QUESTION	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
Online appendix Table 1. Description of the answers to each question of the motivation, value and general confidence with computer use scales.						
General confidence with computer use						
1. I find it easier to learn how to use a computer than I do learning other things.	134 (21.3%)	277 (44.1%)	158 (25.2%)	34.6%)	12 (1.9%)	
2. When I have difficulties using a computer I know I can handle them.	111 (17.7%)	343 (54.6%)	115 (18.3%)	49 (7.8%)	10 (1.6%)	
3. I am not what I would call a computer person.	72 (11.5%)	130 (20.7%)	219 (34.9%)	171 (27.2%)	36 (5.7%)	
4. It takes me much longer to understand how to use computers than the average person.	146 (23.2%)	249 (39.6%)	152 (24.2%)	72 (11.5%)	9 (1.4%)	
5. I have never felt myself able to learn how to use computers.	206 (32.8%)	230 (36.6%)	128 (20.4%)	57 (9.1%)	7 (1.1%)	
6. I enjoy trying new things on a computer.	146 (23.2%)	289 (46.0%)	143 (22.8%)	43 (6.8%)	7 (1.1%)	
7. I find having to use computers frightening.	196 (31.2%)	202 (32.2%)	171 (27.2%)	53 (8.4%)	6 (1.0%)	
8. I find many aspects of using computers interesting and challenging.	133 (21.2%)	309 (49.2%)	150 (23.9%)	31 (4.9%)	5 (0.8%)	
9. I don't understand how some people can enjoy spending so much time using computers.	64 (10.2%)	124 (19.7%)	275 (43.8%)	131 (20.9%)	34 (5.4%)	
10. I have never been very excited about using computers.	75 (11.9%)	155 (24.7%)	266 (42.4%)	115 (18.3%)	17 (2.7%)	
11. I find using computers confusing.	123 (19.6%)	243 (38.7%)	199 (31.7%)	58 (9.2%)	5 (0.8%)	
12. I'm nervous that I'm not good enough with computers to be able to use them for continuing education.	139 (22.1%)	228 (36.3%)	181 (28.8%)	64 (10.2%)	16 (2.5%)	
	Strongly agree	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**	**N/A**
My value and general perception of continuing education						
1. Generally CE is valuable	181 (28.8%)	320 (51.0%)	91 (14.5%)	21 (3.3%)	9 (1.4%)	6 (1.0%)
2. Generally CE improves my practice	157 (25.0%)	295 (47.0%)	119 (18.9%)	37 (5.9%)	11 (1.8%)	9 (1.4%)
3. Generally CE increases my knowledge	185 (29.5%)	331 (52.7%)	80 (12.7%)	19 (3.0%)	7 (1.1%)	6 (1.0%)
4. Generally my employer values CE (employed pharmacists only)	47 (7.5%)	130 (20.7%)	217 (34.6%)	29 (4.6%)	17 (2.7%)	187 (29.8%)
I am motivated for adhering to continuing education because						
5. It is required to maintain my pharmacy license	120 (19.1%)	296 (47.1%)	138 (22.0%)	42 (6.7%)	16 (2.5%)	15 (2.4%)
6. I want a career advancement related to CE	113 (18.0%)	273 (43.5%)	171 (27.2%)	37 (5.9%)	14 (2.2%)	19 (3.0%)
7. I like learning with other pharmacists	103 (16.4%)	295 (47.0%)	181 (28.8%)	23 (3.7%)	13 (2.1%)	13 (2.1%)
8. I like being able to help patients I take care of	218 (24.8%)	316 (50.3%)	65 (10.4%)	7 (1.1%)	4 (0.6%)	17 (2.7%)
9. I am encouraged by my family to learn more	82 (13.1%)	203 (32.4%)	258 (41.1%)	41 (6.5%)	15 (2.4%)	28 (4.5%)
10. I want to earn more money	75 (12.0%)	154 (24.6%)	263 (41.9%)	74 (11.8%)	32 (5.1%)	29 (4.6%)
11. I want to keep up with advances in pharmacy	219 (34.9%)	318 (50.6%)	71 (11.3%)	7 (1.1%)	2 (0.3%)	11 (1.8%)
12. I am interested in long-term CE programs with certification	152 (24.2%)	249 (39.6%)	178 (28.3%)	30 (4.8%)	7 (1.1%)	12 (1.9%)
13. I am **not** motivated and I did **not** start any CE	14 (2.2%)	50 (8.0%)	165 (26.3%)	160 (25.5%)	142 (22.6%)	97 (15.4%)

Online appendix Table 2. Principal component analysis results of the motivation, value and general confidence with computer use scales items.					
	General confidence with computer use scales		Value scale	Motivation scale	
	Factor 1	Factor 2	Factor 1	Factor 1	Factor 2
I have never felt myself able to learn how to use computers.	0.865				
It takes me much longer to understand how to use computers than the average person.	0.839				
I find having to use computers frightening.	0.838				
I find using computers confusing.	0.800				
I'm nervous that I'm not good enough with computers to be able to use them for continuing education.	0.706				
I have never been very excited about using computers.	0.657				
I am not what I would call a computer person.	0.636				
I don't understand how some people can enjoy spending so much time using computers.	0.631				
I find it easier to learn how to use a computer than I do learning other things.		0.760			
I enjoy trying new things on a computer.		0.753			
When I have difficulties using a computer I know I can handle them.		0.721			
I find many aspects of using computers interesting and challenging.		0.712			
Generally CE increases my knowledge			0.944		
Generally CE improves my practice			0.937		
Generally CE is valuable			0.933		
Generally my employer values CE (employed pharmacists only)			0.902		
I want to keep up with advances in pharmacy				0.841	
I like being able to help patients I take care of				0.824	
I am interested in long-term CE programs with certification				0.812	
I want a career advancement related to CE				0.803	
I like learning with other pharmacists				0.765	
It is required to maintain my pharmacy license				0.544	
I am not motivated and I did not start any CE					0.762
I want to earn more money					0.672
I am encouraged by my family to learn more					0.526

Online Appendix. Continuing Education Assessment Survey for Pharmacists

نقابة صيادلة لبنان
ORDER OF PHARMACISTS OF LEBANON

Quality
ISO 9001
SAI GLOBAL

OPL ID:

Continuing Education Assessment Survey for Pharmacists

This survey seeks Lebanese pharmacists' opinion about the mandatory Continuing Education (CE) Program implemented by the Lebanese Order of Pharmacists in January 2014.
It takes about 15 minutes to complete and all data obtained are anonymous; they will be kept strictly confidential and will be used for research purposes and improvement of the CE program only.

DEMOGRAPHICS

1. Age:

2. Gender: ☐M ☐F

3. Level of education: ☐BS Pharmacy ☐PharmD, Doctorat d'exercice ☐Masters ☐PhD
☐Other: _____

4. Year of graduation from school/faculty of pharmacy: _____

5. Total number of years of practicing pharmacy: _____

6. University you graduated from as pharmacist:
☐UL ☐USJ ☐BAU ☐LAU ☐LIU
☐Other: _____

7. Language of pharmacy education:
☐French ☐English ☐Other: _____

8. Sector of work:
☐Community (Owner) ☐Community (Employee)
☐Hospital/Clinical
☐Scientific Office/Importer ☐Academia ☐Public Sector (MOPH, Army, NSSF…)
☐Industry ☐Currently not working ☐Other: _____

9. Work Location:

☐Beirut ☐Mount Lebanon ☐North Lebanon ☐South Lebanon ☐Bekaa

☐Nabatieh ☐Currently not working

10. Number of patients reveived per day (community pharmacists only):

☐<10 ☐10-50 ☐50-100 ☐>100 ☐I am not a community

pharmacist

11. Number of beds at the hospital (hospital pharmacists only):

☐<50 ☐50-100 ☐101-300 ☐>300☐I am not a hospital pharmacist

12. Number of working days per week: _____

13. Number of working hours per day: _____

TECHNOLOGY AND COMPUTER LITERACY

14. Available connected device(s):

☐Computer☐Smart Phone ☐Tablet ☐No connected devices

15. What type is your smart phone?: ☐iOS (iPhone) ☐Android (Samsung, Huawei..)

☐Other: _____

16. Are you connected to the internet for at least 4 hours per day: ☐Yes

☐No

☐I can connect when needed (Internet café, neighbors…)

17. Do you find it difficult to access your OPL e-library account?

☐Difficult ☐Intermediate ☐Easy ☐Never tried

18. Do you find it difficult to use OPL Swank platform and take online courses?

☐Difficult ☐Intermediate ☐Easy ☐Never tried

FOGARTY SUB-SCALE FOR COMPUTER LITERACY

19. The following statements refer to your confidence when using computers.

QUESTION	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. I find it easier to learn how to use a computer than I do learning other things.					
2. When I have difficulties using a computer I know I can handle them.					
3. I am not what I would call a computer person.					
4. It takes me much longer to understand how to use computers than the average person.					
5. I have never felt myself able to learn how to use computers.					
6. I enjoy trying new things on a computer.					
7. I find having to use computers frightening.					
8. I find many aspects of using computers interesting and challenging.					
9. I don't understand how some people can enjoy spending so much time using computers.					
10. I have never been very excited about using computers.					
11. I find using computers confusing.					
12. I'm nervous that I'm not good enough with computers to be able to use them for continuing education.					

Fogarty G, Cretchley P, Harman C, Ellerton N, Konki N. Validation of a questionnaire to measure mathematics confidence, computer confidence, and attitudes towards the use of technology for learning mathematics. Mathematics Education Research Journal. 2001 Sep 1;13(2):154-60.
https://eprints.usq.edu.au/953/1/Fogarty_Fogarty-Cretchley-Harman-Ellerton-Konki_Valid._of_questionnaire_maths.pdf

COMMUNICATION WITH THE OPL

20. Do you have the OPL mobile application?: ☐Yes   ☐No

21. Do you read the messages OPL is sending through the app or by SMS?

☐Yes ☐No   ☐Sometimes

22. Do you know the number of credits to be achieved by December 2019?

☐Yes ☐No   ☐More or less

23. Are you aware of the number of credits you earned to this date?

☐Yes ☐No   ☐ More or less

CONTINUING EDUCATION (CE)

24. Value and Motivation to adhere to Continuing Education

QUESTION	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	N/A
My value and general perception of continuing education						
1. Generally CE is valuable						
2. Generally CE improves my practice						
3. Generally CE increases my knowledge						
4. Generally my employer values CE (employed pharmacists only)						
I am motivated for adhering to continuing education because						
5. It is required to maintain my pharmacy license						
6. I want a career advancement related to CE						
7. I like learning with other pharmacists						
8. I like being able to help patients I take care of						
9. I am encouraged by my family to learn more						
10. I want to earn more money						
11. I want to keep up with advances in pharmacy						
12. I am interested in long-term CE programs with certification						
13. I am **not** motivated and I did **not** start any CE						

25. Type(s) of Continuing Education you used to do? (you can choose more than 1)

☐None   ☐Live (conferences, congresses, seminars...)   ☐ Online Courses   ☐Webinar

☐Printed material   ☐Long-term courses with certification (Masters, University Diploma..)

☐Workshop   ☐Other: _____

26. Type of Continuing Education you prefer? (choose only 1)

☐None   ☐Live (conferences, congresses, seminars...)   ☐ Online Courses   ☐Webinar

☐Printed material   ☐Long-term courses with certification (Masters, University Diploma..)

☐Workshop   ☐Other: _____

27. Reasons that generally prevent/prevented you from attending live CE:

QUESTION	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Not Applicable
1. Cost of transportation						
2. Distance and traffic to venue						
3. Timing of the talk						
Reasons that generally prevent/prevented you from attending live CE (ctd.)	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Not Applicable
4. Interest in the topic						
5. Family commitments						
6. Work obligations						
7. Easier to do online courses						
8. Not finding adequate program to meet my practice needs						
9. Cost to be replaced at the pharmacy/Close the pharmacy during the CE session (pharmacy owners only)						
10. Language used for the presentation						
11. I learn very little during live CE						
12. I already attend CE organized by pharmaceutical companies/international congresses						
13. I am already accessing online CE courses						
14. I am exempted (teaching, registered abroad…)						
15. I am **not** interested in doing any live CE						

☐ Other reasons: _____

28. Reasons for not/rarely adhering to OPL online CE Program:

QUESTION	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Not Applicable
1. Difficulty accessing my OPL e-library account						
2. Difficulty using the OPL Swank platform						
3. Lack of interest in the topics available						
4. Not finding adequate program to meet my practice needs						
5. Family commitments						
6. Work obligations						
7. OPL staff not supportive/accessible to help with e-Library and Swank						
8. Courses only offered in English						
9. I am already attending live CE						
10. I am **not** interested in doing any online CE						

☐Other reasons:

_____

29. Preferred length of <u>live</u> CE (you can choose more than 1):

☐Not interested   ☐1-hour long ☐1 to 2-hour long   ☐Half a day (4-hour long)

☐All day (7 hours)   ☐A weekend option (14 hours)   ☐A 3-day option (Annual

Congress)

☐Long-term courses with certification (Masters, University Diploma...)

30. Preferred language of CE in general (you can choose more than 1):

☐English   ☐French   ☐ Not interested in any CE   ☐Other:_____

31. Preferred timing for <u>live</u> CE sessions:

QUESTION	Week Days	Weekends
1. AM		
2. PM		
3. Evening (after 8 PM)		
4. Not interested		

32. Preferred CE topics:

QUESTION	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Laws and Regulations					
2. Guidelines for treating diseases					
3. Medication Therapy Management					
4. New drug dosage forms					
5. New medications					
6. Soft skills (skills development)					
7. Management (community, hospital, companies)					
8. Preventive medicine (nutrition, physical activity…)					
9. Information Technology (IT) related topics					
10. New quality and accreditation standards					
11. Not interested in any CE program					

☐Other topics:

_____

33. Types of CE you already achieved (Choose 1 option only):

☐ Did not start any CE ☐ Online only ☐ Live only

☐ Online and Live equally ☐ Majority of Online ☐ Majority of Live

34. Rate your global level of satisfaction with the CE organized/offered by the OPL:

TYPE	Highly satisfied	Satisfied	Neutral	Dissatisfied	Highly dissatisfied	Not Applicable*
Live in-person						
Online Courses						
Workshop						

* Did not participate to this type of CE

☐ Comments on the CE organized/offered by the OPL: _____

_____

_____

_____

_____

_____