



A Conversation Analytic Investigation Into Pharmacy Students' Interactional Practices Before And After Their Internship

- Undergraduate pharmacy education in Turkey
- The role of the internship and simulation practice in pharmacy education
- Conversation analysis
- Methods
- Results
 - Students' feedback
 - CA findings
- Discussion and Conclusion



Undergraduate pharmacy education in Turkey

• 1839 – Began at "*Mekteb-i Tıbbiye-i Adliye-i Şahane*"

(2 years)



- 1850 The duration of the education prolonged into 3 years
- 1923 The proclamation of the Turkish Republic
- 1938 The duration of the education increased to 4 years
- 2000 8 Faculties of Pharmacy
- 2005 5 years...
- 2017 Nearly 50 Faculties of Pharmacy, 28 of them continue to give undergraduate education

* Sözen Şahne B, Arslan M, Şar S, Yeğenoğlu S. An Assessment of the Development at the Turkish Pharmacy Faculties. IJPTP, 2015, 6(3), 2140-2145.



Undergraduate pharmacy education in Turkey

• Competences:

- ² Pharmacy practices
- ² Symptoms and clinical situations
- ² Legal and psychosocial situation
- ² Personal health situations
- ² Situations related public health
- ² Environmental / Global situations

* Undergraduate Pharmacy Education – Core Education Program, 2015, http://euk.saglik.gov.tr/eczcep2015/index.html.



Undergraduate pharmacy education in Turkey

HACETTEPE UNIVERSITY

 + Analytical chemistry + General chemistry + Biochemistry + Clinical biochemistry + Pharmaceutical microbiology + Plant biology + Medical biology + Physiology + Physiopathology + Organic chemistry + Public health + Anatomy + Biostatistics + Medical aid + Food analysis 	 Ê Pharmacology Ê Pharmacognosy Ê Pharmaceutical botany Ê Phytotherapy Ê Pharmaceutical chemistry Ê Drug metabolism Ê Pharmaceutical toxicology Ê Clinical pharmacy Ê Pharmacotherapy Ê History of pharmacy and deontology Ê Pharmacy legislation Ê Pharmacy management 	 Ê Pharmaceutical technology Ê Biopharmaceutics and Pharmacokinetics Ê Pharmaceutical biotechnology Ê Cosmetology Ê Radiopharmacy Ê Medical supplies
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The role of the internship and simulation practice in pharmacy education

- The interaction between the theoretical education and real practice introduced by internships.
- The internship is an essential part of undergraduate pharmacy education.
- In Turkey, after the EU Harmonization and Bologna Process, undergraduate pharmacy students have to complete their internship period with 40 ECTS (Community pharmacy, Hospital pharmacy, Pharmaceutical industry, the Ministry of Health).

Pitkä K, Löfhjelm U, Passi S, Airaksinen M. Integrating Internships with Professional Study in Pharmacy Education in Finland. American Journal of
PharmaceuticalContent of
Education.PharmaceuticalEducation.2014;78(9):173.doi:10.5688/ajpe789173.Wallman A. 2010. Pharmacy Internship. Students' Learning in a Professional Practice Setting. Universitatis Upsaliensis. Digital Comprehensive Summaries
of Uppsala Dissertations from the Faculty of Pharmacy 120. Uppsala. ISBN 978-91-554-7725-7.



The role of the internship and simulation practice in pharmacy education

- In many countries, simulation is considered to be an instructional technique in pharmacy training to prepare the students for workplace practices.
- Simulation based pharmacy education is used in teaching the subject areas like pharmacology practices, medication management, physical evaluation and communication.
- Although it has becoming more and more popular in the pharmacy curricula of various countries recently, simulation techniques, especially standardized patients have not been used in the education of pharmacists and pharmacy technicians in Turkey yet.

Mesquita AR, Souza WM, Boaventura TC, Barros IM, Antoniolli AR, Silva WB, Junior DPL. The effect of active learning methodologies on the teaching of pharmaceutical care in a Brazilian Pharmacy Faculty. PloS One, 2015:10(5); e0123141. Kane-Gill SL, Smithburger PL. Transitioning knowledge gained from simulation to pharmacy practice. Am J Pharm Educ. 2011:75(10);21. Smithson J, Bellingan M, Glass B, Mills J. Standardized patients in pharmacy education: An integrative literature review. Curr Pharm Teach Learn. 2015:7:851-63.



Conversation Analysis

- Conversation analysis (CA) is an approach within the social sciences that aims to *describe, analyze, and understand* talk as a basic and constitutive feature of human social life.
- CA is the study of talk. It is the systematic analysis of the talk produced in everyday situations of human interaction: talk-in- interaction.

Sidnell, J. (2010). Conversation Analysis- an introduction. West Sussex, UK: WileyBlackwell. Hutchby, I. and Wooffitt, R. (2008). Conversation Analysis (2nd Edition). Cambridge: Polity Press.



4 Basic Principles of Conversation Analysis

- There is order at all points in interaction: Talk in interaction is systematically organised, deeply ordered, and methodic.
- Contributions to interaction are context- shaped and context-renewing: Contributions to interaction cannot be adequately understood except by reference to the sequential environment in which they occur and in which the participants design them to occur. They also form part of the sequential environment in which a next contribution will occur.
- No order of detail can be dismissed a priori as disorderly, accidental, or irrelevant: CA has a detailed transcription system, and a highly empirical orientation.
- Analysis is bottom-up and data driven: The data should not be approached with any prior theoretical assumptions, regarding, for example, power, gender, or race; unless there is evidence in the details of the interaction that the interactants themselves are orienting to it.

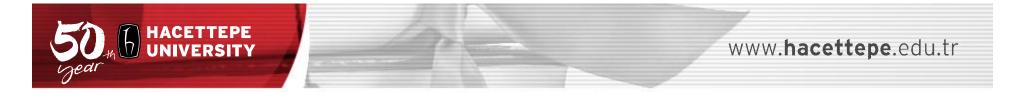
Sert O, Seedhouse P. Introduction: Conversation Analysis in Applied Linguistics. Novitas-ROYAL (Research on Youth and Language), 2011, 5 (1), 1-14. Heritage, J. (1984). Garfinkel and ethnomethodology. Cambridge: Polity Press. Seedhouse, P. (2005). Conversation Analysis and language learning. Language Teaching. 38(4), 165-187.



Conversation Analysis-Transcription: steps

- Follow the instructed format throughout
- Inter-turn gaps, silences
- Overlaps (both onsets and closings)
- Elongations, cut-offs
- Intonation, stress, speed of talk, loudness
- Non-verbal language

Sert O, (2016). Conversation Analysis and Foreign Language Education. Haacettepe University Faculty of Education.



Aim

 In this study, we aimed at investigating the interactional practices of third year pharmacy students before and after their summer internship. The study stands out to be the first one based on simulated practices in Turkey, despite the widespread use of this method in the world.





Vyas D. et al. Use of simulation-based teaching methodologies in US colleges and schools of pharmacy. Am J Pharm Educ (2013) 77(3):53. Wallman A. et al. Communications training in pharmacy education, 1995-2010. Am J Pharm Educ (2013) 77(2):36.



Materials and Methods

- In order to examine the extend to which the internship experience prepares the students for their future career, a simulation practice was planned.
- 11 students participated in the practice voluntarily, with 7 standard patients and 4 different scenarios in the simulation environment before and after the summer internship.
- In order to depict the progress of the students in terms of social interaction, Conversation Analysis was used.

Sacks H., Schegloff E.A., Jefferson G. A simplest systematics for the organization of turn-taking for conversation. Language (1974) 50(4):696-735. Sidnell J., Stivers, T. The Handbook of Conversation Analysis. (2013) Malden, MA: Wiley-Blackwell. Nguyen H. I. Constructing expertness: A novice pharmacist's development of interactional competence in patient consultations. Communication and Medicine (2006) 3(2):147-160.



Materials and Methods

- The data consists of 4 hours of video-recorded interactions, which were transcribed using Jefferson (2004) transcription conventions and were analysed using Transana software by paying close attention to sequential organisation of interaction as well as non-verbal details of talk.
- To triangulate the data, students' opinions about simulation were gathered using a written feedback form.
- This study was supported by the Hacettepe University Scientific Research Project Coordination Unit (Project No: TDS-2016-10689).

Jefferson G. Glossary of transcript symbols with an Introduction. In G. H. Lerner (Ed.) Conversation Analysis: Studies from the first generation (pp. 13-23). (2004) Philadelphia: John Benjamins.



Results – Students Feedbacks

All of the students participating in the study think that simulation practices will contribute to professional practices. At the same time, they mentioned that this practice will be quite useful in terms of the development of communication skills and this should be given more room.

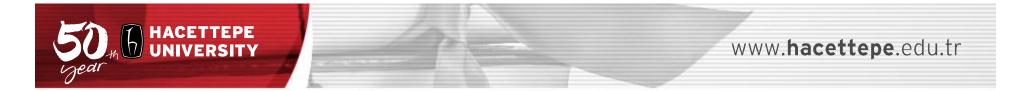
- A1. "It will certainly contribute, and watching before and after our experience gives us different perspectives." (S2)
- A2. "Throughout our education, we didn't encounter patients outside of the internship, and the simulation offers us the opportunity to meet patients, allowing us to learn about patient-pharmacist relationships." (S5)
- A3. "... provided us to see our own development before and after the internship." (S8)
- A4. "I think it's useful from every perspective." (S9)
- A5. "It will certainly contribute, and It will be good to see our deficiencies." (S10)



Results – Students Feedbacks

All of the students emphasized that the simulation practice should definitely be included in the pharmacy education program and the program should be included as obligatory as internships.

- A6. "Simulation practice should take part in the pharmacy education program. We were able to choose depending on the demand, but it must be compulsory like internships and I think it will be useful for our education." (S1)
- A7. "It is good to be done before the internship, it can be done for 1 day or 2 days." (S2)
- A8. "I think it should definitely take part in the undergraduate program." (S4)
- A9. "This practice should take part in the undergraduate program and I think the pharmacy student should also take this course." (S5)
- A10. "It can be a compulsory practice, even with Practice Pharmacy Internship in the second term, this practice can be done and early awareness can be provided for the deficiencies in communication." (S6)



Results – CA Findings

- Similar patterns are noteworthy, except for 2 students, when the preinternship and post-internship records of the students participating in the study are monitored.
- Our conversation analytic findings showed that after the internship, the pharmacy students were able to explicitly verbalize their expertise

(a) by using a decreased number of hesitation markers

- (b) reduced long silences
- (c) by providing more information about the drugs.



Results – CA Findings

(a) Using a decreased number of hesitation markers

• Before the internship:

Extract 1: Hair growing

48	P21	=teşekkür ederim eczacı hanım i:: ben bi arkadaşımın
49		tavsiyesi üzerine su 1:: tableti almak istiyorum
		thank you miss pharmacist i want to buy this tablet at the recommendation of my friend
50	Pha	[him:[:]
51	P2:	[bunu şey yapcam ben
		i ll do something with it
52		(1.0)
53	P2:	kırıp şampuanın içine katıcam <saç iyi<="" td="" uzatmasına=""></saç>
54		geliyormuş dediler>
		i break it and mix with my shampoo it is stated that it is useful
		for hair growing
55	Pho	hı:) bunu arkadaşınızdan mi duydunuz=
		one of your friend said so
5.6	P2:	=evet arkadaşım kullanıyor bana [da tavsiye etti
		yes my freind used and recommended
57	Ph :	[him:: peki u:::: bu benim
58		bildiğim kadarıyla doğum kontrol ilacı ama bi doktorunuza
5.9		danışsanız olmaz mı öyle reçete ile ben size versem
60		nasil olur ihh=
		as far as i
		know it is a contraceptive but it will be better firstly you ask
		it to a doctor then i ll give it to you with a prescription



Results – CA Findings

(a) Using a decreased number of hesitation markers

• After the internship:

Extract 2: Drug use

131	P4z	=>nasıl kullanmam< gerekiyodu?
		how can i take it
132	Ph:	(ha:) onu yazmadım (.) pardon (.)sabah akşam tok karnına yazmış
133		olması lazım (.) ağrı kesici.
		i didn't write it down sorry it must be in the morning and in
		the evening pain killer
134		(1.1)
135	P4:	ağrı geçene kada:r?
		until the pain stops
136	Pha	evet
		yes



Results – CA Findings

(b) Reduced long silences

• Before the internship:

Extract 3: Missing prescription

14	Ph:	receteyi alip gelme sansiniz var mi peki do you have a chance to bring the prescription
15	P1:	ya şimdi biraz uzak ı:: [() it s far from bere
16	Ph:	it s far from here [cok mu uzak peki=
		is it too far
17	P1:	=evet
		yes
1.8	Phi	(him::)
19		((1.0))
20	Phi	thim:: nasil yapalim o zaman
		what can we do then
21		((1.1))
22	Phī	yani ben reçetesiz ilaç verme imkanım yok size ama
		so i can't give you medicine withour prescription
23		((2.6))
24	Ph:	yine durumunuz ağır herhalde çocuğun=
		but your childs condition is probably heavy
2.5		+pharmacist look into the patients eyes
26	P1:	=evet çocuk çocu[k benim acilde, evet
		yes child child is in emergency yes



Results – CA Findings

(b) Reduced long silences

Extract 4: Pain killer

0.4	P4:	>ben bi< ağrı kesci yazdırcaktıım.
		i want to take a pain killer
05	Ph :	ağrı kesciyi doktordan +yazdırdınıız +mı >sağlık ocağıından?<
		do you have a prescription from a doctor from a health centre
0.6	P4:	<pre>//yo:: ağrı kesciyi alıyom ben jeczanelerden?</pre>
		no i buy it from pharmacy
07		(0.9)
0.8	Ph:	ı::: ağrı kesiciyi:: karşıda sağlık ocağı _! mız varı
09		isterseniz yazdırın izaten şu an müsait (.) ondan sonra
10		ge <u>lin</u> ; (.) ben [size burdan veriym.
		pain killer there is health centre across the way if you
		want you can take a prescription from there it is available now
		then you can come here and i ll give you
12	P4:	[ş:imdi eczacı;anım reçetesiz ;vermiyo musunuz
		now you don't give it without a prescription



Results – CA Findings

(c) Providing more information about the drugs

• Before the internship:

Extract 5: Decision

2.9	Phil	peki doktordan tekrar yazdırma şansınız var mı acaba=
		do you have a chance to rewrite the prescription from the doctor
30	P1:	=reçete zaten evde yani yarın öbürsü gün getirebilirim
		the prescription is already at home so i can bring it tomorrow or next day
31	Phi	(him:) getirecem įdiuosunuz
		you re saying that you ll bring it
32		(1, 0)
33	Ph:	anladım
		i see
34		(2.2)
35	Ph:	(ha:)
36		(2.8)
37	Ph:	tamam
		okey
38		+take the medicine from the shelf
39		(1.0)
40	Ph:	
41		(1.5)
42	P1 :	(çok) teşekkür ederim=
		thank you very much



Results – CA Findings

(c) Providing more information about the drugs

• After the internship:

Extract 6: Counseling

52	Ph:	(tamam (.) günde bi kere alcaksınız yeni başlıyosunuz herhalde
53		ibu ilaca.
		okay you take it once a day are you started newly
54	P6:	bu ilaca yeni başlıyoruım.
		i ve just started
55	Ph:	hihi
56		(3.9)
57	Ph:	"him:" tok- 1:: aç karnına (.) "alırsaınız (.) [daha iyi" olur.
	(it will be better if you take it on a full on an empty
		stomach
58	P6:	[tamam >artik<
59		akşamları: gece mi kalkıp içim yok- yoksa sabah mı:
60		hani(.)uyandı°ğım zaman mı içim° [fark ediyo mu
		okay now i begin
		to wake up in the night to take it or when i wake up is the any
		difference
61	Ph:	[sabah- sabah aç karnına
62	(alırsanız (.)kan ilaçlarını daha iyi etki elder:.
		in the morning morning on an
		empty stomach the antianemics affect better
65		(1.7)
66	P6:	°tamam°
		okay



Discussion & Conclusion

- It has previously been showed that the communication of the pharmacists with patients increases the quality of the healthcare service.
- In this study, it is possible to see the development of the students' expertise in terms of communication skills with the findings of conversation analysis.
- We concluded that conversation analysis methodology has proved to be very useful for revealing the importance of the internship experience the use of simulation in pharmacy communication training.

Nguyen HT. 2006. Constructing expertness: A novice pharmacist's development of interactional competence in patient consultations. Communication and Medicine, 3(2); 147-160. doi: 10.515/CAM.2006.017



Thank you for your attention.

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A CONVERSATION ANALYTIC INVESTIGATION INTO PHARMACY STUDENTS' INTERACTIONAL PRACTICES BEFORE AND AFTER THEIR INTERNSHIP

To the leading edge ... Tomard being the best ... www.hacettepe.edu.tr Bilge Sözen**ş**ahne, Elif Uluta**ş**Deniz, Selen Ye**ğ**enoğlu, Olcay Sert, Melih Elçin, Terken Baydar EAFP 2017, Helsinki bilgesozen@yahoo.com