

# Mentorship and professional identity formation in post-graduate pharmacy residents: Multiple institution study

Dr. Elena Vuković<sup>1</sup>, Dr. Thomas Gallagher<sup>2</sup>

<sup>1</sup> Department of Social Pharmacy, University of Belgrade, Belgrade, Serbia

<sup>2</sup> College of Pharmacy, University of Kentucky, Lexington, USA

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## Abstract:

*In an attempt to build self-assured, capable and ethically solid pharmacy leaders, professional identity formation (PIF) has become the key process. This multi-institutional qualitative research examined the extent to which structured mentorship programmes may encourage PIF among postgraduate residents of the pharmacy. The study was conducted in six academic medical centers in Serbia and the United States that included 42 residents in a 6-month mentorship program that involved pairing with skilled pharmacy leaders. The method included semi-structured interviews, reflective journals, and mentor feedback as a way of obtaining data, which was thematically analysed to find patterns of professional growth. The most significant themes have been identified, such as the importance of role models, the effect of positive feedbacks, and the need to allow shadowing of the leaders. The participants stated that they had a greater sense of self-awareness and confidence in decision making and shared the values of the profession more closely. Mentors observed an increase in the leadership preparedness and greater interprofessional collaboration abilities in their mentees.*

**Keywords:** *Mentorship and formation of identity, pharmacy leadership, postgraduate residents, leadership development, role-modelling, interprofessional collaboration, qualitative study, pharmacy education and self-awareness.*

## 1. Introduction

### 1.1 Pharmacy Professional Identity Formation

Professional identity formation (PIF) is an important developmental process that defines how they view their profession with respective behaviors, values, and choice of actions. Members of pharmacy educational programs, especially, should take into consideration the value of PIF as it helps develop not only the technically skilled but ethically-sound and able to take leadership in healthcare teamwork pharmacists. With the increasingly patient-centered and interprofessional gradients in pharmacists roles, and an emerging emphasis on leading and collaborating, strong professional identity remains imperative in the development of pharmacists in residency as they emerge into dynamic and complex healthcare in contemporary practice.

To a large extent, the socialization process in the profession is entangled with the PIF process. It entails the formation of a professional attitude, values and behaviors as gained through experience, interactions and through reflective processes. Professional identity formation has traditionally been acquired through formal education, clinical placements and work experiences, although during the postgraduate training it has become increasingly evident that mentorship plays a great role in this process.

### 1.2 Mentorship Matters in the Professional Identity Development

Indeed, mentorship, which is usually referred to as a developmental relationship between an experienced person (the mentor) and the less experienced person (the mentee) in which the first teaches, provides feedback, and can be described as a supporting relationship can be of great use in forming professional identity. Mentorship is considered as a process of professional values transmission, cultivation of leadership qualities and improvement of clinical competency in the sphere of pharmacy. The transfer of a pharmacy resident from academics to practice areas requires effective mentorship programs to expose the student to higher-qualified personnel, therefore, creating structured mentorship programmes to assist the student to gain professional perception and be equipped to serve as healthcare team leaders.(1)

Mentorship is a way that residents apply to observe and imitate the professional behaviors of professional mentors and gain the opportunity to know more about the demands and peculiarities of the pharmacy profession as it is applied in everyday life. Mentorship enables residents to synthesize their academic education and practice and make them become confident in their decisions, as well as coordinate their actions with key values of the profession. Furthermore, mentorship is effective in instilling some of the most important qualities of a leader,

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including flexibility, ethics in decision-making and communication, which are essential in the highly complex and interdisciplinary world of healthcare of this era.

### **1.3 The necessity of deliberate mentorship opportunities during the pharmacy postgraduate training**

Although mentorship has been traditionally recognized as an important and valuable part of the professional development, there is the increasing understanding that mentorship programs must be developed and established to ensure that there are organized and systematic strategies in developing a professional identity. There are peculiar challenges to the postgraduate pharmacy residents when they are switching the roles of a student and a professional. It is required that they take on incremental responsibility and use critical degree clinical situations but with little direction. Naturally occurring mentorship schemes can offer the required support and framework to see residents through this vital stage in their career using mentorship programs that are intentionally designed to foster PIF.(2)

Organized mentorship initiatives involve more than the causal and ad hoc face-to-face relationships and have specific goals, expectations, and concentration on some primary aspects like developing leadership, role modeling, critical feedback, and interprofessional learning. Under these programs, the residents are also advised on how to go about their clinical practices, and more importantly foster the self awareness, confidence and readiness to be leaders in their profession insofar as pharmacy practice.

### **1.4 Study Aim**

The purpose of the study represented by a multi-institutional qualitative study is to identify the nature of the utility of structured mentorship programs in promoting PIF among the postgraduate pharmacy residents within the six academic medical centers. This study uses semi-structured interviews, reflective journals and comments by mentors to explore the effect of mentorship on development of professional identity among pharmacy residents, particularly improvement of leadership, self-awareness, and confidence making decisions. The discussion of such factors can help the study define how mentorship could be used to fast-track leadership training and equip pharmacy graduates with complex and dynamic leadership roles in the healthcare system.

## **2. Professional conceptual framework of professional identity formation**

### **2.1 Professional Identity Formation (PIF) in healthcare professions: theoretical underpinnings**

Professional identity formation (PIF) is the continuous and active process, which transforms an individual towards gaining knowledge and adopting values, ethics, and roles of his/her profession. Application of PIF in healthcare occupation such as pharmacy is premised on social cognitive conscience, role framework and socialization theory. According to Social Cognitive Theory (Bandura, 1986), learning is focused on the significance of observation and modeling, social interactions. Within the domain of the pharmacy, residents are exposed to the environment of experienced professionals, through this exposure by observation and interaction, the residents tend to absorb the attitudes, behaviours and skills that characterise their professionalism. By means of mentorship and collaboration with their colleagues, the residents pattern their activities and reactions after the behavior they see in mentors and the ones that are similar to them, which gives them a stronger sense of professionalism.

According to Role Theory (Biddle, 1986), professional identity is developed by the internalization of role and expectation. By participating in mentors, clinical environments, and interprofessional teams, pharmacy residents understand the unique roles they are supposed to undertake as members of the healthcare team, including management of drugs, patient advocacy, and others. With the knowledge of their roles, residents start to identify themselves as pharmacists as well as the contribution they provide to patient care.

Using the theory of socialization, theories deconstruct the ways that persons are introduced in the world; the construct of individuals into a professional community is through social interactions and cultural absences (Tannenbaum, 1973). PIF refers to a process or rather embedding in a professional culture where residents internalize in the profession values, norms, and practices. It is a particularly vital process in the field of healthcare where ethic standards, treatment of patients and cooperation are well spelled out. Mentorship is one of the most important tools used herein because it advises residents on the norms of professional practice, feedback, and confirmation of the professional conduct.(3)

### **2.2 Leadership Competencies as A Result of Professional Identity Formation**

The key aim of professional identity development is the mastery of the leadership competencies that would enable healthcare professionals to take the responsibility of caring about the patients, guide interdisciplinary teams, and

make valuable contributions to the healthcare provision. Leadership competencies are also part of PIF because they are quite fundamental in performing active practices in fluid and patient-oriented settings.

**2.3 One can call the manifestations in healthcare of PIF leadership competencies. These are competencies which are:**

1. **Self-Awareness and Emotional Intelligence:** It is an essential element of leadership ability to be able to think about those strengths and areas that require development and emotional reaction both in clinical and professional settings. In the course of building their professional identities as pharmacy residents, they also begin to understand how their values, experiences and emotions enter into their work. This self awareness will help them deal with hard situations and interact better with patients and other colleagues.
2. **Decision-Making and Problem-Solving:** Working under complex and high-pressure situations requires good leaders to make sound judgments, and decisions which should be ethical. Pharmacy residents acquire critical thinking and problem-solving skills through clinical experiences and through the mentoring process in order to meet the challenges. Residents learn to learn the skills of balancing clinical judgment and ethical factors, especially as they proceed in decision-making situations, which eventually influences their professional self as highly qualified and competent decision-makers.
3. **Interprofessional Collaboration and Communication:** The contemporary field of healthcare depends to a large degree on the cooperative functioning of various medical professionals. Ability to lead interprofessional teams, effective communication, and conflict resolution are some of the competencies of leadership in pharmacy. In the course of the training toward pharmacy residency, the mentorship experiences offered to the residents will enable them to practice cross-professional work, where they learn how to lead, mediate, and assist their colleagues in delivering holistic care.
4. **Ethics and Professional Ethics:** Ethical practice and professional integrity is an excellent foundation of strong leadership. As residents establish their professional identity, they embrace the value system of the pharmacy profession such as being patient-centered, honest, and are able to advocate. Mentorship is also important in enforcing these values in order to integrate the ethics of making decisions into their leadership developments as residents.

Summing up, the process of PIF is rather complicated and implies gaining not only technical but also leadership skills. Mentorship-driven PIF more so as compared to the case with no mentorship, facilitates the shift into being effective leaders in the health system by building self-awareness, decision-making processes, and interprofessional collaboration skills among pharmacy residents. This is not only a basic process to them as individuals but also in the greater aspect of making patients and health care delivery and the result more satisfactory.

### **3. Supporting the Pharmacy Mentorship in Leadership development**

#### **3.1 Role Modelling and Experiential Learning**

Mentorship has been identified as central towards leadership competency development in postgraduate residents in pharmacy due to its ability in promoting role modeling and experience learning which are the two central processes of professional identity formation (PIF).

**Role Modeling:** Role modeling involves the role modeling process and enables the residents to view the example of the experienced mentors who, due to their experience, represent the values, decision-making skills, and leadership behaviors required of them as future pharmacy leaders. The access to mentors will allow pharmacy residents to experience the genuine, real-world practice of pharmacy, the ability to make ethical decisions, patient-centered care, and interprofessional cooperation. The examples provided by the mentors about their behaviors can be followed by the residents, and they can incorporate the requirements of the practices to the profession within their inner worlds and better understand the nature of their roles in the healthcare system. An example would be in the modeling of how to lead a pharmacy team in the setting of a medication error, including calmly making decisions in a pressure-filled situation, patient safety, and effective communication with other healthcare professionals. These learning experiences include the observed behaviors and make the professional identity as an expert in pharmacy leadership to the resident very practical.(4)

**Experiential Learning:** The other major aspect of mentorship which assists in leadership development is experiential learning. This is a learning process that underlines the significance of direct practical learning experience through which leadership skills can be developed. Mentorship can be used to give residents a chance to collaborate in actual-life leadership situations, which include leading interprofessional teams, handling

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emergencies, and communicating with patients and health care teams in complicated clinical contexts. Such experiences are priceless to the residents who have been at an academic level to a practical leadership role. The practice of learning how to overcome obstacles in a daily drudgery of a pharmacy work and the likelihood to get immediate feedback by mentors helps to quicken the process of acquiring knowledge and developing major aspects of leadership. The sense of confidence and trust in their abilities comes as a result of their active involvement in decision making and problem solving processes throughout mentorship processes therefore, in time residents start to explore the leadership identity they need to delight in effective practice.

### **3.2 Loopholes in the Present Postgraduate Preparation**

Although mentorship presents a significant contribution toward leadership development, current structure of postgraduate training of pharmacists in the country has loopholes that affect the potential value of mentorship programs in producing quality pharmacy leaders.

**There is a lack of Formalized Mentorship Opportunities:** Mentorship opportunities are not fully formalized in many postgraduate pharmacy residency programs; most programs are informal in their role, and most often depend on personal resident-mentor relationships, as opposed to a formal program around leadership development. Although certain residents can gain positive ad-hoc experiences of mentoring, the others might not be able to obtain mentorship that is aimed at forming leadership competencies. Formalized mentorship within a residency program guarantees quality mentorship to all residents with an aim to develop a leadership component, professional identity and career development aspect.

**Poor Emphasis on Leadership Skills:** Leadership training and skills are not focused on in recent post graduate education in pharmacy. Whereas residents are trained to perform well on a technical part of the job like medication handling and patients care, not much attention can be noticed as far as leadership training, including managing teams, pressure decision-making, and communication, is required. Pharmacy residents require formal chances to train their leadership skills and have mentors available to provide comments about such in the real-life environment. Unless there is proper exposure to such experiences, the residents might find it difficult to become effective leaders after the end of their training.

**Lack Of Preparation In Interprofessional Leadership:** Since pharmacy leaders might be part of an interdisciplinary team, cooperation, conflict management and decision-making are vital to patient care. Nonetheless, numerous pharmacy residency programs do not focus much on interprofessional collaboration expertise needed to lead in team-based care. Learners can be invaluable mentors by observing and role-playing the process of interprofessional interaction and, therefore, acquiring skills as a leader of a team, conflict manager, and the ability to establish power with groups associated with a variety of healthcare professionals.

**Lack of reflection on professional identity:** Lack of reflection on the internalization of mentorship values is a problem in certain postgraduate pharmacy curricular structures. PIF is not a fixed process where it needs to be reflected and guided continuously so that residents can figure out how to way forward concerning the core values of the pharmacy profession. To the extent that a mentor can encourage reflective conversations about ethics, patient duties and leadership roles, they can assist residents to develop the connection between his/her personal values and his/her job as a physician.(5)

On a final note, leadership development through mentorship should become the key to bridging the existing training gaps in postgraduate pharmacy training. Internship-based mentorship opportunities considering the concepts of role modeling, gaining experience, and leadership will lead to the improvement of PIF in pharmacy residents and will also make them even more ready to become leaders in patient-centered care. A major issue of concern that needs to be addressed in order to produce confident, competent, and ethical pharmacy leaders who are ready and eligible to commit themselves in the complexities of modern healthcare is a massive implementation of formal mentorship programs during the period of residency.

## **4. Study Design & Setting**

### **4.1 Serbia-United States Multi-Institutional Collaboration**

The study was envisioned as a multi-institutional qualitative study, which implied the research carried out in six academic medical centers of the United States and Serbia. Institutional cross-geographic and health care institution collaboration played a critical role in the studies that investigated how varied healthcare systems and various cultures enact mentorship-driven PIF. Through the interactions with a multicultural and multisituational group of

postgraduate pharmacy residents, this study acquired reliable information to understand the universal and context-dependent influences that dominate in the leadership development among postgraduate pharmacy residents.

All in all there were 42 pharmacy residents who took part in the study and each of them was enrolled in a half a year long mentorship program that is expected to enhance their leadership skills and professional identity development. The mentorship program matched the residents with trained pharmacy leaders who were assigned as mentors giving them structured professional experiences to encourage self awareness and leadership qualities as well as the confidence in their decisions. The paper gathered data on these residents, by conducting, semi structured interviews, reflective journals and mentor feedback, which was discussed using the following themes to reveal the trend in professional development and leadership.

The cross-institutional design allowed an examination of the influence of mentorship in a far-ranging institutional setting, characterised by a variety of distinct institutional cultures, patient care models, and academic structures. Although Serbia and the United States have two different healthcare systems, in regards to each other, whereby having separate clinical training systems and different professional expectations, both nations have a common goal as Serbia and the United States seek to create competent pharmacy leaders in the form of mentorship. The comparison of the outcomes of these two settings was intended to reveal the common part of mentorship that helps to build professional identity, and the contextual process involved in becoming a pharmacy leader in various healthcare settings.(6)

#### **4.2 Institutional diversities and Collective purpose**

Even though the partnering institutions had varying institutional and geographic affiliations, there were similarities in the goals of the participating institutions in their desires to develop leadership competences and form professional identities of their postgraduate pharmacy residents. The six academic centers that participated in this research had different types of healthcare systems, educational models and the amount of resources available that added a wide and diverse framework in answering the question of the importance of mentorship in developing professional identity and leadership.

##### **Institutional Variations:**

**Healthcare Systems:** The systems in Serbia were integrated into a healthcare system that can be described as highly oriented to public healthcare, and highly centralized in terms of pharmacy practice, whereas institutions in the United States were aligned with a more decentralized system, that is more privately-driven. Such variations will affect the manner of interaction between pharmacy residents and mentors, as well as their exertions of leadership in practice settings.

**Educational Systems:** In the United States, mentored pharmacy residents are normally taken through formal processes of mentorship in terms of the existing mentored residencies that are incorporated into the academic centers or hospitals, but in Serbia, one can have an informalized progress to being mentored and where the integration of mentorship on pharmacy practice may be within the traditional practice settings. It is this difference in the program structure that enabled this comparative study of the various mentorship models.

**Professional Culture:** The perception of the pharmacy leadership and development has some cultures differences. To illustrate, mentorship in the U.S. can be associated with an interest in interprofessional collaboration and patient-centered care, whereas mentorship in Serbia can be related to the technical side of the pharmacy practice. Such cultural attributes influence the mentorship experience of the residents as well as their formation of their professional identity.

##### **Shared Objectives:**

Through all these differences, there was one particular goal that was shared by all feeding institutions and that is to bring up pharmacy residents who are ready to assume leadership positions in a complex healthcare setting. The importance of making ethical decisions in each of the mentorship programs focused on self awareness and interprofessional collaboration which were essential elements towards effective leadership in the field of pharmacy. All mentors were chosen because of their experience in leadership in clinical practice and ability to play the disciplining role as a role model who could contribute to professional identity development in their mentees.

The design of the study accentuated the idea of cross-cultural education and knowledge exchange due to the analysis of how mentorship helps to stimulate PIF in varied institutional contexts regardless of the ultimate purpose of becoming a leader. The results of this multi-institutional collaboration can be discussed as the contribution to

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the increasing number of studies on the role of mentorship in pharmacy education and can be used as an insight into enhancing postgraduate pharmacy training programs around the world.(7)

Finally, this multi-institutional cooperation in Serbia and the United States was beneficial because it allowed creating a very comparative framework in the context of discussing the effect of structured mentorship programs on the professional growth and leadership development of postgraduate pharmacy residents. The research design of the study not only helped to identify some universal measures to promote professional identity but also pinpointed circumstantial differences that condition the effectiveness of such programs in various healthcare and education structures.

### 5. Recruitment of participants & selection of mentors

#### 5.1 Resident Qualifications

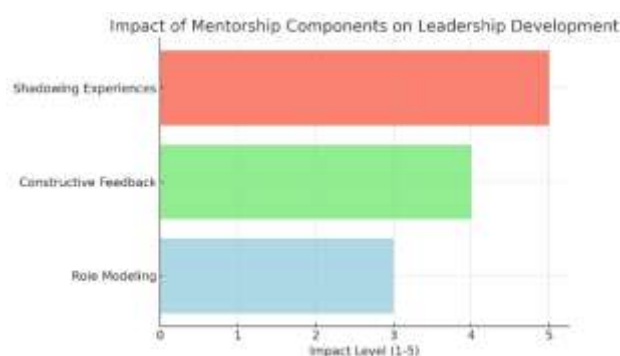
Targeted eligibility criteria were used to select the pharmacy residents involved in this study because they were believed to be suitable candidates in the mentorship-based professional identity formation (PIF) program and had the required framework to develop leadership. Recruitment was done using the following criteria:

**Postgraduate Pharmacy Residents:** Not all postgraduate pharmacy residents had to participate in the study as it applied exclusively to postgraduate pharmacy residents enrolled in NCAMPR-accredited residency programs at the participating academic medical centers in Serbia and the United States. These residents were in their last year of postgraduate training and therefore were at a state of professional development which would respond well to specific mentorship to develop their professional identity.

**Those interested in Leadership Development:** Selection of the residents was grounded in their indicated interest in developing their leadership competence and professional identity. In the recruitment process, residents had to provide the pre-participation survey that contained questions regarding employment motives, concerns in relation to mentorship, and hopes regarding becoming pharmacy practice leaders.

**Committed to the Program Period:** The target group of residents had to show dedication to ensuring that they were willing to commit to the mentorship program by attending the program in six months which included regular interactions between the mentor and the mentee, reflective journaling, and the semi-structured interview. The time spent in the mentorship program was critical in order to engage in relationship building and professional development.

**Readiness to Give an Evaluation:** In the research design, an evaluation of their experience as mentors would also be carried out by asking the residents to give a feedback on their experience. This entailed them expressing their views on how mentorship has influenced them in terms of their leadership capacity, self-understanding and their General advancement as a professional.(8)



**Figure 1:** Impact Of Mentorship Components On Leadership Development

#### 5.2 Qualifications of Mentors

Selection of mentors was also a key success factor to the mentorship program. Mentors were instrumental in the formation of a new professional identity of the residents through giving advice, feedback, and practical ideas concerning leadership and clinical work. Mentor selection was based on the following criteria:

**Pharmacy Leadership Experience:** Mentors were chosen with considerations of their vast experience in relation to pharmacy leadership. The ideal mentors were people who would have held a leadership role in the practice of

pharmacy like a pharmacy director, coordination in the practice, or senior members of the faculty. They had to exhibit established history of leadership in clinical practice and interprofessional practice.

**Mentorship:** Mentors were required to be committed to the 6 months mentoring process and give regular advice, and comments to their mentees. The mentor was to meet the residents on regular one-on-one basis, offer professional guidance, as well as, assist this prospective pharmacy profession leader develop his/her own identity as future clinician.

**Professional Identity Formation Expertise:** Mentors were selected on grounds of their skills on professional identity formation (PIF) of the residents. This involved their journey in the self-awareness process and the provision of constructive feedback as well as the necessity of critical reflection on self and professional development.(9)

**Desire to Support Reflective Practices:** Mentors were anticipated to participate with the residents in reflective practices, which may entail a conversation regarding leadership issues, career aspirations, and the changing scope of pharmacy practice. This was necessary to cultivate self-reflection that was imperative to the successful PIF.

## **6. Mentoring Program Structure**

### **6.1 Time and frequency of meeting Meetings length Duration and regularity of meetings**

The mentorship program was customized as lasting 6 months because it allowed the postgraduate pharmacy residents to interact with their mentors extensively and have exposure to all types of leadership areas of pharmacy practice as well as reflective of their progression. The time frame offered by the program was conducive to a gradual and continuous process of leadership and professional identity building (PIF) enabling the gradual development during the year of residency.

Mentorship meetings were regularly conducted and at least two of them per month between the resident and the mentor. The structure of these meetings ensured that they offered formal and informal interactions and flexibility with regard to the needs of the resident and mentor. The first stage of mentorship consisted in establishing mentor/mentee expectations, outlining the professional growth goals of the mentee, and defining the areas where the resident wished to develop leadership skills including decision-making, ethical reasoning, interprofessional communication, team leadership. In this stage, mentors directed the residents to experience their professional identity to reinforce the ethics of the pharmacy profession.

Meetings in the second part of the program were planned to have reflective directions, discuss the goals progress, solve leadership issues, and practice skills. Such periodic meetings guaranteed stable support and advice and made it possible to reach out continuously and give feedback and improve on the leadership skills over time. The frequency of such meetings also played an important role in building a long-term mentorship relation since it was instrumental to keep the residents motivated and thinking about it during the whole 6 months.

### **6.2 Opportunities to Shadow and Feedback**

Shadowing opportunities within the mentorship program were a part and parcel that would see residents availed the opportunity of shadowing their mentors in actual practice in pharmacy. Such opportunities enabled the residents to provide the firsthand exposure to how the professionally experienced leaders in the field of pharmacy resolves complicated circumstances, including managing medication errors, crisis responses, and collaboration across interprofessional settings. Shadowing sessions were developed in accordance with the personal needs and career ambitions of respective residents. As an example, a resident with an interest in leadership in clinical setting may shadow their mentor in rounds, team meetings or during clinical care etc, whilst a resident with an interest in administration leadership may shadow the mentor at policy development or strategic planning etc.(10)

The practice of shadowing taught critical lessons about how to cope with the leadership issues, including balancing clinical and leadership roles, interprofessional relationships, and guidance of others. The observation provided residents with a real-life experience that helped them to convert the theoretical aspects into practical skills of leadership and solving problems.

After every shadowing experience, mentors gave the residents formulated feedbacks about their performances with the spots that they had done well and provided helpful criticism about the areas that also needed improvement. Such meetings with feedbacks played a critical role in establishing the provision of precise and practical pieces of advice to be offered to the residents which would guide the stream of their training to lead with considerations of their individual objectives and the requirements of the discipline. Feedback was presented in a manner that fostered

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self-reflection and development, including how to deal with decision-making, communications, and how to develop more effective methods of leadership.

### **7. Method of data collection**

In order to have a deeper knowledge in the impact of mentorship on professional identity establishment (PIF) and leadership among postgraduate pharmacy residents, a multi-method data gathering technique was employed. This method enabled data that are both deep and qualitative to be gathered about various schools of thought, such as residents, mentors and their comments on their experiences. The main three methods of the data collection were the semi-structured interview, the reflective journals and the mentor evaluations.

#### **7.1 Semi-Structured Interviews**

The pharmacy residents and their mentors were interviewed using the semi-structured interviews to capture deep understanding of the experience in mentorship and any effect it may have on the leadership development and PIF. These interviews were loose in the sense that the type of questioning is flexible yet the topic examined remained the same among all the participants.

**Resident Interviews:** The purpose of the resident interviews was to understand their personal and professional development and ways that they have grown as leaders, as well as how mentorship has affected their professional identity. The structure of the open-ended questions was intended to investigate the effects of the mentorship relationship on their confidence, competence in decision making, and the ability to pursue the core values of pharmacy. Examples of such questions were:

- What have you learned as a pharmacy leader as a result of the mentorship experience?
- Do you recall any situation in the mentorship where you felt your abilities as a leader were being taxed or tested?
- What are your personal learnings about your professional identity as a pharmacist in the mentorship program?

Such interviews served as a platform upon which residents can reflect on how the self-awareness and confidence they gained throughout the program affected them, and the actual leadership skills they believed they had acquired (e.g., communication, decision-making, ethical reasoning).(11)

**Mentor interviews:** Mentor interviews were concerned with extracting how they felt about the growth and development of their mentees. Mentors were also questioned on their philosophy in terms of mentorship, the competences they valued and how they perceived the progress of their juniors. Questions included:

- What do you see in terms of changes in your mentee in leadership skills and professional identity?
- How did you help your mentee to traverse leadership issues?
- What do you feel were the most helpful elements of the mentorship process regarding the professional development of your mentee?

Such interviews were informative of the perspectives of mentors in terms of the role they have envisioned in forming the professional identity and leadership skills of pharmacy residents and how their advice shapes up in the mentorship experience.

#### **7.2 Reflective Journals**

Part of the data collection entailed reflective journaling, which was achieved to allow residents to capture their thoughts, learning and personal experiences in the 6-month mentorship program. The reflective journals were a chance to perform serious introspection of oneself and allowed residents to find correlation between what they have experienced and the development of their leadership and the professional formation of their identities.

**Journal Prompts:** During the program, residents were asked to write some thoughts about their leadership experience, as well as about their mentoring experience, and on the issues that they had to deal with. Some journal prompts were:

- Think of your own experiences during this time during which you had some leadership problem in which you were helped by your mentor.
- So, the first question is: how has your self-perception as a pharmacist leader improved after you had gone through the mentorship program?
- Of the leadership skills, which do you feel has been enhanced and how do you intend to use them in your practice going forward?



Journals: The journal entries enabled researchers to establish main themes of the leadership growth which included the development of confidence in making decisions, ethical reflection and management of conflict situations, and self-awareness. The reflection also gave an insight into the various ways in which the residents put the inputs they received either in the form of feedbacks by their mentors or the way they utilize the encounter into the real world scenario.

### 7.3 Mentor Evaluations

Mentor surveys were carried out to understand how effective the mentorship program was in the mind of the mentor. Such assessments offered vital information about the mentor impressions with regard to the progress of their mentees in regard to leadership skills enhancement, professional personalities advancement, and general performance during the mentorship tenure.(12)

Evaluation Criteria: The mentors were requested to score their mentees concerning their improvement in various aspects some of which included:

- Leadership Competency: What was found regarding the effectiveness of the resident leadership behavior in a team or clinical situation?
- Self Awareness: Has a resident improved their abilities of self-awareness and reflection, self understanding of strengths and areas of improvement?
- Decision-Making and Problem-Solving: What showed confidence and competence in making decisions during stressful or complex moments was the resident?

Qualitative Feedback: Qualitative feedback was also sought by the mentors with regard to the development of the mentee and the problems faced by the mentee during the program. This feedback supplemented the data in the interviews to provide an overall impression of how the mentorship was able to help the residents in their practice of leadership.

### 7.4 Data Analysis

Qualitative content analysis was used to interpret the data collected in a theme by using semi-structured interviews, reflective journals and mentor evaluations. Themes were coded and divided into categories, which included: leadership development, self-awareness, professional identity formation and impact of mentorship. Thematic analysis enabled the holistic comprehension of how the mentorship program affected the residents and their mentors, and the insights on the mentorship-based process of leadership training and the establishment of professional identity within the context of pharmacy practice are deep indeed.

**Table 1:** Key Themes and Impacts

Theme	Impact on Leadership Development	Mentor Perspective	Resident Feedback
Role Modeling	Enhanced Ethical Decision-Making	Guided ethical practice through real-life examples	Role models shaped personal and professional values
Constructive Feedback	Increased Self-Awareness and Confidence	Provided constructive guidance to refine leadership approach	Feedback boosted leadership confidence and self-reflection
Shadowing Experiences	Improved Interprofessional Collaboration	Demonstrated collaborative decision-making in clinical settings	Shadowing prepared for team leadership in diverse settings

## 8. Data Analysis

### 8.1 Coding Thematic Approach

Thematic coding was used to analyze the qualitative data that was collected during the semi-structured interviews, reflective journals and mentor evaluations. The approach enabled the recognition of the patterns and common themes in the data, which offered a granular insight into the role of mentorship-based, professionally constructed identity (PIF) of postgraduate pharmacy residents

Coding Process: Coding involved transcribing all the recordings of interviews as the initial phase of the analysis then reading and viewing the reflective journals, mentor assessment with prior reading. Qualitative data analysis software (NVivo or ATLAS.ti) was used to create a coding framework by first employing open coding. This has been done by coding the transcripts and journals with some initial codes that recorded the rudiments of ideas that were voiced by respondents, including leadership confidence, self awareness, role modeling, and effect of

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feedback and decision making. These preliminary codes were based on the research questions of the study and the important aspects of the program of mentorship.

Theme Development: Axial coding followed the initial coding in which the codes were clustered into wider themes. These themes were created through defining the kind of meanings and links and relationships amidst the codes, e.g. the mentorship helped them to transform towards leadership confidence or professional identity problem. Among the major themes that were brought out were:

- Leadership Development Role Modeling
- Improved Self awareness in Mentorship
- The First Influence, Constructive Feedback
- Interprofessional Collaboration Skills and Leadership Skills
- Ethical Reasoning and Decision Making Confidence

Themes: The themes were refined in iterations due to continuous analysis and each data piece was compared to establish the consistencies and contradictions. Themes were reduced or divided as the coding process went on so that it could better reflect the information. As an illustration, the theme of self-awareness was divided into such subthemes as personal development and ethical judgment. The last themes offered a detailed holistic explanation of the influence of mentorship on the development of leaders in the area of residence and their professionalities.

### **8.2 Cross- Institutional Theme Validation**

Because of the multi-institutional design of the paper, it was critical to test whether the identified themes were similar and applicable at other institutional contexts (in Serbia and the United States). The research team did a cross-institutional analysis to verify the identified themes in each institution. It was done in form of reviewing the data collected at any given institution, and an evaluation of the result was then compared with each other, to evaluate whether the major themes were coherent in the various educational and healthcare environments.

Cross-Institutional Comparisons: The researchers compared the results of the leadership development outcomes of the mentorship program across culturally and professionally diverse institutions. To illustrate, both countries reflected on the importance of role modeling by mentors, but when it comes to interprofessional collaboration, the information reflected more emphasis on collaborative practice in the U.S. institutions and importance of clinical pharmacy leadership in Serbia. Besides these dissimilarities, the most essential topics, including increased confidence in making decisions and the attention to ethical considerations, were shared across the two samples, proving the overall appeal of the themes.

Cultural Cross-Institutional validity: The researchers could also highlight the effects of cultural differences and the experiences of mentorship with the help of the cross-institutional validation. In particular, in U.S. institutions, the emphasis was more on the self-directed learning whereas in Serbia, the mentors spoke of the need of direct guidance towards shaping professional identity. These variances were implemented into the thematic frame in order to take into consideration the differences in culture, but at the same time not taking away the fundamental content of the themes such that it could be applied in both contexts.

## **9. Results**

### **9.1 Role Modeling as Value Alignments Driver and Ethical Decision Making**

The fact that role modeling plays a significant role in the determination of professional identity and leadership ability of pharmacy residents was one of the major findings of this study. Mentors also played a pivoting role when it came to the professional values and ethics that can drive a successful pharmacy practice, especially in decision making and patient care. During the course of mentorship, residents were exposed to situations where their mentors had to resolve complex clinical situations and this enabled them to internalize the most important tenets of pharmacy practice, including patient-centered care, ethical accountability, and professional integrity.

Participants always mentioned that real-time decision-making modeling by their mentors was critical in making them align their personal values with those of the profession. As an illustration, ethical decision-making skills of mentors revealed in the context of a crisis (how to manage a medication error or prioritize care in the situation of a disaster triage) were strong models to the residents. A number of residents stated that the experiences in role modeling were crucial to helping them adhere to the ethical practices and gave them a framework in making comparable choices in their future work.

One patient expressed how her mentor was very calm and ethical during an incident of a medication error and it helped her realize that professionalism and patient safety should be the ultimate priority. This experience has informed my view of ethical practice and leadership in pharmacy practice.”

Role modeling was suggested to be important in that it helped align personal values of the residents to professional values in the formation of professional identity. This resonance not only helped in making ethical decisions but also made the residents enhance their confidence in the possibility of becoming leaders in many pharmacy contexts.

### **9.2 Positive Feedback to Foster leadership Self-understanding and self-confidence**

The other outstanding discovery was the determination of constructive feedback in building self awareness and leadership assurance to the residents. Mentors and residents described that sessions of giving and receiving feedback were helpful to clarify the strengths and needs of leadership practice. Frequent feedback also gave residents practical information regarding their decision-making skills, communication effectiveness, and aptitude to tackle complicated situations which are considered critical in pharmacy practice leadership.

Mentors stressed the significance of feedback, which should not only recognize the achievements of the resident but also give particular recommendations regarding his/her improvement. In turn, the residents stated that constructive feedback and the feeling of being listened to assisted in building a more realistic and self-assured vision of the leadership abilities. Most of the inhabitants stated that the feedback made them more self reflective so they could make better decisions especially during stressful environments. According to one of the residents, feedback that she got with the mentor allowed her to identify points that she needs to work on, specifically how to handle interprofessional relationships and delegate responsibilities. This contemplation also gave me more assurance of becoming a future leader.”

## **10. Conclusion**

### **10.1 Effect Summation Conclusion**

This multi-institutional qualitative study determined the potential impact of designed mentorship on the professional identity formation (PIF) and the leadership development in postgraduate pharmacy residents enrolled in six academic centers in the United States and Serbia. The findings also indicated that mentorship played a vital role in helping leadership abilities grow at an alarming rate and also improved conviction in the decision-making process, and it has linked the personal values with the profession value of pharmacy. Participation in mentorship programs demonstrated significant development of the leadership capabilities of residents with regard to self-awareness, interprofessional collaboration, and ethical decision-making. Such results applied both to the institutional settings, demonstrating the common benefits of the role modeling, positive criticism, and shadowing adventures to the development of the leadership competencies and professional identity.

In the research the role of mentorship was considered central in fulfilling the gap between the theory and practice in leadership allowing the residents to enter into the complex clinical environment much more confidently and more competently. The mentors with their example and guidance gave an indispensable insight into the actual world of leadership which enabled residents to build their identity as a future pharmacy leader.

### **10.2 Educational Implications**

Their results are in support of the fact that structured mentorship programs should be included in postgraduate pharmacy education. Nowadays, most residency programs are biased when determining the priority areas of education which promotes clinical skills disregarding the imperative development of leadership traits. The authors of this study propose that mentorship program can provide a highly effective way to supplement clinical training program as it can speed up the process of becoming a doctor and enable the residents to take leading positions in medical care. The systematic mentorship would enable residents to go through reflective practices, constructive criticism, and exposure to workplace leadership aspects, which are required to thrive in more complex healthcare settings.

To ensure the growth of leadership competencies during pharmacy residency programs, it is essential to focus on mentorship by having well-trained mentors, who will teach the residents to find solutions to critical leadership issues, self-reflection, and allow the residents to shadow and follow the good role model.

### **10.3 Practice Integration**

The lessons highlighted by this research are of great significance with regard to formulating hospital residency activities and overall professional developments. Structured mentorship also has the potential to greatly improve

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resident preparedness in leadership, giving them the skills to become effective leaders in interdisciplinary teams, to manage challenging patient care scenarios, and to work effectively with ethical issues. The results also indicate the possibility of mentorship in order to overcome the increasing needs to have pharmacists ready to assume leadership responsibilities by the hospital and health care systems. Residency programs can also be optimized to ready residents with the changing practice requirements of healthcare leaders by creating a shadowing opportunity, as well as feedback loops.

### **10.4 Strengths and weaknesses & Applicability**

The study offers informative information; however, it should not be overlooked that there are some limitations. First, the fact that the sample size was of 42 residents is considered to be adequate to carry out the qualitative analysis, but the results of this study might not be appropriately generalized. Moreover, the participating institutions are diverse in terms of their cultures as they are located in Serbia and in the United States, which might have an effect on their perception and experience of mentorship thus influencing the interpretation of some of the themes. The culture can influence the style of leadership and mentorship and the research in future needs to refer to the cultural setting in interpreting the results of mentorship in various environments.

### **10.5 Future Work**

Future direction ought to be investigations on the longitudinal approach so as to determine the effects of mentorship on leadership development in the long-term once the formal mentorship arrangement is over. Monitoring the leadership skills and professional identity of residents during their time in the program will allow understanding whether a mentorship program will lead to the long-term formation of leadership skills and readiness to take a senior workplace in the pharmacy practice field. Also, what the post-mentorship experience develops alongside leadership could be taken as a topic of future research, especially in hospital pharmacy leadership and academia career path.

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### **Conflicts of interest**

The authors have no conflicts of interest to declare

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