet the needs of the world's poorest. These eight Millennium Development Goals (MDGs) as they were called, ranged from halving extreme poverty rates to halting the spread of HIV/AIDs to providing universal education. MDG 5 specifically addressed maternal mortality. The hope was to decrease the maternal mortality ratio by three-quarters by 2015 (United Nations, 2015). However, since 1990, the maternal mortality ratio has only been cut by half, and after years of slow progress, only half of all pregnant women receive the recommended antenatal care. These statistics

show that despite some progress, further improvements in policy and health care programs are needed to decrease maternal mortality worldwide.

Family Planning as a Means to Reduce Maternal Mortality

The need for further reduction in maternal mortality is apparent. However, the question remains how? One such avenue is through family planning. For many women in developing countries, their reproductive years are marked by health risks associated with sex and reproduction (Abouzahr, 2014). However, this does not necessarily have to be the case. Research has shown that family planning can help ensure the healthiest timing and spacing of pregnancy, hence, regulating fertility. As fertility falls, so do infant, child, and maternal mortality (Mbizvo and Adamchak DJ, 1991). Contraceptive use would likely prevent more than 272,000 maternal deaths from childbirth each year. Researchers further estimate that satisfying the global unmet need for contraception could reduce maternal deaths an additional 30 percent (Eko et al., 2013). In addition, regular access to contraception protects women from unwanted pregnancies that often end in unsafe abortions, particularly in countries where abortions are illegals. In fact, an estimated 67,000 women die from unsafe abortions globally every year accounting for 13% of all maternal deaths (Sedgh et al., 2012).

With this in mind, I set out to understand the intricacies of women's health, maternal mortality and family planning in two developing countries: the People's Republic of China and the United Republic of Tanzania. Although both countries are considered developing countries, the culture, policies and communities were vastly different. However, modern contraceptives

were used in both populations (84.6% in China and 29% in Tanzania), which made it possible to compare and contrast differences in contraceptive choice, the reasons behind such choices and their subsequent effects on maternal mortality.

China – The One-Child Policy

China, officially the People's Republic of China, is the most populous country in world. When the Communists took over in 1949, families were encouraged to have many children. However, gradually fear of overpopulation as a threat to modernization and developed and in 1979, the One-Child policy, deemed essential to economic reform and to improving quality of life, was introduced as an attempt to control unprecedented population growth (Hesketh et al., 2005). For the past few decades, this policy was strictly enforced with a few exceptions – if the first child is a girl, then the family can have another, if family lived in a rural area, or in the case of ethnic minorities. Many propaganda posters during this time advocated birth control in the name of productivity and health. Common slogans included “If you have one child, IUD please, if you have two children, sterilization please” (White, 2005). Although attitudes today towards sexuality and reproductive health have changed dramatically in Chinese citizens, the use of contraception and birth control is still heavily influenced by traditional government policy.

China's stringent family planning policies have resulted in a developing country with one of the highest rates of contraceptive use in the world. According to a United Nations report on world contraceptive use, 84.6% of women in China are on some form of contraception compared with 78.6% in the United States (United Nations, 2011). Interestingly, the heavy

emphasis on long-term contraceptives such as IUDs and sterilization has become a barrier to contraceptive use for the younger generation who do not want to use either method, but are otherwise unaware of other options. The high abortion rate among China's youth is thought to be a direct effect of inadequate contraceptive services and education. In 2009, Chinese health officials reported that 13 million elective abortions were performed in China annually (Shan and Qian, 2009).

The high rate of elective abortions is also thought to have led to China as having one of the highest sex-ratio imbalances in the world, with a boy-girl ratio at birth of 120:100 (Dudley et al. 2011). Although fetal-sex determination is prohibited by law, sex selective abortions, hiding baby girls, and infanticide still occur that contribute to perpetuate women's health disparities in this country (Chu, 2001).

Tanzania - Women's Health in Sub-Saharan Africa

Sub-saharan Africa has one of the highest rates of maternal mortality in the world and the United Republic of Tanzania is no different. It is among the East African countries nestled between Kenya, Mozambique, Zambia, Uganda, Burundi, and Rwanda. Tanzania has a population of around 45 million and a high fertility rate of around 5.4 per person (United Republic of Tanzania, 2011).

Tanzania is among the countries that have made slow progress towards reducing maternal mortality. It has a high unmet need for contraceptives, a high maternal mortality rate (446 deaths per 100,000 live births) and high neonatal mortality rate (25 deaths per 1000 live

births). According to Cleland et al. (2011), there has been a 16% increase (from 56% to 72%) in the desire to cease or postpone childbearing among East African women since the early 1990s. Despite the increasing acceptance and interest in family planning, Tanzania still has a large unmet need for family planning (22% in 2004/2005) particularly in the rural populations (Weinberger et al., 2011). Despite large increases in contraceptive usage in the early to mid 1990s, the rate of increase has slowed considerably similar to worldwide trends (Eko et al., 2011).

Furthermore, Tanzania is different than China in that elective abortions are illegal. However, this does not mean that they do not occur. Oftentimes, women get abortions illegally and then present to the hospital with complications, but providers do not document it as an EAB for fear that it will get the woman in trouble with the government.

OBJECTIVE

The purpose of this study was to determine and compare contraceptive choices in women in China and Tanzania and to assess the factors associated with their contraceptive choice.

MATERIALS AND METHODS

Project Locations

First Affiliated Hospital of Sun Yat-sen University in Guangzhou, China

The First Affiliated Hospital of Sun Yat-sen University was established in 1910. It is the largest and the most comprehensive one among all affiliated hospitals of SYSU, as well as one of the largest hospitals in the country. The hospital is an important referral center for medical treatment, teaching, research, preventive care and rehabilitation for Southern China and Hong Kong. It contains 3,888 beds and serves up to 15,000 patients a day (4.8 million a year) on an outpatient basis. There are 1,565 physicians and 2,770 nurses on staff throughout the year. Taken together, this makes the First Affiliated Hospital of Sun Yat-sen University a 3A hospital, equivalent to a tertiary hospital in the United States.

In 2010, UTSW entered into a partnership with Sun Yat-sen University and its First Affiliated Hospital in Guangzhou, China to promote scientific research, educational, and training activities, as well as implement a new global health initiative.

Monduli District Hospital in Monduli, Tanzania

Monduli Hospital is located in the Monduli district headquarters in northwest region of Tanzania. It serves as a referral to all lower health facilities within the district (i.e. dispensaries, clinics and health centers). The hospital has 114 inpatient beds and serves up to 80 patients as outpatients daily. The outpatient clinics consist of clinics for prenatal check ups, postpartum

visits, family planning, pediatrics, and treatment clinics for HIV patients, diabetic clinic and general clinic. The hospital has a staff of 122. Included in the staff are one gynecologist, one surgeon, four medical doctors, 10 clinical officers and nurses. The hospital is about 50 KM from the city of Arusha.

Study Design

A prospective cohort trial was performed at Sun Yat-sen Memorial Hospital in Guangzhou, China (06/2013 - 08/2013) and the Monduli District Hospital in Monduli, Tanzania (08/2015 - 09/2015). Women were approached during either an inpatient or outpatient visit with an Obstetrics/Gynecology practitioner and asked to complete a survey in their native language (Mandarin or Kiswahili) after obtaining verbal consent.

Survey Instrument

A questionnaire pertaining to contraceptive use in women was developed prior to traveling to each country. The survey included demographic and social data, socioeconomic status (SES), obstetric history, and contraceptive choice. It was designed to identify socioeconomic and cultural factors related to contraceptive choice and assess general knowledge in women regarding different types of contraceptives. Data were analyzed using Student's T-test and Chi-square test for continuous and categorical data, respectively. A $P < 0.05$ was considered statistically significant.

Contraceptive Use Questionnaire | UTSouthwestern Medical Center

Patient ID Number: _____

Age: _____

Married? ☐Yes ☐No

Race:/Ethnicity: _____

Do you smoke? ☐Yes ☐No

Religion/Tribal Affiliation _____

Occupation: _____

☐ Muslim ☐ Christianity ☐ Traditional African religions ☐ Other**Socioeconomic status/Education Level**☐ No formal education ☐ Primary education ☐ Secondary education ☐ College education/University**Ob History****1. Number Pregnancies**

Year	Planned	Full Term (>=37 wks)	Preterm (<37 wks)	Post-term (>= 42wks)	Gestational Age of Baby at Delivery	Complications at Birth/STIs
1. _____	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ wks	<input type="checkbox"/> No <input type="checkbox"/> Yes _____
2. _____	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ wks	<input type="checkbox"/> No <input type="checkbox"/> Yes _____
3. _____	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ wks	<input type="checkbox"/> No <input type="checkbox"/> Yes _____
4. _____	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ wks	<input type="checkbox"/> No <input type="checkbox"/> Yes _____
5. _____	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ wks	<input type="checkbox"/> No <input type="checkbox"/> Yes _____
6. _____	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ wks	<input type="checkbox"/> No <input type="checkbox"/> Yes _____

2. Living Children

Year	Vaginal	C-section	Assisted
1. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Abortions/MiscarriageNone ☐

Year	Spontaneous	Therapeutic	Induced/Planned
1. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Your Health**Past Medical History**

- _____
- _____
- _____

Past surgical history

- _____
- _____
- _____

Contraceptive Use

Years Used	IUD	Implants	Condoms	OCP	Injection	Patch	Sterilization	Other
1. _____	<input type="checkbox"/>	<input type="checkbox"/>	M <input type="checkbox"/> F <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M <input type="checkbox"/> F <input type="checkbox"/>	_____
2. _____	<input type="checkbox"/>	<input type="checkbox"/>	M <input type="checkbox"/> F <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M <input type="checkbox"/> F <input type="checkbox"/>	_____
3. _____	<input type="checkbox"/>	<input type="checkbox"/>	M <input type="checkbox"/> F <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M <input type="checkbox"/> F <input type="checkbox"/>	_____

Reason for Use/Change:

Figure 1. Original Contraceptive Use Questionnaire in English

避孕使用问卷Contraceptive Use Questionnaire /美国德克萨斯州大学西南医学中心

UTSouthwestern Medical Center

1. 病例号 Patient ID Number: _____ 2. 年龄 Age: _____
3. 婚姻状况 Marital Status: ☐ 已婚 Married ☐ 未婚 Never Married ☐ 丧偶 Widowed
☐ 离婚 Divorced ☐ 其他 (请说明) Other (Please Specify) _____
4. 民族 Ethnicity: _____ 5. 吸烟史 Do you smoke? ☐ 是 Yes ☐ 否 No
6. 宗教 Religion/spirituality
☐ 道教 Taoism ☐ 佛教 Buddhism ☐ 基督教 Christianity ☐ 穆斯林 Muslim ☐ 其他 Other _____
7. 收入 Socioeconomic Status (人民币/月 RBM per month):
☐ <2000 ☐ 2000- 5000 ☐ 5000 – 10,000 ☐ >10,000

产科记录Ob History

8. 怀孕史 Pregnancies ☐ 怀孕过 ☐ 没怀孕过

- | 年 Year | 足月 Full Term
(>=37周wks) | 早产 Preterm
(<37周wks) | 延迟 Post-term
(>=周42wks) |
|----------|----------------------------|--------------------------|----------------------------|
| 1. _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

10. 现有孩子 Living Children ☐ 有 ☐ 没有

- | 年 Year | 自然生产
Vaginal | 破腹产 C-
section | 助产
Assisted |
|----------|--------------------------|--------------------------|--------------------------|
| 1. _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

孕龄 Gestational Age at Delivery **并发症 Complications at Birth**

- | | |
|----------|--|
| 1. _____ | <input type="checkbox"/> 否 No <input type="checkbox"/> 是 Yes |
| 2. _____ | <input type="checkbox"/> 否 No <input type="checkbox"/> 是 Yes |
| 3. _____ | <input type="checkbox"/> 否 No <input type="checkbox"/> 是 Yes |

12. 避孕使用 Contraceptive Use ☐ 用过 ☐ 没用过

- | 年 Years Used | 宫内 IUD | 避孕套 Condoms | 口服避孕药 OCP | 注射避孕
Injection | 结扎 Sterilization | 其他 Other |
|--------------|--------------------------|---|--------------------------|--------------------------|---|----------|
| 1. _____ | <input type="checkbox"/> | 男 M <input type="checkbox"/> 女 F <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 男 M <input type="checkbox"/> 女 F <input type="checkbox"/> | _____ |
| 2. _____ | <input type="checkbox"/> | 男 M <input type="checkbox"/> 女 F <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 男 M <input type="checkbox"/> 女 F <input type="checkbox"/> | _____ |
| 3. _____ | <input type="checkbox"/> | 男 M <input type="checkbox"/> 女 F <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 男 M <input type="checkbox"/> 女 F <input type="checkbox"/> | _____ |

使用及更换原因 Reason for Use/Change:

9. 流产 Abortions ☐ 流产过 ☐ 没流产过

- | 年 Year | 选择性
Elective | 自主
Spontaneous | 治疗
Therapeutic | 习惯性
Habitual |
|----------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

11. 您的健康情况 Your Health

医学史 Medical Complications:

- _____
- _____

手术史 Past Surgeries:

- _____
- _____
- _____

Figure 2. Chinese version of contraceptive use questionnaire used in Sun Yat-sen University Hospital in Guangzhou, China.

Utumizi wa Njia za kuzuia mimba | UTSouthwestern Medical Center

Nambari ya mgonjwa: _____ **Umri:** _____ **Umefunga Ndoa?** ☐Ndio ☐Hapana
Kabila: _____ **Unavuta sigara?** ☐Ndio ☐Hapana
Dini: _____ **Kazi:** _____
☐ Uislamu ☐ Ukristo ☐ Dini za Jadi ☐ Nyingine
Kiwango cha Elimu
☐ Sina elimu rasmi ☐ Shule ya msingi ☐ Shule ya upili ☐ Chuo Kikuu

Historia ya mimba

1. Idadi ya mimba

Mwaka	Uzazi wa kupangwa	Muda kamilli (>/= wiki 37)	Mapema (< wiki 37)	Baada ya muda (>/= wiki 42)	Umri wa mtoto wakati wa kujifungua	Matatizo ya uzazi/ Magonjwa ya zinaa
1. _____	<input type="checkbox"/> Ndio <input type="checkbox"/> Hapana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	wiki _____	<input type="checkbox"/> Ndiyo <input type="checkbox"/> Hapana _____
2. _____	<input type="checkbox"/> Ndiyo <input type="checkbox"/> Hapana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	wiki _____	<input type="checkbox"/> Ndiyo <input type="checkbox"/> Hapana _____
3. _____	<input type="checkbox"/> Ndiyo <input type="checkbox"/> Hapana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	wiki _____	<input type="checkbox"/> Ndiyo <input type="checkbox"/> Hapana _____
4. _____	<input type="checkbox"/> Ndiyo <input type="checkbox"/> Hapana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	wiki _____	<input type="checkbox"/> Ndiyo <input type="checkbox"/> Hapana _____
5. _____	<input type="checkbox"/> Ndiyo <input type="checkbox"/> Hapana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	wiki _____	<input type="checkbox"/> Ndiyo <input type="checkbox"/> Hapana _____
6. _____	<input type="checkbox"/> Ndiyo <input type="checkbox"/> Hapana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	wiki _____	<input type="checkbox"/> Ndiyo <input type="checkbox"/> Hapana _____

2. Watoto wanaoishi

Mwaka	Kuzaa kwa kawaia	Kuzaa kwa kupasuliwa	Kuzaa kwa kusaidiwa
1. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Kutoa mimba/mimba kutoka

Hakuna ☐

Mwaka	Kwa hiari	Kutibu	Iliyopangwa
1. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Afya Yako

Historia ya matibabu

- _____
- _____
- _____

Historia ya upasuaji

- _____
- _____
- _____

Matumizi ya Njia za kuzuia mimba

Miaka ya Matumizi	Kitanzi	Kipandikizi	Kondom	Vidonge	Sindano	Kibandiko	Kufunga kizazi	Nyingine
1. _____	<input type="checkbox"/>	<input type="checkbox"/>	kiume <input type="checkbox"/> kike <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	kiume <input type="checkbox"/> kike <input type="checkbox"/>	_____
2. _____	<input type="checkbox"/>	<input type="checkbox"/>	kiume <input type="checkbox"/> kike <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	kiume <input type="checkbox"/> kike <input type="checkbox"/>	_____
3. _____	<input type="checkbox"/>	<input type="checkbox"/>	kiume <input type="checkbox"/> kike <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	kiume <input type="checkbox"/> kike <input type="checkbox"/>	_____

Sababu za kutumia/kubadilisha hizi njia:

Figure 3. Kiswahili version of contraceptive use questionnaire used in Monduli District Hospital in Monduli, Tanzania.

RESULTS

During the study period, a total of 128 Chinese women and 61 Tanzanian women completed the questionnaire in their native language, Chinese and Kiswahili, respectively.

Sun Yat-sun University Hospital, Guangzhou, China

Demographics

The mean age of women surveyed here was 32.8 ± 9.6 years: 83.6% of the women were married (Table 1). The majority of women were of Han ethnicity (95.9%), followed by Zhuang (1.6%), Dou (0.8%), Miao (0.8%), and Mali (0.8%) ethnic groups (Figure 4). 64.8% of the cohort were not religious, while 11.7% were Buddhists, 2.3% Christian, and 0.8% Muslim (Figure 5). Most women were non-smokers (Table 1). Women were grouped by socioeconomic class (SEC), with the majority of women having a monthly income between 2000 and 10,000 RMB each month (Table 1). 9% were nulliparous, 51% had 1 pregnancy, and 16% had 2 pregnancies and 23% had 3 or more pregnancies (Table 1).

Monduli District Hospital, Monduli, Tanzania

Demographics

The mean age of women surveyed in Monduli, Tanzania was 27.4 ± 8.1 years: 62.3% of the women were married (Table 1). There were many different ethnicities in Tanzania,

however, Maasai (26%) and Mchaga (16%) were the two most common ethnic groups encountered (Figure 4). Interestingly, Christianity was the main religion in that region of Tanzania, with an even split between Catholics and Protestants (Figure 5). However, the other main religion in the women surveyed in Monduli was Islam. Similar to China, most women were non-smokers. Women were also grouped by socioeconomic class. Instead of basing it off of income, Tanzanian women were divided based on their education level – the majority of women had a University level education, followed by secondary school level education, primary school level education and finally those with no formal education (Table 1). 28% of women were nulliparous, 23% had 1 previous pregnancy, 21% have 2 pregnancies and 25% had 3 or more pregnancies (Table 1).

Differences in Contraceptive Use between Women presenting at Sun Yat-sun University Hospital in Guangzhou, China, and Monduli District Hospital in Monduli, Tanzania

In both countries, most women chose to use condoms as their primary method of birth control. IUDs were the second most common method of birth control in Chinese women, but not many other contraceptives were used (Figure 6). However, in the Tanzania population, there was a more even distribution of the different types of contraceptives that women used. In fact, other popular methods of contraception included long acting reversible contraceptives (LARCs) such as implants as well as injections. More Tanzania women were also using the calendar method and OCPs than Chinese women. Very few women in either country chose permanent sterilization (male or female) as a method of contraception.

In addition, whether or not a woman chose to use contraceptives seemed to be affected by age particularly in the Chinese cohort. Chinese women <21 and >35 years of age used some form of contraception compared with women in the 21-35 year old range who were more likely to not use contraception (Table 2). In contrast, there was no significant difference between the likelihood of contraceptive use in women of different age groups in the Tanzanian population (Table 3). In addition, there was no difference in rates of contraceptive use between women of different religions.

Moreover, in China, women who had never been married were significantly more likely to be using any type of contraception compared with women who were married ($P=0.007$), whereas there was no significant difference between contraceptive use in married and unmarried Tanzanian women (Table 2, Table 3). When comparing SEC and contraceptive use, the data suggested that women of lower SEC in China were actually more likely to use contraceptives. However, there was no significant difference between SEC and contraceptive use in Tanzania. Interestingly, when gravidity was compared to SEC in the Chinese population, there was a clear distinction showing that women in the SEC extremes have more children (3 or more) than the middle SEC ($P=0.008$). There was no relationship between gravidity and whether a woman used contraceptives in either country (Table 2, Table 3).

A total of 65 elective abortions (EABs) were performed in 38 women in China (Figure 7) while there were no documented elective abortions in Tanzania ($P=0.006$); however there were 4 documented spontaneous abortions and 1 therapeutic abortion in Tanzanian women (Figure 7). Elective abortions were not associated with SEC in either location ($P<0.3$).

Table 1. Demographics of women in the study.

	Number of Women	Percentage		Number of Women	Percentage
Nationality			Nationality		
Chinese	128	NA	Tanzania	61	NA
Marital Status			Marital Status		
Married	107	83%	Married	38	62%
Never Married	14	11%	Never Married	23	38%
Divorced	0	0%	Divorced	0	0%
Unknown	7	5%	Unknown	0	0%
Smoker			Smoker		
Yes	4	3%	Yes	1	2%
No	97	76%	No	60	98%
Unknown	27	21%	Unknown	0	0%
Age			Age		
<21	4	3%	<21	11	18%
21-35	87	68%	21-35	38	62%
>35	37	29%	>35	10	16%
SEC			SEC		
<2000 RBM per month	29	23%	No Formal Education	1	1.6%
2000 – 5000 RBM per month	41	33%	Primary School	15	24.6%
5000 – 10,000 RBM per month	41	32%	Secondary School	19	31%
>10,000 RBM per month	9	7%	University	26	43%
Unknown	8	5%	Unknown	0	0%
Gravidity			Gravidity		
0	12	9%	0	17	28%
1	65	51%	1	14	23%
2	21	16%	2	13	21%
3 or more	29	23%	3 or more	15	25%
Unknown	1	<1%	Unknown	2	3%

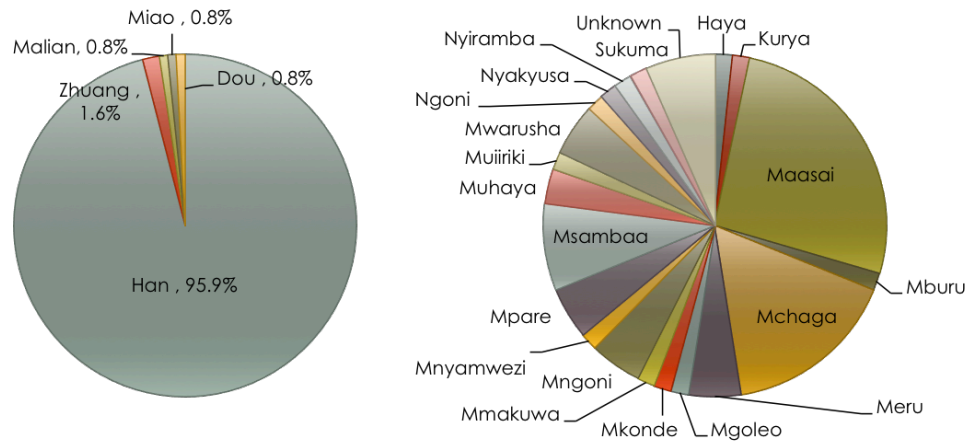


Figure 4. Ethnicities of women surveyed in A) Guangzhou, China and B) Monduli, Tanzania

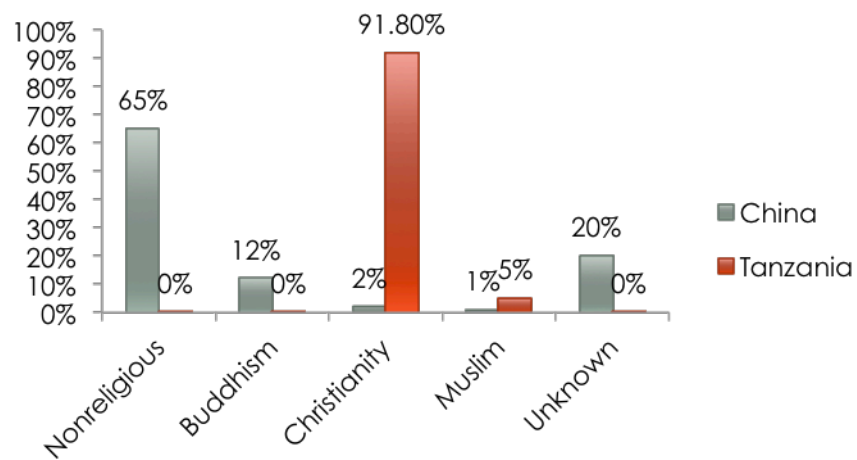


Figure 5. Religions of women surveyed in Guangzhou, China, and Monduli Tanzania

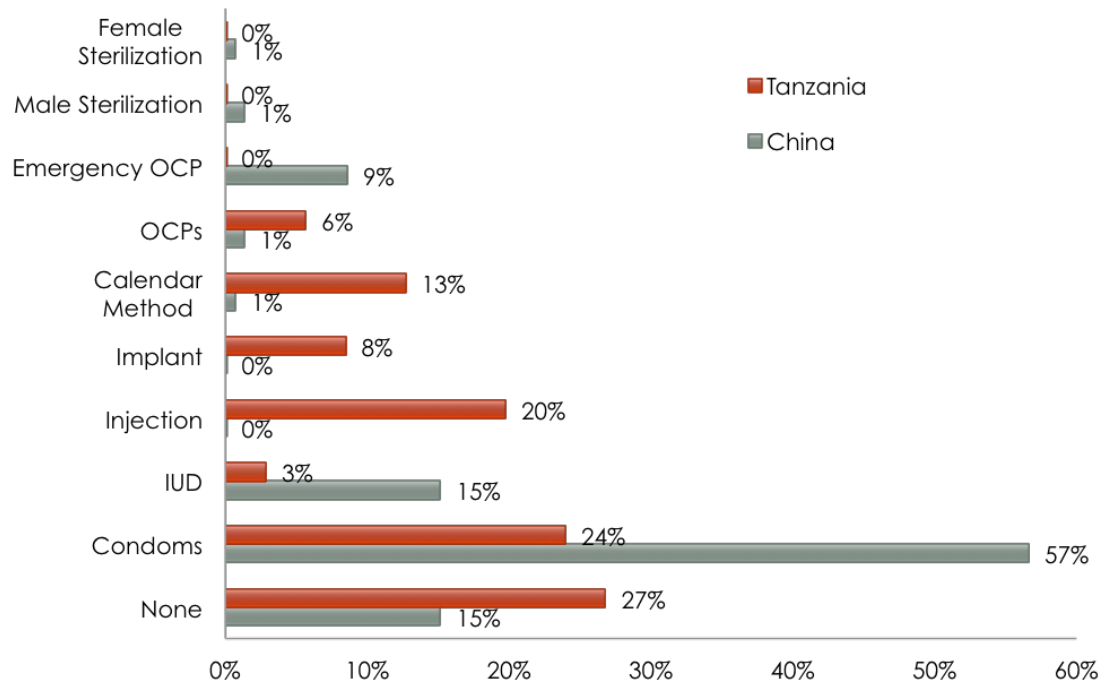


Figure 6. Contraceptive choices in study participants in Guangzhou, China and Monduli, Tanzania

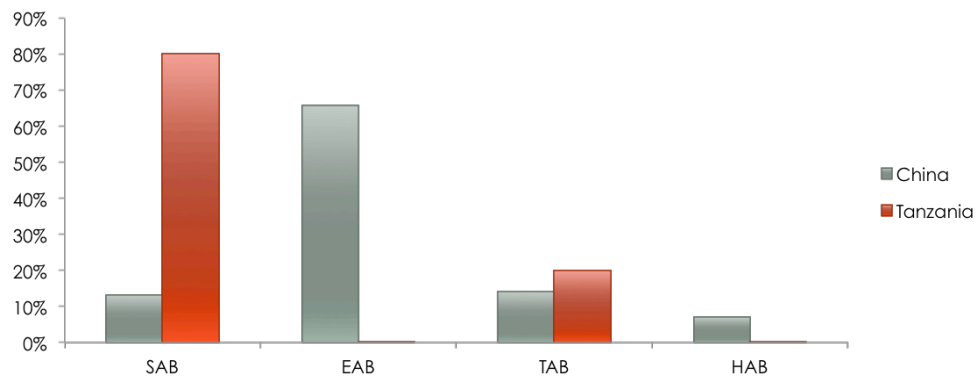


Figure 7. Rate of spontaneous abortions (SAB), elective abortions (EAB), therapeutic abortions (TAB) and habitual abortions in women surveyed in Guangzhou, China, and Monduli, Tanzania.