Full Length Research Paper

Turkish pharmacy technicians' counseling practices and attitudes regarding emergency contraceptive pills

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Supplying emergency contraception pills through community pharmacies without the need for a doctor's prescription is an important public health role for the pharmacy staff, as a way of reducing unwanted pregnancies and induced abortions. Therefore, we aimed to assess the Turkish pharmacy technicians' counseling practices and attitudes regarding emergency contraception pills. A survey tool which was structured to question pharmacy technicians' demography, professional experience, counseling practices and attitudes regarding emergency contraception pills was administered to pharmacy technicians at the end of the "pharmacy technician certification program". The fully completed questionnaires (n=145) were further analyzed. Mean [SEM] age of the pharmacy technicians was 25.3 [0.4] years and majority (89%) of them were practicing in a community pharmacy. Despite their positive attitude towards the emergency contraception pills, pharmacy technicians were found to provide insufficient emergency contraception pill counseling to clients. We suggest that organization of continuing education programs on "reproductive and sexual health and emergency contraception" for the pharmacy technicians could help increase the quality of emergency contraception pill counseling provided by the pharmacy technicians.

Key words: Emergency contraception pill, counseling, attitude, community pharmacy, pharmacy technician.

INTRODUCTION

Emergency contraception pills (ECPs) are safe and effective oral products for reducing the risk of pregnancy after unprotected sexual intercourse (Abuabara et al., 2004; Norris Turner and Ellertson, 2002). They can reduce the risk of pregnancy by at least 75%, when taken within 72 h of unprotected intercourse (Trussell et al., 1999). However, it has been confirmed by many studies that many women in need of emergency contraception find it difficult to obtain doctor's appointments (or to attend other service providers) within the crucial 72 h time-frame (Ellertson et al., 2000).

The rate of unplanned pregnancies worldwide (World Health Organization, 2005), as well as in Turkey (Hacettepe University, 2004) is still quite high. The

unplanned pregnancies resulting in labor for some can result in induced abortion for others, which is still a major cause of maternal deaths. To lower rates of unintended pregnancies women need better access to both regular contraceptive methods and ECPs. Pharmacy provision of the ECPs without the need for a doctor's prescription could increase this access; thus, help reduce unwanted pregnancies and induced abortions.

In many countries today emergency contraception products are available without prescription (ECP status and availability chart. Consortium for Emergency Contraception. Available at: http://www.cecinfo.org. [Accessed March 31, 2010]). Studies show that pharmacy supply of emergency contraception improves access and enables most women to receive it within 24 h of unprotected sexual intercourse (Anderson and Blenkinsopp, 2006). Although women have some concerns in relation to over-the-counter supply of the ECP (Hobbs et al., 2009), they are generally satisfied with pharmacy emergency contraception supply and the

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information that they received from pharmacists (Arnet et al., 2009; Anderson and Blenkinsopp, 2006); while, they value the privacy, confidentiality (Landau et al., 2006) and convenience of accessing ECP through pharmacies (Gainer et al., 2003; Landau et al., 2006; Killick and Irving, 2004) which are open long hours and on weekends.

In Turkey, ECPs are supposed to be dispensed upon a physician's prescription. However, the real life practice in the community pharmacy setting is quite different. Although, there is not an official non-prescription or over-the-counter status for the ECPs, customers can purchase these products right from the community pharmacies without a prescription. This special situation gives the pharmacy staff a deep responsibility in counseling on ECPs and on the usual methods of contraception, in order to provide rational use of these agents.

Pharmacy technicians are the main auxiliary staff of the community pharmacies in Turkey. Although, the pharmacist is the ultimate responsible person for all the services provided in the community pharmacy, all pharmacy technicians can dispense and counsel on both prescription and non-prescription drugs including the ECPs.

In the literature there is no published study on Turkish pharmacy technicians' counseling practices and attitudes; therefore, we aimed to assess the pharmacy technicians' counseling practices and attitudes regarding ECPs in Turkey.

MATERIALS AND METHODS

Survey tool

A survey tool consisting of three parts was structured for data collection. First part of this tool consisted of questions on demography and professional experience; while, the second part consisted of questions on providing/selling ECP, sources of information about ECP and counseling practices about ECP, with multiple-choice response options. The third part of the questionnaire was on attitudes towards ECP and structured as a modification (Table 3) of the questionnaire developed by Aneblom et al. (2004) with the permission of the authors. Attitudes were measured by 18 items under four domains: "reproductive health (5 items); information and availability (7 items); risk behavior (3 items) and regulatory restrictions (3 items)". A 5-point Likert scale ranging from "totally agree" to "totally disagree" was used for rating. Internal reliability of the Likert scale items was tested using Cronbach's α calculation (Cronbach, 1990).

Study population

The questionnaires were administered to 160 certified pharmacy technicians at the end of the "pharmacy technician certification program". Pharmacy technicians who attended to the "pharmacy technician certification program" that was held in Istanbul were informed about and invited to participate in the study. The technicians who accepted to participate were requested to fill in the questionnaires as completely as possible. Filling in the questionnaires was considered as giving an informed consent. Respondents completing the whole survey were considered as "being aware of the ECPs"; while, those who completed only the demographic data but not the parts on ECP were considered as "not being aware of ECPs". The questionnaires consisting of only the demographic data, but not the rest of the survey were not included in the analysis.

Pharmacy technicians practicing in community pharmacies were asked to fill in the whole questionnaire; while others were requested to fill in the questionnaire excluding the questions on providing/ selling ECP and counseling practices about ECP.

Pharmacy technician certification program

"Pharmacy technician certification program" was a 330-h professional education program that was organized by the Turkish Pharmacists' Association, of which the courses were taught by lecturers and research/teaching assistants of the pharmacy faculties. Pharmacy technicians who were already practicing, as well as new candidates could attend this program; the only criteria for acceptance was having completed at least 11 years of formal education. Participants who successfully completed this education program and received their certificates are called "certified pharmacy technicians".

Data analysis

Statistical analyses were performed using commercially available statistics software (SPSS 11.5). Continuous variables are presented as "mean ± standard error of the mean [SEM]" and categorical variables were presented as percentage (%). The results of attitudes were presented as positive attitudes (totally agree and agree), negative attitudes (totally disagree and disagree) and neutral attitudes (neither agree nor disagree). For the negatively formulated items of the survey (ECP should be sold only to women; ECP should only be sold on prescription; ECP should be sold only to those at the age of ≥18 years) positive attitudes were represented by the percent who "totally disagreed and disagreed"; while, negative attitudes were represented by the percent who "totally disagreed and agreed".

RESULTS

Survey tool

The Cronbach's α value of the Likert scale items was 0.70 for the whole questionnaire, indicating a satisfactory reliability.

Background

All of the invited pharmacy technicians accepted to participate in the study and filled in the questionnaire; the respond rate was 100%. Only fifteen questionnaires contained only the demographic data and were not included in the analysis; the fully completed questionnaires (n=145) were further analyzed. The respondents completing the whole survey were considered as "being aware of the ECPs"; therefore, the rate of ECP awareness was estimated as 91%.

Table 1. Data regarding provision o	f emergency contraceptive pills (n=129)*
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	%
Experience of ECP sale	98
Experience of ECP sale to men	
Never	22
Seldom	35
Sometimes	35
Often	8
Number of ECPs sold per month	
None	2
<1 box per month	15
1-5 boxes per month	25
6-10 boxes per month	20
11-20 boxes per month	19
21-50 boxes per month	11
>50 boxes per month	5
Just at night shifts	3

*Pharmacy technicians practicing at the community pharmacies; ECP: emergency contraceptive pills

Majority (89%; 129/145) of the pharmacy technicians were practicing in a community pharmacy. The mean [SEM] age was 25.3 [0.44] years and the mean [SEM] years of practice was 5.4 [0.40] years. The gender distribution was similar; about half of the respondents were female.

ECP provision

Data collected from the pharmacy technicians practicing in the community pharmacies regarding ECP provision are presented in Table 1. Ninety-eight percent of them reported to dispense ECP to any client and 78% reported to dispense ECP to men. The most frequent ECP dispensing range was 1-5 packs/month (25%).

The pharmacy technicians' main sources of ECP information was pharmaceutical company representatives (62%), employers (18%) and physicians (9%), followed by media, education programs and others. Sixty percent of the pharmacy technicians reported to be comfortable about ECP counseling with customers; while, 29% reported to be comfortable only while counseling with customers of the same gender and 11% told to be uncomfortable.

Counseling

The counseling practices of the pharmacy technicians on various aspects of ECP (that is, side-effects, pregnancy test, mechanism of action, dosage, efficacy, timeframes and methods of contraception) were as presented in Table 2.

Attitudes

In general, pharmacy technicians displayed positive attitudes towards majority of the items of the survey (Table 3). They displayed positive attitudes towards the items suggesting that existence of ECP is positive and ECP is ethical; while they displayed neutral attitudes towards the other items of the "reproductive health" domain, namely: "teenagers and youngsters can take responsibility for the use of ECP; ECP gives women increased sexual safety; and ECP increases women's control of reproduction".

All pharmacy technicians displayed positive attitudes towards all of the items under the "information and availability domain". While, the pharmacy technicians were negative to the items suggesting that ECP should be sold only to women and only on prescription, they agreed with the item suggesting limiting the ECP sales to those over 18 years of age. All of the pharmacy technicians displayed concerns about the risk behaviors related with the increased knowledge and availability of the ECP, while they were neutral to the item suggesting that ECP can make it more difficult for women to refuse unprotected intercourse.

DISCUSSION

This is the first study reflecting the practices and attitudes of Turkish pharmacy technicians regarding ECP counseling practices and attitudes. In the literature there exist no published studies conducted on pharmacy staff on this subject. Therefore, we compared our results with those of similar local studies conducted on other

	%
Side-effects	
Never/Seldom	56
Sometimes	24
Often/Always	20
Pregnancy test	
Never/Seldom	39
Sometimes	16
Often/Always	45
Mechanism of action	
Never/Seldom	55
Sometimes	15
Often/Always	30
_	
Dosage	
Never/Seldom	27
Sometimes	6
Often/Always	67
Efficiency	
Emcacy	07
Never/Seldom	27
Sometimes	22
Often/Always	51
Timeframes	
Never/Seldom	21
Sometimes	11
Often/Alwaye	69
Ollell/Always	00
Methods of contraception	
Never/Seldom	39
Sometimes	35
Often/Always	26
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Table 2. The content of counseling provided to customers by pharmacy technician (n=129).

health-care providers.

The pharmacy technicians surveyed in this study displayed a high ECP awareness rate (91%). It is higher than reported at most of other local studies conducted on physicians, nurses and midwives: Mandiracioglu et al. (2003) reported a rate of 53.7% in Izmir where 22% of personnel had received specialized training in family planning; Uzuner et al. (2005) reported a rate of 84.4% in Istanbul where all of the participants received special training in family planning in family planning counseling and Zeteroglu et al. (2004) reported a rate of 74% in Van. However, the awareness rate of the pharmacy technicians is less than reported by several authors where almost all pharmacists (Yam et al., 2007; Blanchard et al., 2005) and other

providers (Sevil et al., 2006) were aware of the ECPs.

Majority (98%) of the pharmacy technicians practicing at the community pharmacies reported that the people in seek of emergency contraception visited their pharmacies and purchased ECPs. The amount of ECPs sold in their pharmacies was less than one pack per month for 15%; while, it was up to 5 packs per month for 40% and more than 5 packs per month for 55%. When compared with the local data, it is seen that the rate of clients in need of emergency contraception served by the pharmacy staff was higher than those served by other health-care providers (34.3% (Sevil et al., 2006) and 71% (Uzuner et al., 2005). The frequency of ECP provision reported by the pharmacy technicians was also higher than reported Table 3. Pharmacy technicians' attitudes towards emergency contraceptive pills.

Domains and items	Totally disagree (%)	Disagree (%)	Neither agree nor disagree (%)	Agree (%)	Totally agree (%)
Reproductive health					
Existence of ECP is positive	2.1	6.9	18.6	40	32.4
ECP is ethical	3.4	9.7	35.2	35.8	15.9
Teenagers and youngsters can take responsibility for the use of ECP	4.8	20.7	34.5	29.0	11.0
ECP gives women increased sexual safety	4.2	18.6	31.0	33.8	12.4
ECP increases women's control of reproduction	8.3	19.3	40.0	26.2	6.2
Information and availability					
All sexually active women should be aware of ECP	1.4	3.4	6.9	42.8	45.5
ECP should be as well known as condoms	1.4	6.2	8.3	51.0	33.1
Routine information about ECP should be included in contraceptive counseling	0.0	2.8	10.3	62.1	24.8
All sexually active men should be aware of ECP	2.1	7.6	13.1	44.1	33.1
Information of ECP should be included in sex education in school	3.4	6.8	13.8	44.1	31.7
To have ECP available OTC is positive	3.4	13.8	18.7	40.7	23.4
For adult fertile women to keep ECP at home is positive	2.8	15.8	21.4	44.1	15.9
Regulatory restrictions					
ECP should be sold only to women	14.5	47.6	11.6	16.6	9.7
ECP should be sold only to those over 18 years of age	4.2	9.7	11.0	31.7	43.4
ECP should be sold on prescription only	15.2	35.8	22.8	17.2	9.0
Risk behavior					
Men will be less willing to use condom when they know about ECP	3.4	14.5	16.6	41.4	24.1
Increased knowledge of ECP results in more unsafe sex	1.4	8.3	26.9	37.2	26.2
ECP can make it more difficult for women to refuse unprotected intercourse	1.4	9.7	42.7	25.5	20.7

by other providers where the estimated frequency of application was at least once per month for 39% and less than once per month in 32% (Uzuner et al., 2005). However, our results comparable to those reported from Jamaica and Barbados, where res-pectively, 98.6 and 93.2% of the pharmacists had experienced serving a client in need of emergency contraception and 67% of the Jamaican pharmacists reported to provide the method more then 5 times a month; while, these rates were lower for the physicians (Yam et al., 2007). Likewise, in a survey of 182 pharmacists in South Africa it was reported that the average requests for ECPs per pharmacy was 14.7/month (Hariparsad, 2001).

These findings may suggest that pharmacy staff in community pharmacies have the potential to contribute to improving the public's health through emergency contraception provision. Although pharmacy staff is the most readily available health-care providers that people admit to receive help, in numerous studies, it was suggested by majority of the providers consisting of physicians, nurses and midwives that emergency contraception should only be administered by providers in the family planning unit (Uzuner et al., 2005), by physicians and nurses primarily at hospitals and clinics (Langer et al., 1999) and by family planning services (Muia et al., 2002).

The number (60%) of pharmacy technicians comforttable about ECP counseling with customers was higher (34%) than that reported from South Dakota pharmacists (Van Riper and Hellerstedt, 2005). In our study 68% of the pharmacy technicians reported to have private counseling areas in their pharmacies. This rate is similar to that reported by Hariparsad et al. (2001). This is an important issue in ECP counseling, as lack of privacy and confidentiality was noted as a concern of the clients (Anderson and Blenkinsop, 2006).

In general the counseling practices of the pharmacy technicians on various aspects of ECP (that is, sideeffects, pregnancy test, mechanism of action, dosage, efficacy, timeframes and methods of contraception) were inadequate. The two areas that the pharmacy technicians most frequently counseled on were the most crucial counseling areas: dosage and timeframes. Sixty-seven percent reported to always or often counsel on dosage while this rate was 68% for the timeframes. However, these rates are still very inadequate and consistently lower than those reported from pharmacy staff in Sweden (Aneblom et al., 2004).

Seventy-two percent of the pharmacy technicians were positive towards the item suggesting that the "existence of ECP is positive". While, higher rates were reported from Jamaica (Yam et al., 2007), very similar rates were reported from Barbados (Yam et al., 2007) and Kenya where the respondents were supportive of greater access to emergency contraception (Muia et al., 2002). However, at a study from Turkey only 36.4% of the providers (other than the pharmacy staff) supported the use of ECPs (Sevil et al., 2006), similar to that reported from Mexico City, where physicians were less likely to be supportive of the method (44%) (Langer et al., 1999).

High percents of pharmacy technicians displayed positive attitudes towards almost all of the items under the "information and availability domain". Of them 64% were positive towards the item suggesting that "having ECP available without prescription is positive". Our results comparing with some other studies (Aneblom et al., 2004; Hariparsad, 2001; Sherman et al., 2001) yielded higher rates than reported by Yam et al (2007), and were in contrast to others displaying negative atti-tudes towards the non-prescription provision of the ECP (Barrett and Harper, 2000; Kettyle and Klima, 2002). Sixty percent of the pharmacy technicians agreed with the item suggesting that it is positive for adult fertile women to keep ECP at home. This rate is consistently higher than others in the literature (4.1-53%), reported from pharmacy staff and midwives (Aneblom et al., 2004; Yam et al., 2007; Blanchard et al., 2005).

Sixty-two percent of the pharmacy technicians were negative to the item suggesting that "ECP should be sold only to women". This rate complying with the findings of Aneblom et al. (2004) was higher than reported by Yam et al. (2007). Perhaps the most striking finding regarding the attitudes was that 75% of the pharmacy technicians agreed with the item suggesting limiting the ECP sales to those over 18 years of age. This finding was in accordance to others where only 21.6-49.2% of the pharmacists agreed to provide the method to those younger than 18 (Yam et al., 2007; Blanchard et al., 2005).

The pharmacy technicians displayed concerns about the risk behaviors related with the increased knowledge and availability of the ECP, such that increased knowledge of ECP would result in more unsafe sex (63%). Turkish health-care providers other than the pharmacists reported higher rates of concern for this item as 92.1% (Sevil et al., 2006) and 79% (Uzuner et al., 2005). While, a higher rate of Jamaican and a similar rate of Barbadian pharmacists thought that the method encourages sexual risk-taking (Yam et al., 2007), similar concerns were also expressed by pharmacists from South Africa (Blanchard et al., 2005).

In Turkey, pharmacists are the most readily available health-care providers for the clients in need of emergency contraception. Although, the pharmacy technicians included in this study, acting as the assistants of the pharmacists generally had favorable attitudes towards the ECPs, these attitudes, particularly those regarding the "risk behavior" can be improved by education programs as demonstrated in the literature (Muia et al., 2002; Beckman et al., 2001). The pharmacy technicians included in this study have completed extensive "pharmacy allied" education; however this education seems to be inadequate in optimizing the counseling practices regarding ECP. Therefore, the ECP counseling behavior of the pharmacy technicians can also be improved through specific continuing education programs.

We suggest that widespread and continuous professional development programs on reproductive and sexual health and emergency contraception are needed to be conducted for the pharmacy technicians, in order to give them the competence of counseling on emergency contraception as well as routine contraception to help prevent unintended pregnancies, thus, reduce the social burden.

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