Chapter

Planning Methods in Ecuador's Indigenous People

Yaroslava Robles-Bykhaev, Nina Naula, Javier Cornejo-Reyes, Ana Parra, Vladimir Robles-Bykhaev, Blas Garzón and Jorge Galán

Abstract

Sexual and reproductive health (SRH) is a fundamental human right that implies knowledge and exercise of sexual and reproductive rights (SSR). Among the latter are access to knowledge and use of contraceptive methods; therefore, SSR should be experienced as a constant experience that allows women to achieve full satisfaction and security in their sexual and reproductive sphere through their subjectivity, their body, and their social and cultural life. Knowing about family planning allows having the desired number of children determining the interval between pregnancies and choosing the contraceptive method according to the social, cultural and psychological beliefs, needs and conditions of each woman. However, indigenous women from Canton Cañar (Ecuador) have less access and knowledge to contraceptive methods, mainly due to the influence of social, cultural, religious and economic factors, among others. The lack of information about family planning in indigenous populations of the South of Ecuador has motivated this study; through a medical-anthropological approach, it is intended to determine what is the preference regarding contraceptive methods in indigenous Cañari women in the context of the Cañari culture and what are their perceptions regarding such methods.

Keywords: planning methods, indigenous peoples, Cañari population, indigenous women, Ecuador

1. Introduction

Health is a fundamental human right, SRH is a part of health, and this gives the reason for SRR to also be a fundamental human right [1]. The term "reproductive rights" was made public at the First International Conference on Women's Health carried out in Amsterdam, Holland, in 1984 [2], whereas the term "sexual rights" was introduced as a negotiation strategy at the International Conference on Population and Development (ICPD) in 1994, with the purpose of guaranteeing the inclusion of reproductive rights in the final version of the El Cairo Declaration and Action Program [2]. In 1997, the World Declaration of Sexual Rights was formulated at the World Congress of Sexology (Valencia-Spain). It was later ratified at the General Convention of the Sexology Association (WAS) during the XV Sexology Congress carried out in Paris.

The Organización Mundial de la Salud (OMS) [3] declared that sexual health is a state of physical, mental and social welfare related to sexuality. It demands a positive and careful treatment of sexuality and sexual relations, as well as the possibility of having pleasant and safe experiences that are free from coercion, discrimination and violence. The OMS precept on sexual health is exclusive, biased and oriented toward the western paradigm, since it does not correspond to the local reality of the Original Peoples of Ecuador such as the Cañari, determined by bio-psycho-socio-cultural factors and economics such as ethnicity (especially indigenous and mestizo), religion (Catholic, Christian, Evangelical and charismatic groups, among others), literacy, social class, level of education, work activity and profession, among others. The aforementioned factors determine the way and lifestyle of the indigenous women of Cañar, their perception of SRH and the cultural imagery through which social construction on the use of contraceptive methods takes place.

The ways and lifestyles of Cañari women have a direct "relationship with the land and fertility, as well as with physical spaces considered feminine," since they are assigned for physical and social reproduction in the community [4]. This task of reproduction prevents access to free-form contraceptive methods if they are single [5] or adolescents (18 years), since they are frowned upon by the community and are stigmatized. Therefore, the religious and cultural precepts of the Cañaris communities are focused on control [6] regarding the exercise of their SRR.

Cañari indigenous adolescents and young adult women have greater difficulties in accessing knowledge and care in contraception due to the taboo issue that SRH represents, but also due to traditional paradigms on the role of sexual reproduction, since in indigenous communities of the Ecuador the idea that sexuality is reserved for reproduction still prevails, and the generational continuities crossed by the power relations of the gender system are reinforced [7–9]. Specifically, because the house is considered a sacred and immutable group of male ancestry that controls access and management of symbolic reproduction related to fertility [10], and subordinates the symbolic representation of women towards the Nature, therefore, is a generator of life and a naturally reproductive subject [11].

Within the value system of the Cañari culture, the generational hierarchy within the female gender plays a fundamental role, since respect from one generation to another forbids the dialog between mothers and daughters about the use of contraceptive methods, due to a generational role assigned to women according to their life cycle. Therefore, it is forbidden to talk about sexuality and birth control methods ("take care" in terms of the indigenous community of Cañar) among older adult women, and young adults and adolescents.

Not being able to talk freely between women of one generation (adolescents and young adults) and those of another generation (mature adults and older adults) may be related to modesty as an acetic value within the value system of the Cañari culture governed by the influence of religion. Indeed, modesty is related to a form of social control mainly for the censorship of what is related to sexuality, therefore chastity, and also for its erotic connotation [12–14]. In other words, modesty plays a role as a sobering element for the redirection of indigenous sexual behavior, since it allows values such as dignity and honor to be achieved [15].

Shyness as a social value allows to build and achieve a stereotype of biological and social woman; therefore, it is through the body of indigenous women that the experience of social control of modesty or embodiment[1] is manifested, so that this body is the existential basis so that said social control can be generated and

[1] It consists of living, with and through the human body, a set of emotions and sensations we experiment throughout our lives [16].

reproduced collectively through the intersubjective experiences [17] of the Cañari culture. In the case of the indigenous women of Cañar, modesty in relation to body management has its essence in the tendency to hide sexual values so as not to turn the body into an object of pleasure [18] without permission and theocratic recognition of religion, for example, Catholic, Christian and Evangelical, among others, through consecrated union in the church (ecclesiastical marriage).

Body shame or embarrassment arises as a result of the body, since it occurs in relation to some aspect of the body or body management [19]; specifically, the female body continues to be a place of shame for women; it is associated with passions and uncontrolled appetites and with something dirty and polluting [20]. That is, it constitutes the social, biological and cultural site where the intersubjectivities of mature and older women, families, men and subjects of the indigenous Cañari society discipline it, and thus socially control the behavior of adolescent and young adult women, as well as single, divorced or separated women to prevent them from experiencing sexuality related to family planning. Since the female body that has not been sacralized through ecclesiastical marriage, and by the mere fact of being a female body, becomes an impure space.

Currently, the society of the Cañari culture still exercises social and biological control in the body of the indigenous women of Cañar, that is why Cañari society can accept birth control for women, as a normative and socially accepted behavior, only if women are married. This phenomenon already took place in Quito, Ecuador, in 1970 [21], since the main group of attention for family planning was women who already had children, most of them married, which reaffirmed the exercise of sexuality only under the conjugal mandate. According to the Organización Panamericana de la Salud (OPS) and the Comisión Económica para América Latina y el Caribe (CEPAL), in Ecuador, between 67% and 90% of indigenous youth reside mostly in rural areas, and they also have social exclusion, determined by schooling (4–6 years of study approved) [22]. Being a young indigenous woman and residing in a rural sector together with having an early active sexual life will become indicators of risk for SRH, exclusion, poverty and difficulty for living conditions.

The start of an active sexual life of teenagers at an early age implies risks such as unwanted pregnancy, sexually transmitted infections, clandestine abortions and social segregation, among other problems. It is estimated that in Latin America 50% of young people under 17 are sexually active [22]. In fact, in Ecuador, teenagers' sexual relations start at the age of 15 [23, 24]. In the case of teenagers' fertility (15–19 years old), an alarming increase of 11% between 1999 and 2004 and between 2007 and 2012 [25] has been observed in Ecuador.

In most nonwestern countries, and especially in indigenous contexts, women reach the state of biological and social adulthood with marriage and motherhood at a stage in life that—according to western chronological criteria—could be categorized as adolescence. In this way, the right to marry is connected to biological maturity in traditional societies [22]. Despite the fact that in indigenous communities the acquired right to access family planning is instrumentalized and admitted by marriage, women do not have the same freedom to exercise their SRR, including that of family planning.

Teenage women, young adults and single mature adults who choose a family planning method are socially singled out. Well, sexuality is repressed, since sexual relations before marriage is seen as a lack of honor and a risk for women [26]. Therefore, the women's body is relate to something dirty and polluting, for that reason that mentioned body plays again a fundamental role as a social and biological space for socialization of the experience of cultural values. In other words, the passions and and uncontrolled appetites that those women can have must be social controlled by the Cañari culture. Even more so, if they are single indigenous women, they are socially stigmatized or singled out; in fact, according to the

Ministerio de Salud Pública del Ecuador (MSP), this social phenomenon stands out, since single mothers are the target of aggression and contempt in the community; and girls are physically and psychologically punished and are often expelled from home and from the community [27].

For their part, married indigenous women who have children can opt for family planning; in addition, society assigns the role of motherhood as a central component of their existence and socially grants them prestige and social recognition [27]. We will then say that the prevailing cultural system, the model of social control based on religious asceticism, the generational hierarchy in the female gender, patriarchal domination and belonging to the indigenous ethnic group in localities of Cañar influence access to knowledge and care in SRH and SSR, and therefore access to family planning methods.

According to OMS [3], it is calculated that, at world level, 214 million women of childbearing age in developing countries want to postpone or stop procreation, but they do not use any modern contraceptive method. However, in Ecuador, according to INEC [28, 29], the indigenous population has the lowest knowledge of contraceptive methods (34.7% of a total of 221.558). Regarding the prevalence of contraceptives and demand for satisfactory family planning [30], a more substantial dependence on traditional methods is observed in Ecuador in women aged 15 to 49. In the case of contraceptive methods, indigenous women prefer the use of rhythm or calendar (24.6%), ligature (23.6%), IUD/IUS (copper spiral "T") (19.1%), injection (16.4%), abstinence (6.7%), contraceptive pill (5.3%) and, finally, condom (3.9%). From their part, mestizo women prefer tubal ligation or female sterilization (35.9%), contraceptive pill (18.7%), rhythm (15%), IUD/IUS (14%), injection (9.5%), condom (4.2%) and abstinence (1.2%).

The rhythm method is currently not recommended or is proscribed as being ineffective [31]. Furthermore, the fact that indigenous women prefer such a contraceptive method is a trend that reflects less access to knowledge and family planning. The preference for tubal ligation and the preference for the rhythm method reveal the place that women occupy with regard to the subject of rights [32]; however, the strong religious influence reflects how women, indigenous people and their partners consider the use of contraceptive methods as a sin, and for their part, men consider that their partners can return to being adulterous [33].

1.1 Some data about the province and city of Cañar

In the province of Cañar (located in southern Ecuador), 15.2% of its population identifies itself as indigenous, while 76.7% identifies itself as mestizos [34]. It is a culturally representative province of Ecuador regarding customs, history and archeological remains. In the Cañar canton (located in the Cañar Province in the south of the country), there are 12 parishes: Cañar, Chontamarca, Chorocopte, Ducur, General Morales, Gualleturo, Honorato Vásquez, Ingapirca, Juncal, San Antonio, Ventura and Zhud.

According to the Municipio Intercultural del Cañar [35], this canton has around 58,185 inhabitants, and 40% of the population is indigenous, represented mainly by the Cañari ethnic group. The Cañari people speak Kichwa and Spanish. The identities of each indigenous people of the Cañari culture take place through the colonial present, but also with some influence from the pre-Inca past [36]. Furthermore, expressions, manifestations and their cultural value system are subject to resignifications due to processes of cultural syncretism.

In 2015, according to the Secretaría Nacional de Planificación y Desarrollo (SENPLADES) [37], the illiteracy rate for the indigenous population of the Cañar Province represented 42.78% and the poverty rate 95.2%. According to CEPAL [38],

in 2001, the global fertility rate was 4.6 in the indigenous population in the province of Cañar, while for 2015, according to (SENPLADES), the number of teenage pregnancies (15–19 years) in Cañar [37] reached 11% in the province of Cañar.

With the exposed background about cultural phenomenology, which has allowed to partially understand how the perception of sexuality takes place and, as a part of it, how the indigenous women of Cañar manage family planning, our interest is to determine their preferences regarding contraceptive methods, considering the fact that there is scarce information about it. For this purpose, a descriptive-exploratory study was conducted (diagnosis phase) that focused on determining the perception indigenous women, aged 19–59, of the rural areas of Juncal and Ingapirca and the urban area of Cañar have about the use of and preference for contraceptive methods.

2. Methodology and design

This was a descriptive-exploratory study because information about family planning in the indigenous communities located to the South of Ecuador, such as Cañar, is scarce and insufficient, especially due to their biological position.

Data gathering was done by administering a previously validated survey through the Cronbach's alpha test (0.7). This survey was administered in the city of Cañar in 3 occasions during 3 months, considering the fact that SRH is a taboo and reaching a quotient of Cronbach's alpha higher than 0.7 was not possible. As previously stated, on the one hand, it is necessary to consider the difficulty of accessing a social construct about SRH within the system of values of this population. On the other hand, this is an exploratory study (diagnosis phase or baseline) and there is not enough information about this population's preferences regarding birth control methods, and due to the structure of their cultural system and cosmogony, access to information is restricted by the marked complexity that the cultural construct of sexuality represents. For this reason, it was decided to work with a quotient of Cronbach's alpha of 0.7.

Sampling was done randomly to 25 women who identified themselves as indigenous. It was checked that they had a level of elementary, high school and higher education. The surveys were applied in high social activity strategic zones in three parishes: Cañar (urban), Ingapirca and Juncal (rural). Additionally, accessing to the next parishes was easier (see **Table 1**), considering the fact that, in general, it is not easy to gather information in indigenous communities because local and/or foreign researchers usually get data but people disapprove of this:

- In the community of Yaculoma, which belongs to the parish of Juncal, surveys were applied to indigenous women attending the Unidad Educativa Intercultural de Juncal.

- At the cattle square and the clothes market of the urban parish of Cañar.

- At the community of Vendeleche belonging to the parish of Ingapirca.

The majority of the Cañari indigenous women interviewed belong to the parishes of Ingapirca (10) and Cañar (8) (see **Table 1**) and they speak both languages: Spanish and Kichwa.

The analysis of information was done by using "R" open software, version 1.1.456. A descriptive statistical analysis was done (measurements of central and dispersion tendency) because it was necessary to start with a diagnosis phase of the preference the indigenous women of the city of Cañar have regarding the use of contraceptives.

Parishes	Communities	Indigenous women	Total	%
Cañar	Cañar	2	8	32
	Cañaribamba	1		
	Coriurco	3		
	Quilloac	2		
Chorocopte	La Capilla	2	4	16
	Tretón	2		
El Tambo	Coyoctor	1	1	4
Gualleturo	Gasa	1	1	4
Honorato Vásquez	Sigsihuayco	1	1	4
Ingapirca	Cebadas	6	10	40
	Chuguin Grande	1		
	Cochapamba	1		
	Masanqui	1		
	Sisid	1		
		25	**25**	**100%**

Table 1.
The table shows the Cañaris parishes were the surveys have been applied to indigenous women.

Surveys were applied to volunteer indigenous women of Cañar of any marital status, aged 19–59, with a level of elementary, high school or higher education. Volunteer participants signed the informed consent before participating in this study. Surveys were applied by a previously trained team of women, and one of the team collaborators was a Kichwa native speaker and supported the rest or the team to access the communities.

3. Results

It is worth mentioning that the results obtained should be considered taking into account several variables: age, marital status, years of study, the level of education and current occupation, and also, all respondents were indigenous and Catholic.

The age range of respondents was between 19 and 59 years. It was observed that the average pregnancy per woman was 3.08, and the pregnancy range was from 0 to 8 children, 2.72 being the average. Regarding the level of education of respondents, 15 women had elementary school education, 3 women had high school instruction and 7 had a higher education degree. In relation to their marital status, 22 women were married, 1 woman had free union relationship and 2 were single.

We asked some questions in order to understand what is the preference regarding contraceptive methods in Cañari indigenous women and what are their perceptions regarding such methods:

1. How many children do Cañari indigenous women have?

2. What is the most widely identified contraceptive method by the indigenous women of Cañar, according to the community they are from, their level of education and age?

3. What family planning method is the most widely used and which age group of women prefers this method?

4. How many children do women who have generally had tubal ligation have, how old were they when they decided to have tubal ligation and what is their level of education?

5. What is the age to begin the use of contraceptives in Cañari indigenous women, and why?

It is important to mention here that the results obtained showed that the women were engaged in the following activities: farmer (28%), housewife (40%), merchants (8%), public servant (8%), teacher (8%), physiotherapy assistant (4%) and student (4%). The 80% of housewife women respondents and the 100% of the farmer women respondents have elementary school education. The Cañari indigenous women respondents above mentioned belongs to the communities of Cañar (8), Chorocopte (4), Tambo (1), Gualleturo (1), 14 Honorato Vásquez (1) and the parish of Ingapirca (10) (see **Figure 1**).

3.1 How many children do Cañari indigenous women have?

Women having a higher number of children are those who have elementary school education, especially indigenous women between 49 and 59 years old (see **Table 2**), probably due to the fact that only 193.5 (estimated number in thousands) cases of sterilized women between 15 and 49 years old were registered in Ecuador until 1987 [39]. For this reason, women living in rural areas of Ecuador in the 1990s (30 years ago) did not know much about tubal ligation as a contraceptive method. Consequently, it was not a well-known birth control option; on the other hand, it was fundamental to have large families so that children can contribute to

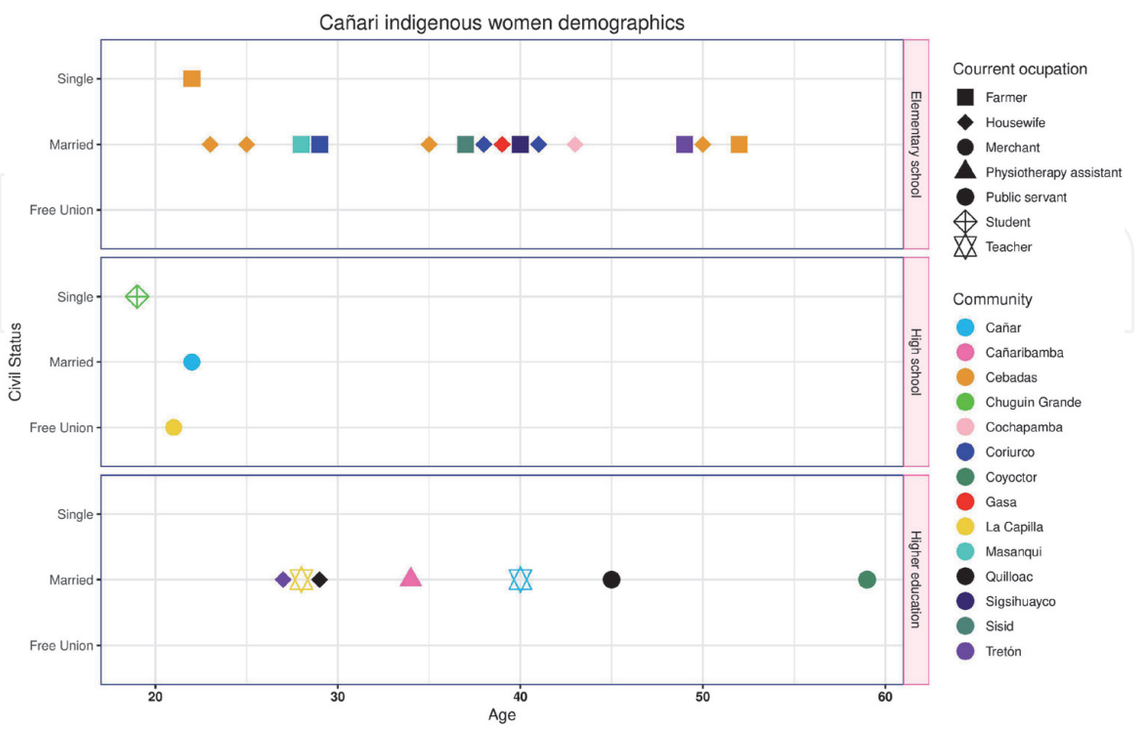

Figure 1.
The panel shows how indigenous women have been categorized according to their marital status, scholarity, current occupation and community. As ***Table*** *1 shows, most women are married and have elementary school and higher education, are from the communities of Cebadas and Coriurco, and are farmers.*

Age group	Marital status	Higher education	Elementary school	High school	Number of children
19–28	Free Union			1 (1.47%)	10 (14.71%)
	Married	2 (2.94%)	5 (7.35%)	1 (1.47%)	
	Single		1 (1.47%)		
29–38	Married	3 (4.41%)	11 (16.80%)		14 (20.59%)
39–48	Married	5 (7.35%)	21 (30.88%)		26 (38.24%)
49–59	Married	2 (2.94%)	16 (23.53%)		18 (26.47%)
		12 (16.76%)	54 (79.41%)	2 (2.94%)	68 (100.0%)

Table 2.
Number of children that indigenous women of Cañar have according to age group and education level.

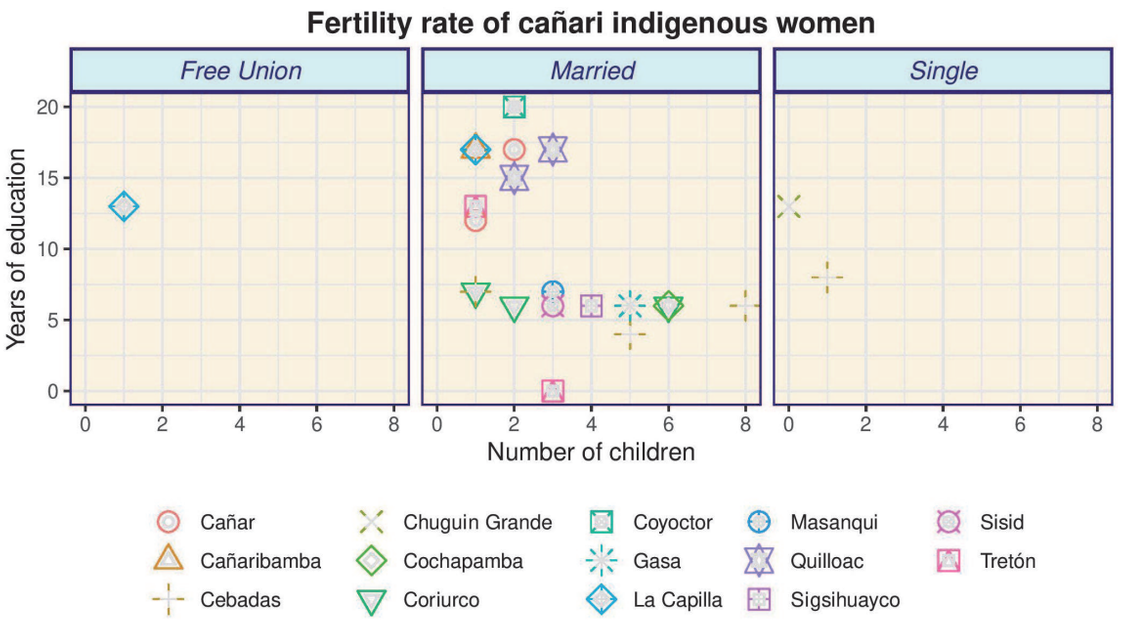

Figure 2.
Number of children that Cañari indigenous women have according to level of education and civil status.

agricultural and livestock tasks, especially in rural areas. Currently, there are still indigenous communities in Cañar, where women having a higher number of children, that is, between 5 and 8 children, are those from the rural parishes of Cebadas, Cochapamba, Coriurco and Gasa, and they have between 5 and 6 years of education (elementary school), while single women or women who have a free union relationship have 1 child and are from Chuguin Grande, Cebadas and La Capilla (see **Figure 2**).

3.2 What is the most widely identified contraceptive method by the indigenous women of Cañar, according to the community they are from, their level of education level and age?

The two most widely known contraceptive methods by the Cañari indigenous women between 19 and 59 years old are tubal ligation (24%) and hormonal injection (24%), followed by the contraceptive pill (16%) and no method (8%). It is important to say that Cebadas is the community that most identify contraceptive methods (24%) as: hormonal injection, implant and tubal ligation (see **Table 3**).

Contraceptive methods	Elementary school	High school	Higher education	Total
All			1	1
Hormonal injection	5		1	6
Various	1	2	1	4
Implant	1			1
IUD/IUS			1	1
Pill	1		3	4
Tubal ligation	6			6
None	1	1		2
	15	3	7	25

Table 3.
Contraceptive methods identified by Cañari indigenous women.

Tubal ligation, for its part, has been identified as an inexpensive method, which is easy to access, allows family planning and avoids teenage pregnancy. Cañari indigenous women also say that it is easy to access hormonal injections, which allow family planning and avoid teenage pregnancy. Regarding contraceptive pills, indigenous women know about the last two advantages indicated above. There is also the perception that not using a contraceptive method is inexpensive. Finally, pills and/or hormonal injections are considered to be inexpensive and comfortable (see **Figure 3**).

3.3 What family planning method is the most widely used and which age group of Cañari indigenous women prefers this method?

The contraceptive methods the indigenous married women of the city of Cañar who were surveyed prefer are tubal ligation (36%), none (28%), injections (12%), implants (12%), contraceptive pill (8%) and rhythm method (4%). The community where contraceptives are most widely used is Cebadas (24%) (see **Table 4**). It must be considered that most respondents were married (22–25 years old; see **Table 1**). This is worth noticing because single women did not want to participate to avoid being identified and stigmatized and criticized by the people of the community, as it was stated in the theoretical section of this discussion. It is also necessary to highlight that all the respondents declared themselves to be Catholic and, as it was

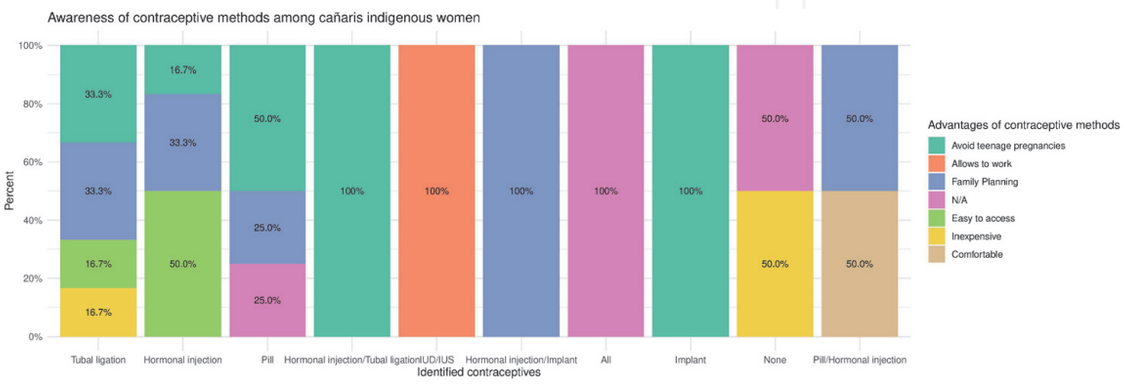

Figure 3.
Notice that the indigenous women of Cañar know about hormonal injection and/or tubal ligation, as well as implants, as valid options to avoid teenage pregnancy, IUD/IUS as a method that allows them to work, and hormonal injection and/or implants as methods that allow them to plan their pregnancies.

Contraceptive methods	Single	Free union	Married	Total
Hormonal injection			3	3
Implant	1	1	1	3
Pill			2	2
Rhythm method			1	1
Tubal ligation			9	9
None	1		6	7
	2	1	22	25

Table 4.
Contraceptive methods used by Cañari indigenous women.

stated before, they have a system of social control; therefore, women's sexuality is also controlled.

Accessing contraceptive methods is considered to be easy for most women who are married, have a free union relationship, or are single. However, married women represent most of the sample of the respondents (22). Notwithstanding, in this group, women from the parishes of Gasa, Quilloac and Sisid consider that accessing contraceptive methods is difficult or very difficult (see **Figure 4**).

Married women (with elementary school and higher education level) think that the community has to condemn the behavior of single women who use contraceptive methods, as well as they have the perception that this will turn out to be a shame for families. Finally, they consider that the partners of single women who start contraception criticize them. This perception phenomenon is reproduced by women who have a free union relationship. Single women preferred not to answer, which may be associated to the stigma we talked about in the introductory theoretical part of this discussion (see **Figure 5**).

The family planning methods that Cañari indigenous women prefers are: 17 tubal ligation (50%), followed by hormonal injection (16.6%), implant (16.6%), 18 and pill (16.6%), pill (11.1%), and rhythm method (5.55%).

Women between the ages of 39 and 48 have more frequently had tubal ligation (24%), but women between the ages of 29 and 38 (16%) show also this phenomena, while women between the ages of 49 and 59 represent 4%. Young adult women

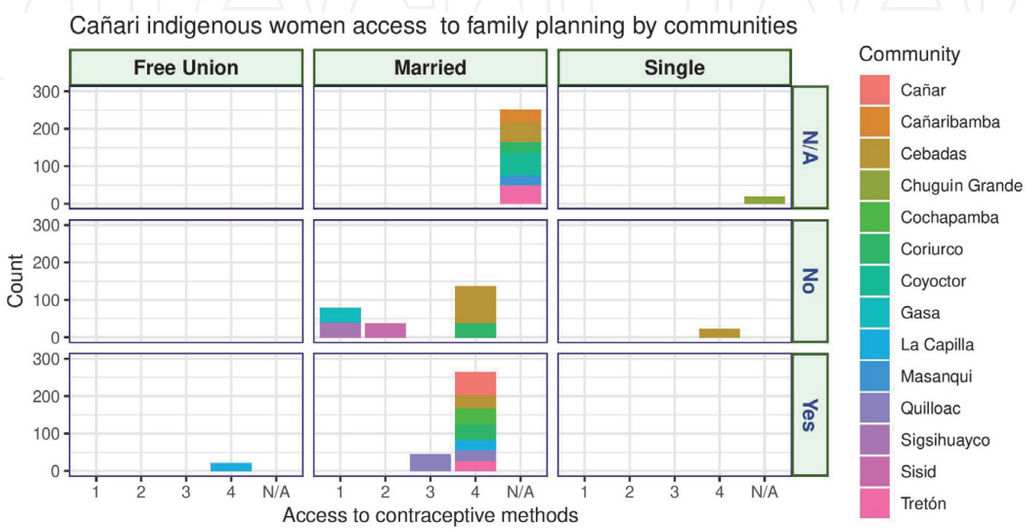

Figure 4.
This figure shows Cañari indigenous women's access to contraceptive methods.

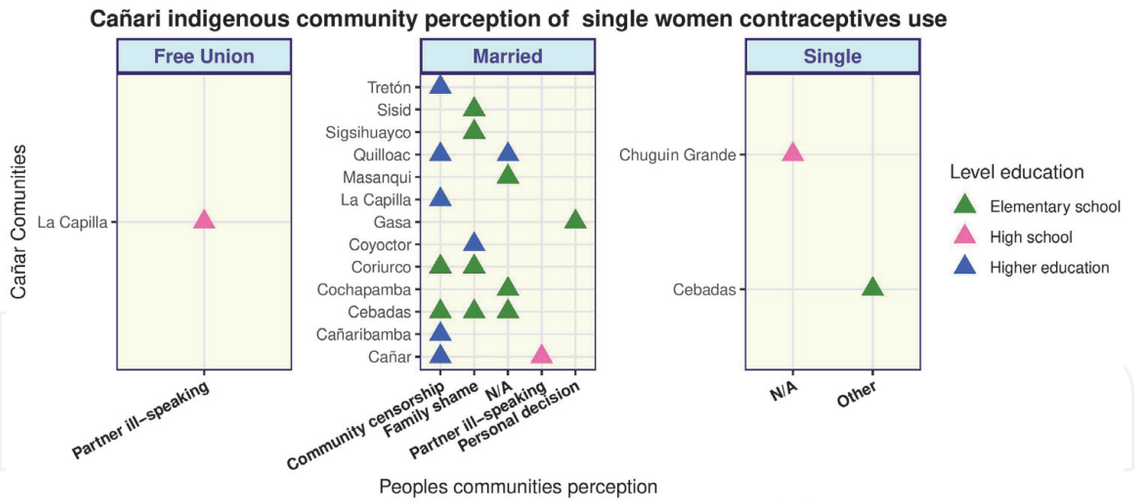

Figure 5.
This figure shows Cañari indigenous communities' perception about single women's use of contraceptives.

Contraceptive methods	Age	Elementary	High school	Higher education	Total
Hormonal injection	19–28	2	1		3
Implant	19–28	1	1	1	3
Pill	19–28			1	1
	39–48			1	1
Rhythm method	29–38	1			1
Tubal ligation	29–38	1		2	3
	39–48		4	1	5
	49–59	1			1
None	19–28	1	1		2
	29–38	1		1	2
	49–59	2		1	3

Table 5.
Prevalent use of contraceptive methods by Cañari indigenous women according to their level of education and age.

(19–28 years old) usually choose methods like hormonal injection, implant and contraceptive pill (28%), probably because they are temporal long-term methods and they still want to have children.

About 28% of Cañari indigenous women do not use any contraceptive method, and this is probably caused by their low level of education, since women in all the age groups (19–28, 29–38, 39–48 and 49–59) that do not use any kind of contraceptive method have elementary or high school education. On the contrary, women who more widely use contraceptives, besides being young (19–28 years old), are those who have elementary school education (see **Table 5**).

The social phenomenon of prevalence of use of contraceptive methods similarly corresponds to women who have elementary school education. On the other hand, in the case of young women who do not use any contraceptive method and have elementary and high school education, the phenomenon is also related to the number of children they have: the higher the level of education they have, the fewer the number of children they have.

3.4 How many children do Cañari indigenous women who have generally had tubal ligation have, how old were they when they decided to have tubal ligation and what is their level of education?

We can see that Cañari indigenous women who have a higher level of education have fewer number of children. Ligation as a method of family planning prevails in the indigenous women of Cañar who have between 5 and 6 children. However, having 8 children in the current era is not prevalent. That is why, only 1 woman had a ligation when having this number of children (see **Figure 6**).

Respondents perceive that both the women they interact with and other women of the community who have undergone tubal ligation consider it to be "very dangerous" (20% and 44.4%). However, other women in these two groups consider tubal ligation to be "very safe" when their close acquaintances have undergone tubal ligation (40%) and also when their close acquaintances have not undergone tubal ligation (33.3%). Similarly, some women consider tubal ligation to be dangerous for their health, harmful for their bodies and the cause of abdominal pain. Finally, they say it weakens their bodies (6.7%), and surveyed women believe that tubal ligation is a sin (6.7%) (see **Figure 7**).

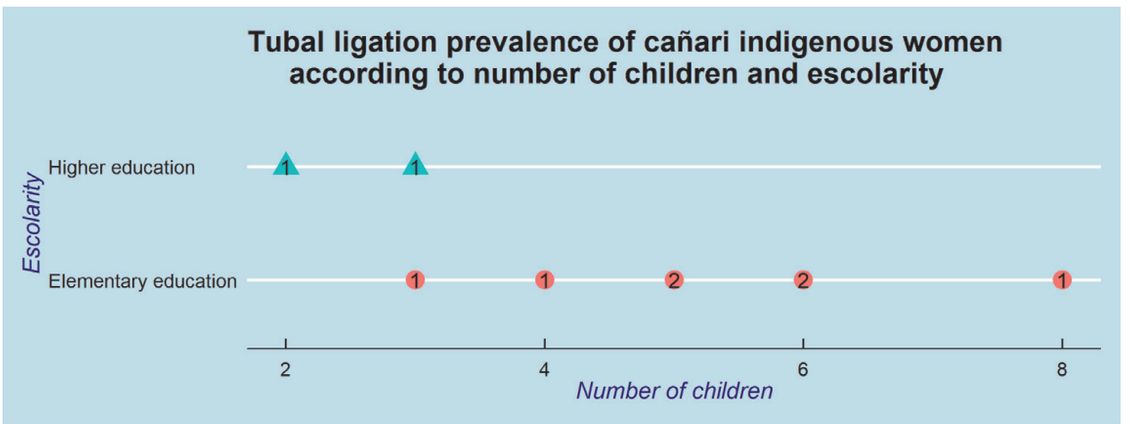

Figure 6.
Prevalent use of tubal ligation by Cañari indigenous women.

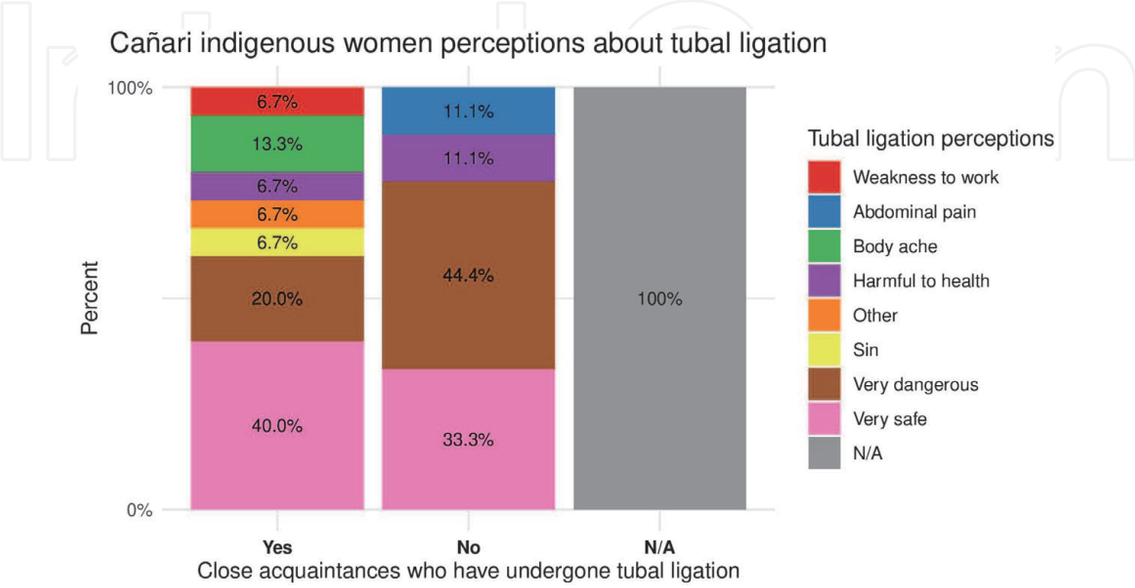

Figure 7.
The figure shows Cañari indigenous women's perception about tubal ligation when their close acquaintances have undergone tubal ligation.

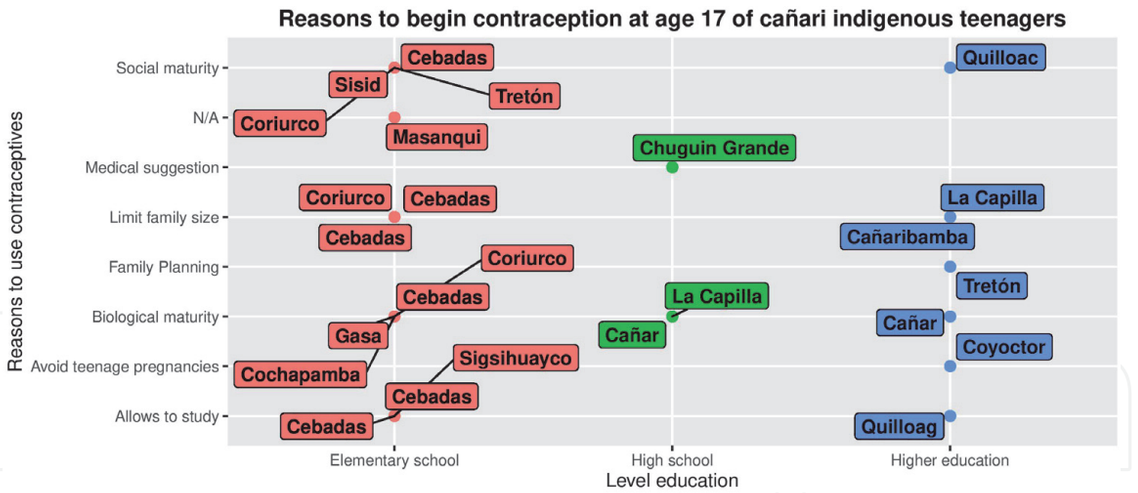

Figure 8.
Respondents with elementary school level education perceive that adolescents at age 17 can, and also should, begin the use of contraceptives because adolescents have biological maturity, adolescents show social maturity, the contraceptives avoid teenage pregnancies and they also allow to study. But respondents with higher education level mostly perceive that adolescents should begin the use of contraceptives at age 17 because of their biological maturity and because the contraceptives limit family size, let family planning, avoid teenage pregnancies and allow to study.

3.5 What is the age to begin the use of contraceptives in Cañari indigenous women, and why?

Cañari indigenous women's perceptions about reasons to begin the use of contraceptives at age 17 in adolescents (see **Figure 8**) is very concerning, because they are too young, and it shows that in this community sexual activity starts very early. This is very dangerous not only because it predisposes them to sexually transmitted infections (STIs), unwanted pregnancy and abortion, but also because their adolescence is reduced, and their adulthood starts early.

4. Conclusions

Based on the results obtained, we can state that the number of children the indigenous women of Cañar have, as it is already known, is connected to their level of education. This research has proven that the higher the number of children these indigenous women have, the fewer the years of education they have (inversely proportional) (see **Table 5**).

The two contraceptive methods that are most widely identified by the indigenous Cañari people between the ages of 19 and 59 are tubal ligation (24%) and hormonal injection (24%), followed by the contraceptive pill (16%), no known method (8%), and, finally, hormonal injection/implant (4%), hormonal injection/tubal ligation (4%), implant (4%), IUD/IUS (4%) and all the rest (4%) (see **Table 3**).

Women having a higher number of children (5–8) are from the rural parishes of Cebadas, Cochapamba, Coriurco and Gasa and have 5 or 6 years of education (elementary school), while single women or women who have a free union relationship have 1 child and come from Chuguin Grande, Cebadas and La Capilla (see **Figure 2**).

Tubal ligation is definitely the preferred contraceptive method (see **Table 4**) by women aged 29–59 (50% of all the family planning methods), including both women having elementary school education (higher number of children) and high school education (fewer number of children). This is defined by the social

phenomenon of change of values within this population's cultural system, just as the respondents, during the survey, besides answering questions, confessed that they decided to use contraceptive methods considering the fact that they help to improve both their economy and their children's quality of life. Also, they think that tubal ligation offers several advantages: it is inexpensive and is easy to access, and it allows family planning and avoids teenage pregnancy (see **Figure 3**). However, young women (19–28 years old) choose other methods: hormonal injection, implant and contraceptive pill (28%), considering the fact that they are long-term temporal methods and probably still want to have children.

Besides, tubal ligation was perceived by the surveys as "very dangerous," "very safe," "dangerous for health," "harmful to the body," "causes abdominal pain" and "weakens the body."

It is important to highlight that 28% of Cañari indigenous women do not use any contraceptive method. They are the women who have elementary or high school education. Again, it corresponds to the inversely proportional relationship: the higher the level of education, the fewer the number of children. Choosing natural or traditional contraceptive methods is also connected to "sin," this being the reason that some women value this behavior so as not to break this cultural and religious standard.

In general, accessing contraceptive methods, according to the survey results, is very easy, considering the fact that the Cañari indigenous women who participated in the survey were married (22) (see **Figure 4**). Single women did not want to participate in the survey due to the fact that their marital status limits their answers because they are the target of criticism, as it was indicated in the introductory part of this discussion. For this reason, married women know that their communities condemn the behavior of single women who use contraceptive methods. They also believe that it is a shame for the families of those women, and they think the partners of single women who start using contraceptive methods speak ill of them (see **Figure 5**). The target of criticism that is embodied in single women who use contraceptive methods or participated in the survey is related to shyness or the female stereotype. That is, through the indigenous women's bodies, social control of shyness is manifested in such a way that it becomes the existential basis of shyness. The strong influence of the social control exercised by religion is another important factor. In this study, all the surveys show that these women are Catholic and, as it was stated in the introductory theoretical part of this discussion, the religious component is a system of social control and, consequently, also controls women's sexuality, which is expressed through their bodies.

We need to state that the Cañari culture is marked by a system of values where religion plays the role of socially controlling women's sexual behavior and embodies the stigma of accessing contraceptive methods through a woman's body. This is lived as a set of experiences that modifies these women's access to contraceptive methods and, consequently, to family planning. We can also say that the number of children women having a low level of education have is a factor that determines the occurrence of the previous phenomenon. The fact that some mature adult women undergo tubal ligation is another important factor that needs to be paid attention to. Before 1990 (1987), a record of tubal ligations of women between the ages of 15 and 49 in Ecuador shows the lack of knowledge of this contraceptive method in rural communities; consequently, it was not considered to be a birth control and/or family planning option.

Finally, we also state that there is very concerning the beginning of the contraceptives use in cañari indigenous adolescents (see **Figure 8**) because they start sexual activity very early, and predisposes them to sexually transmitted infections (STIs), unwanted pregnancy and abortion; but, also because their adolescence is reduced, and their adulthood starts before.

Acknowledgements

This project was partially funded by the "Catedra UNESCO UPS Cuenca-Ecuador, Grupo de Investigación en Inteligencia Artificial y Tecnologías de Asistencia (GIATA) CuencaEcuador" and also by "Universidad Politécnica Salesiana."

Conflict of interest

The authors declare no conflict of interest.

Author details

Yaroslava Robles-Bykbaev[1,2*], Nina Naula[2], Javier Cornejo-Reyes[2,3], Ana Parra[2], Vladimir Robles-Bykbaev[2], Blas Garzón[2] and Jorge Galán[2]

1 Grupo de Investigación en Terapia Celular y Medicina Regenerativa (TCMR), Departamento de Medicina, Universidade da Coruña, Spain

2 GI-IATa, Cátedra UNESCO Tecnologías de apoyo para la Inclusión Educativa, Universidad Politécnica Salesiana, Cuenca, Ecuador

3 Instituto Superior Tecnológico del Azuay (ISTA), Cuenca, Ecuador

*Address all correspondence to: zrobles@ups.edu.ec

References

[1] Özcan M, Beritken Ergin A, Acar Z. Sexual and Reproductive Rights in Turkey: An Owerview. Cokaely, Turkey: Kocaeli Üniversitsi Sosyal Bilimler Dergisi. pp. 122-136

[2] Davis L. Reconocimiento jurídico de los derechos sexuales: Un análisis comparativo con los derechos reproductivos. Sur, Revista Internacional de Direitos Humanos. [online]. 2008;5(8):60-83. DOI: 10.1590/S1806-6445200800 0100004

[3] Organización Mundial de la Salud (OMS). Planificación familiar. [Internet]. 2019. Available from: https://www.who.int/es

[4] Milagros A, Cordero L, Vuttone M. Salud de la mujer indígena: Intervenciones para reducir la muerte materna. Vol. 23. BID, Almería: Editorial Universidad de Almería; 2010

[5] Espinosa, S. Maternidad Indígena: Los derechos, los deseos, las costumbres, en S. Lerner, I. Szasz, Salud Reproductiva y Condiciones de Vida en México, México, D.F.: El Colegio de México. 2008. p. 169

[6] Internacional A. Políticas del cuerpo: manual general sobre la criminalización de la sexualidad y la reproducción. London: Amnesty International Ltd; 2018. p. 52

[7] Pedone C. Madres e Hijas, Rupturas y Continuidades en los Roles de Género en la Migración Ecuatoriana a España. In: Magliano M, Mallimaci A, editors. Las mujeres latinoamericanas y sus migraciones. Córdoba, Argentina: Eduvim; 2016

[8] Baeza P. Maternidad indígena en Colta: un espacio de encuentros y tensiones. Quito: Abya Yala; 2011. p. 17

[9] Weismantel M. Cholas y Pishtacos: Stories of Race and Sex in the Andes. Chicago, USA; University of Chicago Press; 2001. p. 76

[10] Da S, Women K. Gender and Power among Indigenous Peoples of Portuguese Timor. Anuário Antropológico. Brasília: UnB; 2017. pp. 183-205

[11] Cabezas P. Maternidad indígena en Colta: un espacio de encuentros y tensiones. Quito: Abya Yala; 2011. p. 23

[12] Arias M. Determinantes próximos de la fecundidad: Comportamiento reproductivo de las indígenas Chamibida de Antioquia, Colombia. Rio de Janeiro: Cad. Saúde Pública; 2005. pp. 1087-1109. DOI: 10.1590/S0102-311X2005000400011

[13] Urrea F, Posso J. Feminidades, sexualidades y colores de piel: Mujeres negras, indígenas, blancas-mestizas y transgeneristas negras en el suroccidente colombiano. Cali: Programa Editorial Universidad del Valle; 2015

[14] Vázquez V, Flores A. ¿Quién cosecha lo sembrado?: Relaciones de género en un área natural protegida mexicana. México, D.F.: Plaza y Valdes; 2002

[15] Müllauer-Seichter W, Fernández M, Herrera S, Maynar A, Merino M, Vega-Centeno I, et al. Maneras de narrar espacios y tiempos: Ad fontes: Corrientes en Etnohistoria. Vol. 402. Madrid: Editorial Universitaria Ramón Areces; 2012. p. 131

[16] Lirola, M, Carrasco, M, Espinosa, J, Paterna, J. Investigaciones sobre el impacto de la imagen corporal. 2019. ISBN: 978-84-17261-57-3

[17] Csordas T. The Sacred Self: A Cultural Phenomenology of Charismatic

Healing. California: Univesrity of California Press; 1997. pp. 8, 10

[18] Burgos J. La filosofía personalista de Karol Wojtyla. Madrid, Palabra (tesis de maestría). Quito: Universidad Andina Simón Bolívar; 2007. p. 100

[19] Dolezal L. The Body and Shame: Phenomenology, Feminism, and the Socially Shaped Body. London: Lexignton Books; 2015. p. 7

[20] Bouson B. Embodied Shame: Uncovering Female Shame in Contemporary Women's Writings. Vol. 2. New York: Sunny Press; 2010. p. 3

[21] Agudelo J. La planificación familiar Discursos sobre la vida y la sexualidad en Ecuador desde mediados del siglo XX. Quito: Abya Yala; 2017. p. 101

[22] Organización Panamericana de la Salud (OPS) y la Comisión Económica para América Latina y el Caribe (CEPAL). Salud de la población joven indígena en América Latina: un panorama general. Vol. 54. Santiago de Chile: Naciones Unidas; 2011. p. 42

[23] Organización Panamericana de la Salud (OPS). Salud sexual y reproductiva y VIH de los jóvenes y adolescentes indígenas en Bolivia, Ecuador, Guatemala, Nicaragua y Perú. Washington, D.C.: OPS; 2010. p. 61

[24] Ministerio de Salud Pública del Ecuador. Plan Nacional de Salud Sexual y Salud Reproductiva 2017–2021. Quito: MSP; 2017. p. 34

[25] Instituto Nacional de Estadísticas y Censos (INEC). MSP e INEC presentan resultados de Demografía y Salud Sexual y Reproductiva. [Internet]. 2014. Available from: https://www.ecuadorencifras.gob.ec/msp-e-inec-presentan-resultados-de-demografia-y-salud-sexual-y-reproductiva/ [Accessed: 12 December 2019]

[26] Larrea S. Diagnóstico de la situación de la promoción, oferta y demanda de la anticoncepción de emergencia en Loja, Guayas, Pichincha, Esmeraldas y Chimborazo. Quito: Fundación Desafío y Coordinadora Juvenil por la Equidad de Género; 2010. p. 30

[27] Ministerio de Salud Pública del Ecuador (MSP). Situación de Salud de los y las jóvenes indígenas en Ecuador: VIH y Sida y Embarazo en Adolescentes Informe-Ecuador (Español). Quito: MSP; 2010. pp. 40, 51

[28] Instituto Nacional de Estadísticas y Censos (INEC). Comportamiento reproductivo de las mujeres ecuatorianas. Quito: INEC; 2005. p. 30

[29] Instituto Nacional de Estadísticas y Censos (INEC). Las mujeres ecuatorianas que conocen y usan los métodos anticonceptivos. Quito: INEC; 2006. p. 12

[30] Gómez R, Ewerling F, Serruya S, Silveira M, Sanhueza A, Moazzam A, et al. Contraceptive use in Latin America and the Caribbean with a focus on long-acting reversible contraceptives: Prevalence and inequalities in 23 countries. The Lancet. Global Health. 2019. DOI: 10.1016/S2214-109X(18)30481-9

[31] Peláez J. El uso de métodos anticonceptivos en la adolescencia. Rev Cubana Obstet Ginecol. 2016. ISSN: 0138-600X

[32] Rostagnol S. El papel de l@s ginecólog@s en la construcción de los derechos sexuales. In: Uruguay K, Prieto M, editors. Estudios Sobre Sexualidades en América Latina. Quito: FLACSO; 2008. p. 225

[33] Terborgh A, Rosen J, Gálvez R, Terceros W, Bertrand J, Bull S. La planificación familiar entre las poblaciones indígenas de América

Latina. Perspectivas Internacionales en Planificación Familiar. 1996;**4**(11):10

[34] Instituto Nacional de Estadísticas y Censos (INEC). Resultados del Censo 2010 de Población y Vivienda en el Ecuador: fascículo provincial del Cañar [Internet]. 2010. Available from: https://www.ecuadorencifras.gob.ec/wp-content/descargas/Manu-lateral/Resultados-provinciales/canar.pdf

[35] Municipio Intercultural del Cañar. Población [Internet]. 2019. Available from: https://www.canar.gob.ec/gadcanar/index.php/2013-05-20-16-30-14/2013-05-20-16-39-52

[36] Burgos H. La Identidad del Pueblo Cañari: de-construcción de una nación étnica. Quito: Abya Yala; 2003. pp. 33-37

[37] Secretaría Nacional de Planificación y Desarrollo (SENPLADES). Agenda Zonal, ZONA 6-Austro: Provicncias de Azuay, Cañar, y Morona Santiago. 2013–2017. Quito: SENPLADES; 2015. pp. 27, 40, 57

[38] Comisión Económica para América Latina y el Caribe (CEPAL). Población indígena y afroecuatoriana en Ecuador: Diagnóstico sociodemográfico a partir del censo de 2001. Santiago de Chile: Naciones Unidas; 2005. p. 28

[39] Organización Mundial de la Salud Ginebra (OMS). Guía para la Prestación de Servicios. Ginegra: OMS; 1993. p. 6