Ann Ist Super Sanità 2017 | Vol. 53, No. 1: 9-16
DOI: 10.4415/ANN_17_01_04

Do I need training in public health ethics? A survey on Italian residents' beliefs, knowledge and curricula

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Abstract

Introduction. Ethics is needed to support the decision-making process in public health and to face moral issues during practice. However, professionals are often not adequately trained.

Objectives. In 2015, the National Conference of Public Health Medical Residents of the Italian Society of Public Health started the "Public Health Ethics" workgroup to evaluate how the Italian Schools of Public Health train their residents in ethics, and which are residents' beliefs, knowledge and attitudes about public health ethics.

Methods. A survey was built and emailed to the Italian public health residents.

Results. Residents are interested in ethics/bioethics (83.2%) and are aware of its importance for professional practice (97.2%). However, few of them (19.6%) evaluated their competence above a satisfactory level. They believe that a training in ethics should be offered during residency (92.1%). Nonetheless, in Italy only two schools required a course on bioethics, and one a course in public health ethics. According to residents, a public health ethics trainer should be a public health professional (23.2%) or a social scientist (22.8%).

Conclusions. In Italy, Schools of Public Health do not train future professionals in ethics or public health ethics during residency. Training should be implemented in curricula, and trainers should have a strong competence in both public health and ethics.

Key words

- public health ethics
- curriculum development
- professional training
- ethics education

INTRODUCTION

According to some authors [1], the increasing complexity of Public Health (PH) interventions in the international scenario – in fields such as the delivery of healthcare, the prevention of diseases, the promotion of health, and the development of health policies – may pose ethical challenges. For example, setting priorities, weighing benefits and harms, and dealing with costs – while promoting citizens' rights, and being transparent and accountable at the same time – are all issues that PH has to face [2]. Although the societal values are dynamic, "it is widely recognised that health policies should incorporate society's values, otherwise they may not be perceived as legitimate nor fulfil society's expectations of them" [3]. Two of the most important expectations reported in the literature are probably the acceptable and balanced trade-off between community's health and individuals' autonomy [2, 4], and the engagement in the PH deliberation process of all societal stakeholders involved in a PH intervention [5].

However, when a PH intervention is planned or implemented, the better choice for action is not always self-evident [6] or self-justified [2, 7]. This happens especially when scientific evidence lacks or when moral values are at stake [6]. Personal views of morality alone are often insufficient to resolve ethical conflicts [1] and a PH professional may not easily know 'the right thing to do'. To face inevitable conflicts and disagreements in PH practice [8], an ethical judgment is therefore needed to justify decisions and interventions [3]. Indeed, an ethical decision-making process clarifies the moral mandate of public institutions [9], and aids in organizing goals and imple-

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menting effective solutions [10, 11]. However, while the role of ethics and related training in clinical medicine is clearly acknowledged [12], in PH there are still "limited curricular opportunities and practice-based opportunities" [11] regarding an ethics specific for PH practice.

PH Ethics (PHE) may be considered an area of bioethics. However, some authors believe that traditional theories of bioethics and clinical ethics are not directly applicable to PHE [4], because they neglect the collective dimension of health and healthcare [13, 14]. In particular, medical ethics can be intended as the analysis of choices in medicine [15], and in this sense it is akin to clinical ethics, a term often used to describe an ethics at the bedside, or an ethics "in, for and by the clinical activity" [16]. The main focus is on the patient-physician (patient-health professional, or patient-healthcare system) relationship, in a clinical context. Instead, PHE is quite different. In the first edition (1978) of Reich's *Encyclopedia of Bioethics* [17] health-care services, international health, health and population policies, preventive interventions, and also lifestyles and social justice were all considered ethical problems for bioethics. However, it was also stated that the most serious ethical question underlying PH efforts is the relationship between common good and the freedom of individuals [18]. We may say that PHE focuses on the relational and public dimension of health or, in other words, the collective values related to health. Indeed, the relationship-building capability is maybe the true substance of PH [13]. Therefore, exploring those values that define the relationships between PH officials and communities – or between individuals, State and social institutions in PH interventions [13] – can be considered the core matter of PHE.

Teaching ethics to PH professionals is a way to make PH policies and interventions legitimate among stakeholders, practitioners and decision makers [1, 3]. Schools of PH (SPH) have "a responsibility to raise the consciousness and broaden the decisional horizons of young administrators who may be intent solely upon the efficient, economical, acceptable provision of quality health services" [19]. Thus, in 2003, the Institute of Medicine recommended ethics as an integral part of a PH curricula [20]. In 2004, the Public Health Leadership Society listed the foundational ethical skills for PH: *e.g.*, identifying an ethical issue, ethical decision-making, engaging respectfully different stakeholders, building and maintaining public trust [21]. Previously, the American Association of Public Health Code of ethics showed how PH practice is rooted in ethical principles [22]. In 2000s, the American Association of Schools of Public Health (ASPH) proposed 'Professionalism and Ethics' as a crossing-cutting competence for Masters of PH [23], and the Association of Schools of Public Health in the European Region (ASPHER) recognized the need of an education in ethics in academic PH curricula [24]. Since 2012, the teaching of ethics was required by several organizations accrediting postgraduate medical training programs in the United Stated, as the Accreditation Council for Graduate Medical Education [25]. Given this background, "the understanding that ethics should be included in the training of PH professionals is not a case for debate" [12].

Curricula in PH ethics should provide conceptual knowledge, analytic methods, and decision making skills. In other words, a critical "reasoning" toolbox that PH professionals need in order to deal with dilemmas of daily practice [8-10, 26-29], such as identifying ethical issues and values and developing the ethical judgment at different levels – individual, social, national, and global [3]. However, while facing ethical issues – that is PH actions that entail a moral choice, at all levels of everyday practice – PH professionals feel the need of additional training [30]. In particular, according to some authors [30, 31], major issues arise from the following aspects: 1) partnership and collaboration between public and private sectors; 2) relationship between PH professionals and government officials; 3) political pressure; 4) allocation of resources and priority setting; 5) data use and collection; 6) ensuring standards of quality; 6) the role or scope of PH itself, that is what the PH system should do or provide.

In Italy, there are 32 SPH. They offer a postgraduate education in PH (5 years in duration), that is called "School of Specialization in Hygiene and Preventive Medicine"; this course can be attended only by medical doctors (PH residents). PH residents from all the Italian SPH are represented at the Italian Society of Hygiene, Preventive Medicine and Public Health (SITI) by the Italian National Committee of Public Health Medical Residents (INCR). An ethical reasoning skill is required by Italian Law (Italian Ministry Decree of August 1st 2005) [32] as a content for PH curricula. However, given this scenario, no research was previously conducted to assess if ethics or PHE are effectively taught at SHP. Therefore, in December 2014, five members of INCR and a no-member resident started the "PHE workgroup". The first aim of this workgroup was to perform a preliminary, descriptive study in order to assess how the Italian SPH train their residents in ethics, and which might be residents' beliefs, knowledge and attitudes about PHE. In this paper, we present the results of our survey.

METHODS

The workgroup reviewed the literature in PubMed and Google Scholar for studies about training in PHE (or bioethics) in PH curricula and related surveys [1, 3, 8, 9, 12, 19, 23, 26, 28, 29, 33-41], PH values, critical fields of PH according to an ethical perspective, and ethical issues in PH practice (the last three topics not addressed by the results in this paper).

A workgroup member, trained in bioethics, used comparable studies to design the questionnaire, and a free online survey builder (https://kwiksurveys.com/ accessed on March 2015) to develop a self-administered internet-based questionnaire. This included 31 questions, organized through 7 sections: "Sample characteristics" *(Table 1)*, "Beliefs and attitudes about bioethics" *(Table 2)*, "Knowledge" *(Table 3)*, "Training in bioethics" *(Table 4)*, "Ethics and practice", "Public health values", "A public health code of ethics". We also asked to evaluate the survey itself (two final, optional questions). All questions (except the last two) were required, and their order was identical for all the respondents. The survey

Table 1
Sample characteristics (sample n. = 178)

	n.	(%)
Gender		
• Male	60	(33.7)
• **Female**	**118**	**(66.3)**
Age (years)		
• 25-39	67	(37.6)
• **30-34**	**81**	(45.5)
• 35-39	19	(10.7
• 40-44	10	(5.6)
• ≥ 45	1	(0.6)
Year of residency		
• 1st	31	(17.4)
• **2nd**	**42**	(23.6)
• 3rd	39	(21.9)
• 4th	39	(21.9)
• 5th	27	(15.2)

was arranged through several pages; if all the questions on a page were not completed, the access to the next one was not allowed. The first page included a brief presentation and some instructions; the last page displayed a thanks to the responder and an email address for contacts. Questions had a multiple choice format (one answer allowed, except for four questions), or a drop-down list (two questions: "School" and "Year of residency"). Ordinal choices (*e.g.* year of residency, degree of personal interest) were always identical for all respondents; non ordinal (*e.g.* the list of values) were randomized when displayed. Other workgroup members (one was trained in bioethics as well) revised independently the questionnaire, and tested the online version. After a focus group among members, some changes were introduced, in order to simplify and clarify the questions, avoid redundancy and jargon, and reduce the number of pages.

The link to the first survey (FS) was emailed on March 2015 to the 64 members of the INCR (two delegate residents for each SPH). The email included an explanatory introduction, detailing the objectives of the survey, and gave some instructions. The survey could be completed online and on mobile devices, taking less than 10 minutes. After two weeks, the workgroup sent a reminder. The FS closed a week later. Then, to further improve the questionnaire, the workgroup asked to provide feedback and interviewed some delegate residents, with respect to clarity of the questionnaire and the accessibility of the online version: no critical issues were reported.

About the FS, three questions in the "Training" section ("A course on ethics or bioethics is provided in your SPH?", "If yes, when (year of residency) is it held?", "Is it required or elective?") allowed us to identify those SPH that offered a course on ethics/bioethics. We therefore contacted again only those delegates that answered affirmatively, to collect further information. In this case, we proposed them a short, five-questions interview regarding: 1) matter (ethics, bioethics, public health ethics, medical ethics, other); 2) type of training (core course, elective course, module, seminar/lectures, other); 3) if a core/elective course was offered: title, duration in hours, years of residency; if the matter was delivered across a module, or diffusely taught in a core course: title of the core course, duration in hours of the core course, hours reserved for the matter, years of residency; 4) trainer's background (PH, legal medicine, clinical medicine, bioethics, philosophy, other); 5) topics addressed during the training (open question).

In June 2015, in order to increase our sample and

Table 2
Beliefs and attitudes about ethics/bioethics (sample n. = 178)

	n.	(%)
"Which is your personal interest in ethics/bioethics?"		
• Very interested	40	(22.5)
• **Interested**	108	**(60.7)**
• Not very interested	27	(15.2)
• Not interested	3	(1.7)
"Ethics or bioethics are... for society and professional practice".		
• **Very important**	95	**(53.4)**
• Important	78	(43.8)
• Not very important	5	(2.8)
• Useless	0	(0.0)
"How do you evaluate your ethics/bioethics skills and competence?"		
• Very good	4	(2.2)
• Good	31	(17.4)
• **Satisfactory**	79	**(44.4)**
• Inadequate	64	(36.0)
"When did you read a book or a paper, did you attend a course or a conference, or did you debate ethics/bioethics issues?"		
• Last week	8	(4.5)
• Last six months	43	(24.2)
• Last year	41	(23.0)
• **Previous training (*e.g.* pre-graduate training)**	72	**(40.4)**
• Never	14	(7.9)

Table 3
Knowledge (sample n. = 178)

	n.	(%)
"Ethics and bioethics are the same thing, after all"		
• True	14	(7.9)
• **False**	164	**(92.1)**
"Ethics and medical ethics are the same thing, after all"		
• True	20	(11.2)
• **False**	158	**(88.8)**
"You may define bioethics as..."		
• **An ethics applied to issues related to life, research, and care**	94	**(52.8)**
• A discipline evaluating and justifying the human action in life sciences and medicine	68	(38.2)
• A set of norms defining the correct way to practice the healthcare profession	12	(6.7)
• A set of customs, moral preferences and norms belonging to a certain culture	4	(2.2)
• A method to establish if medical practice is good or evil	0	(0.0)
"In healthcare, a choice or an action is ethical when..."		
• **It is scientific, evidence-based, and effective**	59	**(33.1)**
• It matches patient's/customer's values	43	(24.2)
• It is justified by principles and rational arguments	42	(23.6)
• It is right and correct, above all from a juridical perspective	17	(9.6)
• It matches healthcare system values	17	(9.6)

Table 4
Training in ethics/bioethics (sample n. = 178)

	n.	(%)
"Is a course on ethics or bioethics required in your School?"[a]		
• Yes	7	(21.9)
• **No**	25	**(78.1)**
"In your opinion, how important is a training in ethics or bioethics during the residency?"		
• Very important	65	(36.5)
• **Important**	99	**(55.6)**
• Not very important	12	(6.7)
• Useless	2	(1.1)
"Would you attend a course in bioethics or public health ethics not provided by your School?"		
• No	8	(4.5)
• **Yes**	79	**(44.4)**
• Yes, but only if free of charge	58	(32.6)
• Yes, but only if useful for personal curriculum	7	(3.9)
• Yes, but only if accredited for Continuing medical education (CME)	1	(0.6)
• I do not know	25	(14.0)
Did you know that, according to Italian Ministry Decree of August 1st 2005, an educational aim of Public Health Residency training is "to know how to introduce bioethics in patient-physician and community-healthcare provider relationship, at the level of primary healthcare and prevention activity, with particular regard to priority setting"?		
• Yes	57	(32.0)
• **No**	121	**(68.0)**
"Is most suitable to teach ethics/bioethics a... (at most 4 answers)"[b]		
• **Public health physician**	110	**(23.2)**
• **Social scientist (sociologist, anthropologist, etc.)**	108	**(22.8)**
• **Clinical physician**	54	**(11.4)**
• **Philosopher**	51	**(10.8)**
• Psychologist	43	(9.1)
• Lawyer	31	(6.5)
• Priest/theologian	22	(4.6)
• Management specialist	19	(4.0)
• It is indifferent	16	(3.4)
• Nurse	9	(1.9)
• Other public health professional	7	(1.5)
• Economist	2	(0.4)
• Politician	2	(0.4)

a) n. = 32 (see Methods for details).
b) n. = 474 (see Methods for details).

gather more data about residents' perspectives, a second survey (SS) was sent to the 691 (not-delegate) PH residents subscribed to the INCR mailing list (according to INCR, in March 2015 Italian PH residents were 752). The INCR authorized the submission. The 64 delegates were asked not to answer again: therefore, net recipients were 627. The email still included the link to the survey, the introduction and some instructions for the compilation. The three questions in the "Training" section, above mentioned, were not proposed again. Being this survey shortened, it took approximately 6 minutes. After two weeks, we sent a reminder, and the SS closed a week later.

All data from FS and SS were gathered together and analysed using a spreadsheet. To calculate percentages, when only an answer was allowed, we used as denominator the number of respondents (n. = 178; 23.7% of PH residents subscribed to the INCR mailing list). About the question "Is a course on ethics or bioethics required in your School?" *(Table 4)*, the denominator corresponds to the overall number of Italian SHP (n. = 32). In the last question *(Table 4)*, in which at most 4 answers were allowed, the denominator corresponds to the total number of answers (n. = 474).

RESULTS

Response rate

The FS achieved a response rate of 96.9% (n. = 62/64), and all the 32 Italian SPH were represented. The SS achieved a response rate of 18.5% (n. = 116/627). Therefore, our findings concern about one quarter (23.7%, n. 178/752) of overall Italian PH residents.

Sample characteristics

Two respondents out of three were females, and 83% were 25-34 years old. All years of residency were equally represented *(Table 1)*.

Beliefs and attitudes about ethics/bioethics

The majority of respondents *(Table 2)* expressed some interests (83.2% answered "interested" or "very interested") and gave importance to ethics/bioethics (97.2% answered "very important" or "important"). Nevertheless, only 19.6% of them evaluated their skills and competence above a satisfactory level, and more than one third (36.0%) believed that its level is inadequate. The last approach to ethics or bioethics is referred to the pre-graduate training for the 40.4% of residents.

Knowledge

92.1% and 88.8% of respondents *(Table 3)* thought that a difference exist between bioethics and ethics, and between bioethics and medical ethics, respectively. About the definition, for almost nine out of ten bioethics was an applied ethics, or a discipline evaluating and justifying human actions in life sciences and health care [5, 17, 42, 43]. Only one quarter (23.6%) thought that ethical judgment is based on justification by principles and rational arguments. One third of respondents (33.1%) asserted that in the healthcare a choice or an action is ethical when "it is scientific, evidence-based, and effective"; instead, it should match patient/customer's values for 24.2%.

Training in ethics/bioethics

Seven Italian SPH (21.9%) offer some contents in ethics or bioethics. Only three (9.4%) have a specific compulsory course: "Bioethics" (6 hours, 2nd year of residency), 'Fundamental principles of bioethics' (10 hours, 1st year), and "Public health ethics" (8 hours, 4th year). The other four SPH teach some bioethics, professional ethics or law contents (*e.g.* Italian code of medical ethics, privacy, confidentiality, informed consent, patient's autonomy) in a Legal Medicine required course. Only one course is held by a bioethicist (physician), the other teachers are physicians specialized in Legal Medicine.

Nonetheless, respondents believed that a training during the residency is important (92.1% answered "very important" or "important". (*Table 4*), even if more than two third of respondents (68.0%) do not know that a training on ethical issues in PH curriculum is mandatory, according to the Italian Ministry Decree of August 1st 2005.

The 44.4% of respondents would attend a course for itself, not during residency; but the 32.6% would attend it only if free of charge. Respondents preferred as a trainer a PH physician (23.2%), a social scientist (22.8%), a clinical physician (11.4%) or a philosopher (10.8%).

About the survey

The survey was generally appreciated: it was ("very much" or "somewhat") interesting to the 88.6% of respondents; 80.7% of them found it easy ("not much" or "not at all" difficult) to complete.

DISCUSSION

Our survey found favourable attitudes and interest towards ethics among Italian residents, who acknowledged its importance for professional practice. Respondents also seemed to know that ethics, bioethics and medical ethics are different matters. They have a clear idea of the scope of bioethics – even if one half of respondents considered bioethics just in a common meaning, that we may define as generic practice of "moral decision-making" applied to some issues. A more correct concept of bioethics, as a discipline that deals with moral evaluation and argumentation, using a specific methodology to achieve a decision [5, 42, 43], was less considered. Indeed, on third of respondents believed that the morality of an action lies on its scientific evidence. Yet, a practice may be unethical even though is evidence-based: for example, a well-performed and effective surgical intervention without a proper communication to acquire the informed consent is ethically controversial. The idea that principles and arguments constitute a moral reasoning seems far from the medical background. This further underscores the need of addressing the basic concepts of ethics and ethical decision before framing them from a PH perspective.

Secondly, residents feel the lack of competence in ethics. Since one half of respondents received a dated and probably inadequate training, or no training at all, the commitment to offer it during residency seems particularly strong. However, despite an ethical training is required by Italian Law [32], only few Italian SPH are providing it: three SPH out of ten provide a mandatory course – that is a bioethics course integrated in the "core" PH curriculum – and only four SPH teach some contents about bioethics through a module in other courses. No elective courses are provided. Duration of compulsory courses ranges from 6 to 10 hours of class time overall, an amount of time noticeably scarce when compared to courses offered in United States [29, 38] or in the United Kingdom [35].

About the trainer, respondents of our survey would prefer above all a PH professional: probably, they may perceive closer to them someone with a similar experience and background. Also, this may result in an enhanced credibility and a "put-in-context" teaching, fostering a better compliance in learning ethics as a tool for practice. Interestingly, a social scientist seems to be more suitable than a philosopher as a trainer, and overall the most preferred, followed by physicians (36.3% *vs*. 33.6%). This result probably reflects the belief that ethics is something different from empirical and experimental science [44], but anyway closer to scientific and practical dimensions of actions than to theoretic and argumentative reasoning of humanities. However, according to our survey, in Italy almost all trainers are physicians with a Legal Medicine background. This reflects Italian academic tradition: Legal Medicine is culturally considered as the closest to medical ethics and bioethics [45]. Moreover, the scientific and disciplinary sectors classification – that is used in Italian legislation to regulate academic selection of researchers and the construction of academic curricula – considers Legal Medicine as one of three sectors encompassing bioethics (the other two are History of Medicine and Philosophy of Law).

Our findings are akin to results already reported in literature. In 1974 [19], two thirds of North American SPH did not offer any training. In 1995, even if two thirds of professors in epidemiology had discussed ethical issues of epidemiological research during their teachings, only 3% have held an ethics course [33]. In 1996, training in ethics was required for all students at only one (4%) of 24 surveyed SPH; more than half of them (58%) had elective courses [26]. In 2003, 85% of SPH offered contents in ethics, mostly (94%) through an elective course [36]. In 2006, according to an internet-based curriculum review of 93 accredited PH

schools and programs, only 14% required a course in ethics for graduation, while in 30% the course was elective [37]. In 2012, even if since the 1990s the number of accredited SPH doubled, only one half (23 of 46) required an ethics course [38].

In the United Kingdom, a 2003 survey reported that about one half of PH graduate programmes included topics about ethics in their curricula; training was fully or partially compulsory in 43% of them [35]. In 2010, almost all (95%) the 82 member schools of ASPHER included a teaching of PHE in at least one of their programmes, as a standard curricular content for three quarters of bachelor programmes [12].

A last result comes from India, where only one third of the masters in PH and no diploma in PH have a dedicated module in PHE [39].

Summarising, the thrust on PHE in curricula seems overall minimal [39]. Especially in Italy, PHE is still a neglected matter, while in North America and across Europe at least one half of the SPH provided or required a course.

Also, a high degree of variability affects the way PHE is integrated in curricula [12]. Ethics is often considered as a cross-cutting topic, taught into other courses in different subjects [28, 29], and delivered across modules [12]. When offered, courses are often elective [12, 26, 36, 37], in the form of short courses/workshops, seminars and lectures [26, 35, 36, 39]. Otherwise, contents were offered even if not specifically focused on PHE [29].

About the taught contents, according to our findings, and as other studies reported [26, 38, 39], teachings mostly focused on topics like bioethics, medical ethics, research ethics, law and human rights. However, PHE "is distinct from the realm of traditional ethics and, therefore, merits separate attention" [39], as much as it differs from professional ethics. A common framework for PHE training is still debated [27], even if several curricula or models can be found in literature [8, 9, 34, 40], also from an European perspective [41].

Finally, there is still little agreement about the expertise that teachers should have [12]. In the United States, the professional background is extremely various: it ranges from clinical medicine to philosophy, through areas such as theology, social sciences, epidemiology, health policy, health law, or healthcare administration and management [26]. In the United Kingdom, teaching involves above all doctors, followed by philosophers, lawyers, nurses, and sometimes epidemiologists and social scientists [35]. Also, preparing a teacher may be challenging: an ethicist might not be competent to address PH contents, while a physician or a PH professional may not be trained to teach them in the light of ethical theories [3]. We may debate if the best is an ethicist trained in PH or a PH professional trained in ethics/bioethics [11], but we argue that a strong competence in both PH and ethics – that is to say, "science" and "philosophy" [45] – is needed.

Our study has some limitations. Firstly, to build our survey we did not use a standardized model, because we did not find in the reviewed literature any model developed for our purpose, or that could fit to our aims. For example, most of the published studies only assessed if and how a training was offered by SHP [12, 19, 26, 29, 33, 35, 36, 38, 39]. Moreover, similarly to other comparable studies (that investigated this matter using a questionnaire [12, 35, 36, 38] or an interview [10, 19, 26]), we did not validate our questionnaire. We conducted an introductory, cross-sectional study to assess, before all, if and how PHE was integrated in Italian PH curricula; therefore, we did not conduct an inferential analysis, *e.g.* about the relationship between offered training and students' preparedness (as we have found, in any case, in only one study [37]). However, the perspectives on ethics we collected from the future PH professionals are worthy of further investigations: this may support the need of a structured survey as a tool to evaluate systematically if and how training in PH or PHE develops professionals' moral skills, perspectives, attitudes, and awareness of PH values.

Secondly, we were not able to monitor the real receipt of the survey, so the number of our recipients is approximated to the number of subscribers of INCR mailing list. The response rate we obtained is probably too low in order to extend the results to all Italian residents. Our sample could also be affected by a selection bias: residents who voluntarily answered may be more interested in PHE and more aware about its importance than others. Regarding the section about residents' knowledge, the two questions concerning differences between bioethics, ethics and medical ethics may have not a strong reliability: most of the respondents may have stated that they are different simply because they are named differently. We also did not review the syllabi of required courses on ethics/bioethics (in Italy, syllabi are seldom available online) and, anyway, our survey did not assess this information: we only received an informal course outline by involved residents (see Methods), other than the course name, thus in our study we were not able to compare taught contents. Finally, due to the small sample, we can report only a descriptive analysis of our data.

However, our study is the very first survey addressing the topic of PHE in Italy and, at our knowledge, the first examining the training in ethics during residency from the residents' perspective, and collecting residents' perceptions. Other studies we found in the literature sent a questionnaire directly to the SPH (*e.g.* to professors, deans, heads of departments, etc.) [12, 19, 26, 33, 35, 36]; reviewed curricula and required courses [29, 37-39]; or surveyed graduated students [37].

CONCLUSIONS

Italian PH residents believe that, in healthcare, a choice or an action is ethical when is scientific, evidence-based, and effective. They also seem interested in a training in ethics during residency, and are aware of its importance for professional practice. Finally, according to residents, the most suitable trainer is a PH professional or a social scientist. However, despite the requirements of Italian Law, Italian SPH seldom offer courses in ethics or PHE during residency. Our survey attested that only two required a course on bioethics, and one on PHE. Given the huge need of ethics in order to support the decision-making process in PH prac-

tice, Italian SPH should urgently implement training in curricula, and trainers should have a strong competence in both PH and ethics.

Acknowledgements

Before all, we thank all Italian residents who answered to this survey for their precious contribution. We are also grateful to the Italian National Committee of Public Health Medical Residents (INCR) for allowing this study to take place. Finally, we would thank the Directors of our Schools of Public Health (Firenze, Padova, Pavia, Sassari).

Chellini Martina, Anello Paola, Arru Benedetto, Tettamanti Glenda, Marcon Elena were delegate members of INCR. Colucci Massimiliano was the coordinator of the "Ethics and Medicine" project of Lanza Foundation.

The idea for this article was presented (oral communication) at the 48th National Conference Italian Society of Hygiene, Preventive Medicine and Public Health (SITI), Milan, Italy (14-17 October 2015). Conference paper title: Bioetica in sanità pubblica: quanto interessa "dare valore" alla professione? Ethics in Public Health: how much are we interested in "giving value" to the profession?.

Conflict of interest statement

There are no potential conflicts of interest or any financial or personal relationships with other people or organizations that could inappropriately bias conduct and findings of this study.

Received on 14 April 2016.
Accepted on 11 October 2016.

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