

OPINION ARTICLE

Mentoring young oncologists

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“Behind every successful person, there is one elementary truth: somewhere, somehow, someone cared about their growth and development. This person was their mentor” [1].

Introduction

The term “mentor” originates after the mythological character Mentor, with whom Odysseus entrusted his son, Telemachus. Mentor was responsible for educating and instilling values in Telemachus, when Odysseus departed for the Trojan War.

The goddess Athena took the form of mentor on many occasions, such as to accompany Telemachus to Pylos and Sparta in search of his father, or to seek the help of Odysseus in the extermination of Penelope’s suitors.

The French writer François de Salignac de la Mothe-Fénelon, (1651-1715), in his work “Les Aventures de Telemaque” (1699) presents the mentor Athena accompanying Telemachus on his journey, giving him directions and finally brings him back to his father, Odysseus.

In this way, the word “mentor” in French (le mentor) and as a partial “reborrowing” in Modern Greek, generally means the counselor and friend who acts as a spiritual guide and mentor. In English there are also the derivatives mentoring, mentorship, mentoree / mentee.

Mentorship should not be confused with similar methods of imparting knowledge [2,3], such as the “preceptor (teacher)” who focuses on learning by teaching, the “supervisor” who has critical oversight and management, the “role model” who has brief and long distance contacts with the trainee and is not informed about his / her impact on him

/ her, the “coach” who helps to develop the skills, the “tutors & instructors” who provide training and instruction respectively. The mentor includes all of the above and has an interactive, growing relationship with trainees, who are usually few in number.

More precisely, today, mentorship/mentor is described by many definitions [4-8]

- “A dynamic, reciprocal relationship in a work environment between an advanced career incumbent (mentor) and a beginner (protégé), aimed at the development of both”.
- “Mentorship is a partnership or relationship focused on education, inspiration, and support between a mentor and a mentee. This type of relationship forms part of the central structure of medical education”.
- “Mentorship indicates a personal developmental relationship in which a more experienced (often more senior) individual helps a less experienced or knowledgeable individual who is usually newer to that particular organization”.
- “A mentor provides information, shares their experience or expresses an opinion. However, it is always the mentee that decides, acts and produces outcomes”.

all converging on the finding that:

“Behind every successful person, there is one elementary truth: somewhere, somehow, someone cared about their growth and development. This person was their mentor.”

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Why is mentoring necessary?

Many scientists believe that the mentor is only necessary for those trainees who are interested in a university career. This is wrong. Observing the perspectives and the problems that arise at the beginning of the career (clinical or academic) of the trainee (Resident, Intern or Student), the holistic necessity of the mentor becomes obvious [5, 9-11].

The training of doctors presupposes or even leads to a much closer and more direct relationship between trainers and trainees. While in the past the teaching of medical students was limited to the amphitheatres of the Medical Schools, there is now a tendency for a large part of the studies to take place in small groups, coordinated by the academic staff.

As far as residents are concerned, towards the end of their specialty (especially during the training period in the sub-specialty), the relationship between mentors and trainees is strengthened and becomes more permanent, leading to a useful, more personalized, solid and concrete guidance. Based on these facts, the training period leads to the most personal relationship between two colleagues in a clinical setting.

In the opposite of these elements, the cumulative action of the following parameters has a potentially serious effect on the morale and professional satisfaction of trainers and trainees:

- The responsibilities and stress of practical training and specialization.
- In the last 20 years, the severity and complexity of diseases in patients have increased while the duration of hospitalization has decreased.
- Medical/academic staff is less available (higher clinical, research and administrative requirements).
- Career pressure leads to individualistic behaviors (publications & funding) and leaves no time for collaboration, advice or support.
- Residents have a responsibility to many people (patients, trainers, colleagues, family).
- The (required) available time by specialists for trainees is constantly increasing, not reimbursed and not estimated by the Institution.

In addition to the above, high levels of professional dissatisfaction, burnout and mental problems are observed [11]:

More than 75% of Residents suffer from "burnout" (severely affecting their performance) and more than 50% are prone to depression. According to the international literature, significant increase in psychological morbidity and burnout during

the first year of specialization was observed in Australia. This resulted in a 26% higher risk of suicide for male and 146% for female Specialists and Residents. Additionally, early abandonment of medical studies, mainly by female trainees was observed.

Which are the desired characteristics of a mentor? [3, 5-7, 12]

The mentor should be as complete a personality as possible and have skills on a personal and professional level, as well as on a level of interpersonal relationships. The mentor should be:

Personal

Altruist, sensitive, patient, trustworthy, moral and honest, active listener, doesn't seem judgmental, shows understanding, has personality and inspires the trainee.

Relationships

Approachable, practical, insightful, sincere desire to help fulfill trainee's professional dreams, able to distinguish the capabilities and skills of trainees, makes a sincere effort to build a solid relationship with trainees, support trainees to set and achieve their goals and maintain high standards for trainee performances.

Professional

Experienced and good scientist and has earned the respect of his specialty.

Which are the activities of a good mentor?

The mentor [13-18].

Feelings

Expresses his/her feelings honestly, helps trainees clarify what they want, realises that he/she is not ideal but human and vulnerable. Encourages discussion about personal perception in his/her field of experience. Morally supports trainees to deal with stress.

Interaction of personal - professional issues

Detects trainees' personal issues, creating links over time. Helps trainees balance between personal responsibilities and professional tasks. Provides advice about balancing work and personal life.

Self-knowledge

Review/critique the mentee's work. This would include reading manuscripts and providing constructive criticism in a timely manner, evaluating

teaching or clinical work. Makes constructive criticism and aids in self-analysis. Conducts careful research and reveals trainee underlying claims and objectives. Helps trainees identify areas for even greater professional improvement. Guides or facilitates trainees to make decisions and encourages self-control.

Insight & goal setting

Evaluates trainees' capabilities, goals and interests and encourage them to stay open-minded about their career choices. Helps trainees to clarify their goals by seeing clearly their future, recognise their possibilities and the consequent realistic perspectives. Transmits determination and ability to the trainees that they are able to take full advantage of their potential. Encourages trainees to achieve higher goals than the original ones. Acts as a "role-model" in the context of good mentoring.

Guiding

Promotes trainees in the clinical and academic community (openly and honestly) and protects them from possible unjust attacks. Guides trainees to cope with the "university bureaucracy" and manage difficult situations. Advocate for the mentee within the department, for example by assisting in assuring protected time for the mentee to achieve particular goals (e.g. grant submission). Advices for career advancement, including the achievement of intermediate goals and proper time management. Provides information and encourages critical remarks by the trainee and encourages self-action.

Collaborations and networks

Informs and helps trainees to participate in new research and clinical programs. Provide institutional knowledge about what activities are rewarded, where resources may be found (e.g., monitors and evaluates of scholarships), and who has the power/influence to get things done. Helps trainees enter often closed academic circles and builds relationships with potential research partners. Provide practical advice about activities which will advance their career through the development of a national reputation. This might include assessment of committee invitations, journals in which to publish, time management, etc.

Which are the barriers to proper and ethical mentoring? What is dysfunctional mentoring? [6, 7]

It is expected that the relationship between two people will be ... human and therefore subject

to weaknesses and mistakes. These are of many kinds and from many sources.

About trainees

Courage needed by trainees to face their shortcomings and make effective changes. Many trainees are also vulnerable and often feel rejected when e.g., Mentors cancel meetings.

About mentors

Lack of appropriate mentoring skills by mentors. Many mentors are overly research oriented. They do not listen to the needs and do not listen to the trainee. Sometimes they violate the Principle of Confidentiality.

Differences

It is not uncommon to observe a lack of harmonization between mentor & trainee.

Mentors receiving advantages from the trainees

The mentor enjoys respect, benefiting from trainee's work. Mentors who usurp the research of trainees. Sexual harassment of trainees by mentors. Promotion by mentors of their own "agenda". Use of "free work".

Authoritarian Mentoring

Dominant relationship between boss and employee. Mentor expects trainees to become his/her clone and perform only what the mentor is interested in, especially in matters of research. Mentor who has preconceived notions about what is best for trainees. Mentor which requires the promotion of only selected topics by trainees. Confusion or misunderstanding of roles. Mentors are not just the top hierarchies in the training process, nor are production line managers, nor do they decide on the future of trainees.

Competition

Trainee who is superior to mentor in the field of mentor specialization. trainees compete with mentors for the same sources of support.

Time constraints

Lack of time to build solid mentoring relationships. Lack of energy due to exhausting administrative and clinical daily tasks and problems.

Lack of motivation

Absence of academic recognition for mentors (e.g., non-reference to annual performance reports or absence of development criteria). Lack of financial motivation in mentoring.

Lack of mentoring availability

Insufficient choice. Incomplete accessibility to the Academic Institution. Geographical distance between mentors and trainees. Absence of mentoring.

Which are the best strategies to improve mentoring? [6, 7]

This question concerns the mentor and the trainee as well, as well as the interaction between them.

Training and practical exercise

Engage with mentoring early in studies / specialization / career. Academic mentoring training, taking into account the limited time for such activities (e.g. workshop, short online courses, written instructions). Interaction and training programs between mentors. Annual seminars, one-day workshops for first year trainees on mentoring.

Encourage relationships

Creating a "space" for interaction outside the Institution. Organizing meetings, mentoring and contacts, regularly and uninterruptedly. Written cooperation agreement or progress reports (commitment of both mentor and trainee).

Selection & availability of mentors

Expansion of the potential of mentors. Identify mentors in other Institutions and provide any assistance for trainees to visit these mentors regularly. Promoting long-term relationships of trainees with clinicians through ongoing clinical and research projects.

Mentoring recompense

Strengthening the values of mentoring for mentors. Incentive in the Academic Community: formal evaluations, time required and rewards.

How do I find a mentor?

The trainee must wonder how he/she wants to be in 5-10 years. If he/she has not decided, at least he/she has identified his/her interests: Clinic or research? Clinical or basic research? Focus on a specific type of tumor (e.g. lymphoma or lung cancer) or on a specialty (e.g. pharmacology or immunology)?

Look for the right mentor

The mentor must be both objectively good and appropriate. The trainee should study their CVs and publications; contact colleagues for recommendations; contact former or current trainees for mentors' publications.

Mentor Senior, intermediate age or young?

There are advantages and disadvantages.

- Senior: National & international recognition but minimal time available.
- Young: Lack of experience and tendency to promote their own career. In matters of technology and new drugs they do not know much more than trainees.

- Intermediate age: the preferred choice: steadily increasing personal & professional performance and identity.

Get in touch with potential mentors

Trainees may be lucky during their School mentors contacts, clinical assignments or on-call time. A good idea is to send an email or visit the administrative manager of their Institution.

Helping questions for selecting a mentor by a trainee

- What are mentor's achievements in areas of his/her specialty?
- How has the mentor set his/her own "standard of excellence" and how high is it?
- Is the mentor considered a reputable scientist locally, nationally or internationally?
- Does the mentor consciously believe in the value of the trainee to support him wholeheartedly?
- Is my mentor aware of my needs and goals, in the professional arena and in real life?
- Is the mentor sensitive and honest enough to recognize when he/she is unable to produce the help the trainee has and suggest he/she go elsewhere?

Which mentors do female trainees prefer?

As in all specialties in today's scientific world, the professional position of female - oncologist is still relatively underestimated. Women are underrepresented in management positions or in the academic hierarchy in Oncology [19, 20]. For this reason, initiatives are already being taken in the EU and the US to fill this gap but with huge organizational delays (there is only goodwill...). These initiatives include undertaking a specific policy by professional and funding associations and organizations, individual initiatives by Universities, increasing focus on group training and new practices and high quality mentorship for new oncology students.

In terms of mentoring, female trainees prefer as mentors those who act as "Role Models". Those who are reliable and balance personal and professional life. Female trainees prefer a woman as a mentor and they enjoy greater psychological support from them [21].

Ways of learning

The mentor, depending on the temperament of the learner, chooses the ways and means of training. There are 4 types of trainees:

Optical type. They like diagrams, curves, flow charts, images.

Acoustic type. They like group discussions, questions, audio recordings, keywords and key points.

Graphic type. They like lists, headings, keywords or phrases.

Kinesi-aesthetics type. They like case studies, tangible actions, experiential learning, visualization.

Characteristics of “specific” trainees

In addition to the “average” trainee, there are 3 groups of young scientists who need special treatment:

Category 1. They have too much respect for the mentor, they are not confident, they ask the mentor for instructions on minor issues, they self-examine and try to push the situations.

Category 2. They are very confident, they believe that they know everything and they only ask to argue with the mentor and not to learn. The mentor has difficulties in his relationship with this category of trainees.

Category 3. They work hard, hardheaded and demanding of themselves, do not forgive their mistakes, set high goals and are easily stressed.

Discussion and Conclusions

Levy and co-workers explored aspects of mentoring that potentially affect future careers [22]. The questionnaire that was processed (1226 answers from fellow clinical researchers) concerned parameters such as gender effect, mentor - trainee relationships, mentor characteristics, satisfaction, mentor role range. The main results were as follows:

- Need for more than one mentor: 440/558 women (79%) & 410/668 men (61%)
- Dissatisfied with mentors: 122/1226 (10%) no gender difference
- Very low dissatisfaction with the subsequent career
- High dissatisfaction with work-life balance: 289/553 women (52%) & 268/663 men (40%)

- Behavior, prestige, time available, range of mentor role: depending on career satisfaction
- Mentor gender, same or different gender mentor - trainee, number of mentors / trainees: not related to career satisfaction

Holliday and co-workers [14] explored 158 answers of Oncology residents (of which 96 had an academic / scientific mentor) on various parameters as demographics, presence or absence of mentor, mentor activities, nr of publications, nr of reports, h-index, time of first publication, etc. The main results were as follows:

- The existence of a mentor leads to a higher number of publications and number of reports.
- Those with a mentor were more likely to pursue a doctoral dissertation and spend more time for research.
- Positive correlation between h-index mentor and h-index trainee.
- Having a mentor leads to a significantly higher h-index, longer career duration and less patient involvement (routine).

In addition to the above especially interns and residents need training in “difficult” discussions with patients on prognosis, death or treatment goals [23]. These trainees face intensely emotional situations. They need high quality skills from Oncologists creating an environment of trust, convincing and careful / precise word, composure, etc., helping the patient to decide with the best possible conditions. The above skills can be taught [16, 24-33] as long as mentors with experience in the subject are available.

Table 1 shows the answers collected by Levi et al [22] from 52 first year trainees (Interns) and 75 trainees of previous years (Residents). The high satisfaction rates of the trainees from the presence and the action of the mentors are remarkable.

Table 1. Opinions for mentoring, Brigham and Women’s / Faulkner Hospital, 2002-03

Question or claim	Answer	% of the total
Is it important that the Medical School has appointed a mentor for you?	Yes	91,3
Do you communicate regularly with your mentor (phone or email)?	Yes	47,6
In the last year, has the frequency of meetings with your mentor been satisfactory?	Yes	50,0
Was the mentor helpful to you?	Yes	71,0
Was the mentor available when you needed him?;	Yes	77,0
Did you develop a more friendly relationship with your mentor?;	Yes	50,8
Would you like to change your mentor?	Yes	16,7
My mentor is starting to know me personally.	I agree	50,5
	I have no opinion	17,6
	I don't agree	31,9

These results with minor differences agree with the content of the present work confirming the main axes of the mentoring:

- Whether it is a university or hospital environment, mentor guidance is always positive for the future career and also for handling everyday problems.
- More than one mentor is a better scheme than the “duo” trainee - mentor. A single Mentor is unable to meet all the needs of a Resident. The existence of a woman in the mentoring network is positive [34].
- Mentors could advise trainees about balancing work and personal life.

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