

1. 136, 103, 239

[7]

2. 41

1) (, ,) 4 , 2 (? , ?)

2) 86% 62.6% [8].

[9].

(1) , (2) , (3)

1. Cronbach's α 0.88 , Cronbach's α 0.835, Cronbach's α 0.663-0.876

3) 1999 Parsell Bligh McFadyen [10] 18 9 , 6 , 3 3 5 Likert Cronbach's α 0.89 , Cronbach's α 0.835, Cronbach's α 0.865, Cronbach's α 0.780-0.876

1

1

239

2. 41

1) (, ,) 4 , 2 (? , ?)

2) Interdisciplinary Education Perception Scale [10]. 12 5 , 5 3 (1) (6) 6 Likert Cronbach's α 0.88 , Cronbach's α 0.835, Cronbach's α 0.663-0.876

3) Readiness for Interprofessional Learning Survey 1999 Parsell Bligh McFadyen [10] 18 9 , 6 , 3 3 5 Likert Cronbach's α 0.89 , Cronbach's α 0.835, Cronbach's α 0.865, Cronbach's α 0.780-0.876

4) 2. , 6
5 466 454
(4) (1) 4
385 405
3. (t=2.486 p=0.014). 466
2016 12 29 2017 1 16
444
(t=- 4.053 p< 0.001).
(t=- 6.209 p< 0.001), (t=- 5.468 p< 0.001),
240 239 (t=- 4.800 p< 0.001) 3
99.6%

(Table

4. IBM SPSS ver. 23.0 (IBM Corp., Armonk, NY, USA)

t- test

5. 239 56.9%,
43.1% 38.14 40 (33.5%) 20
(27.6%) 91.6%
8.4%
11.7% , 36.4%
51.9% 72.5%
24.7%, 2.9% (Table 1).

Table 1. General characteristics of participants (N=239)

| Characteristic | Value |
|--------------------------------------|-------------|
| Age (yr) | 38.14±10.45 |
| 20-29 | 66 (27.6) |
| 30-39 | 60 (25.1) |
| 40-49 | 80 (33.5) |
| 50-59 | 26 (10.9) |
| 60 | 7 (2.9) |
| Occupation | |
| Nurse | 136 (56.9) |
| Professor | 103 (43.1) |
| Experience participating in IPE | |
| Yes | 20 (8.4) |
| No | 218 (91.6) |
| Missing | 1 |
| Experience teaching nursing students | |
| Yes | 120 (50.2) |
| No | 119 (49.8) |
| Awareness of IPE | |
| I know it very well | 2 (0.8) |
| I know it | 26 (10.9) |
| I've heard of it | 87 (36.4) |
| I know a little | 104 (43.5) |
| I've never heard about it | 20 (8.4) |
| Necessity of IPE | |
| Strongly agree | 25 (10.5) |
| Agree | 148 (61.9) |
| Neutral | 59 (24.7) |
| Disagree | 6 (2.5) |
| Strongly disagree | 1 (0.4) |

Values are presented as mean±standard deviation or number (%). IPE, interprofessional education.

Table 2. Perception of and readiness for interprofessional education (N=239)

| Subscale | Professor (n=103) | Nurse (n=136) | t-value (p-value) |
|----------------------------------|-------------------|---------------|-------------------|
| Perception | | | |
| Perception of actual cooperation | 4.66±0.62 | 4.54±0.51 | -1.555 (0.122) |
| Perceived need for cooperation | 3.85±0.63 | 4.05±0.60 | 2.486 (0.014*) |
| Competency and autonomy | 4.77±0.59 | 4.44±0.65 | -4.053 (<0.001**) |
| Readiness | | | |
| Teamwork and collaboration | 4.11±0.40 | 3.75±0.48 | -6.209 (<0.001**) |
| Professional identity | 3.76±0.52 | 3.40±0.49 | -5.468 (<0.001**) |
| Roles and responsibility | 3.68±0.46 | 3.38±0.50 | -4.800 (<0.001**) |

Values are presented as mean±standard deviation.
*p<0.05. **p<0.001.

Table 3. Implementation strategies of IPE (N=239)

| Variable | No. (%) |
|--|------------|
| When IPE is needed | |
| Undergraduate (1st-2nd year) | 25 (10.5) |
| Undergraduate (3rd-4th year) | 85 (35.6) |
| Novice nurse | 50 (20.9) |
| 1st-3rd year nurse | 58 (24.3) |
| 3rd year or more nurse | 25 (10.5) |
| Courses to apply IPE | |
| Health-communication | 129 (54.0) |
| Communication | 46 (19.2) |
| Medical ethics | 16 (6.7) |
| Simulation | 46 (19.2) |
| Clinical practicum | 34 (14.2) |
| Others | 2 (0.8) |
| Field related with IPE | |
| 1st | |
| Medical | 227 (95.0) |
| Social welfare | 5 (2.1) |
| Pharmacy | 4 (1.7) |
| 2nd | |
| Pharmacy | 100 (41.3) |
| Physical therapy | 50 (20.9) |
| Social welfare | 32 (13.4) |
| Barriers of IPE^{a)} | |
| Lack of experience in cooperative practice | 160 (66.9) |
| Lack of experience in guiding students | 42 (17.6) |
| Lack of support from hospitals | 80 (33.5) |
| Heavy workload | 183 (76.6) |
| Awareness of low relevance | 47 (19.7) |
| Geographical factors | 7 (2.9) |
| Negative experience (ignorance, etc.) | 91 (38.1) |

IPE, interprofessional education.
^{a)}Multiple responses.

Table 4. Learning outcomes related to interprofessional education (N=239)

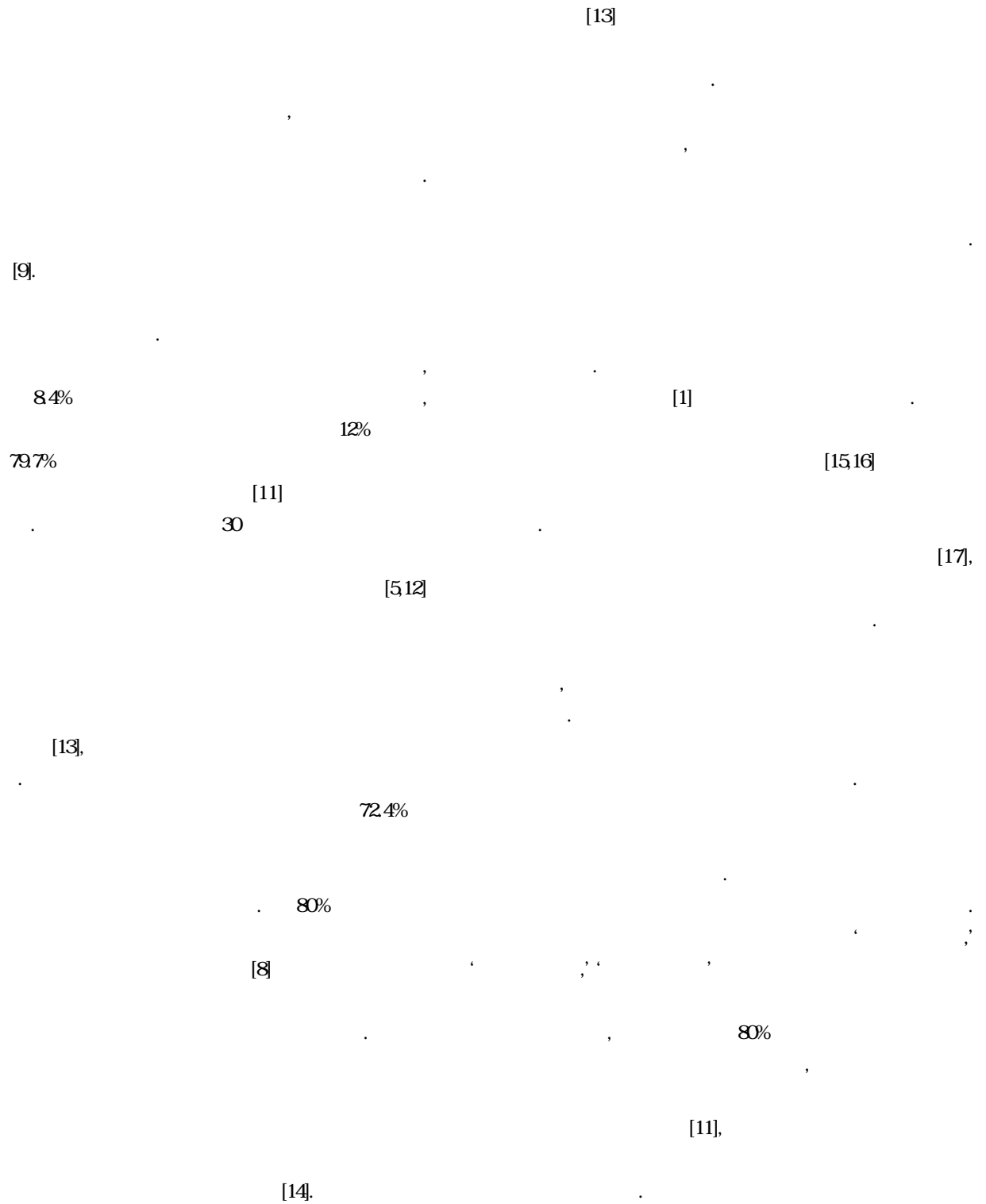
| Learning outcomes | Mean±standard deviation |
|---|-------------------------|
| Interprofessional communication and cooperation | 3.41±0.56 |
| Interprofessional conflict resolution | 3.33±0.62 |
| Team work and functioning | 3.31±0.57 |
| Interpersonal skills | 3.31±0.55 |
| Problem solving ability | 3.31±0.54 |
| Collaborative leadership | 3.19±0.61 |
| Critical thinking ability | 3.15±0.61 |
| Patient centeredness | 3.13±0.59 |
| Role clarification | 3.12±0.58 |
| Professional identity | 3.03±0.59 |
| Clinical performance ability | 3.08±0.63 |
| Self-directed learning | 2.84±0.66 |

2).

4.

(341), (333), (331),
(331), (331), (319)

(Table 4).



3

. Thistlethwaite

[25]

[3],

[18].

[26,27].

[14].

[13].

[19].

[20,21],

[22-24],

REFERENCES

1. Fernandes AR, Palombella A, Salfi J, Wainman B. Dissecting through

- barriers: a mixed-methods study on the effect of interprofessional education in a dissection course with healthcare professional students. *Anat Sci Educ.* 2015;8(4):305-16.
2. Shakman L, Renu G, Obeidat A. Inter professional education in health care. *Int J Nurs Educ.* 2013;5(1):86-91.
 3. Hammick M, Freeth D, Koppel I, Reeves S, Barr H. A best evidence systematic review of interprofessional education: BEME guide no. 9. *Med Teach.* 2007;29(8):735-51.
 4. Yoon BJ, Lee JH. A review study on interprofessional college education in health care sector. *J Korean Soc Sch Health Educ.* 2010;11(1):149-58.
 5. World Health Organization. Framework for action in interprofessional education & collaborative practice [Internet]. Geneva: World Health Organization; 2010 [cited 2017 Jan 16]. Available from: http://apps.who.int/iris/bitstream/10665/70185/1/WHO_HRH_HPN_10.3_eng.pdf.
 6. Stone T, Hua S, Turale S. Evaluation of an international and inter-professional collaboration forum. *Nurse Educ Today.* 2016;46:10-16.
 7. Barr J, Bull R, Rooney K. Developing a patient focussed professional identity: an exploratory investigation of medical students' encounters with patient partnership in learning. *Adv Health Sci Educ Theory Pract.* 2015;20(2):325-38.
 8. Lee YH, Ahn D, Moon J, Han K. Perception of interprofessional conflicts and interprofessional education by doctors and nurses. *Korean J Med Educ.* 2014;26(4):257-64.
 9. Kim HS. Problems and improvement plans of practice curriculum in health and nursing department. Seoul: Educational Research Institute of Korean Council for College Education; 2013.
 10. McFadyen AK, Maclaren WM, Webster VS. The Interdisciplinary Education Perception Scale (IEPS): an alternative remodelled sub-scale structure and its reliability. *J Interprof Care.* 2007;21(4):433-43.
 11. Curran VR, Sharpe D, Forristall J. Attitudes of health sciences faculty members towards interprofessional teamwork and education. *Med Educ.* 2007;41(9):892-6.
 12. Gotlib Conn L, Reeves S, Dainty K, Kenaszchuk C, Zwarenstein M. Interprofessional communication with hospitalist and consultant physicians in general internal medicine: a qualitative study. *BMC Health Serv Res.* 2012;12:437.
 13. George A, Renjith V, Renu G. Inter-professional education. *IOSR J Dent Med Sci.* 2015;14(3):35-8.
 14. Loversidge J, Demb A. Faculty perceptions of key factors in inter-professional education. *J Interprof Care.* 2015;29(4):298-304.
 15. Accreditation Council for Pharmacy Education. Accreditation standards and guidelines for the professional program in pharmacy leading to the doctor of pharmacy degree [Internet]. Chicago (IL): Accreditation Council for Pharmacy Education; c2011 [cited 2017 Jan 16]. Available from: <http://www.acpe-accredit.org/pdf/FinalS2007Guidelines2.0.pdf>.
 16. Zorek J, Raehl C. Interprofessional education accreditation standards in the USA: a comparative analysis. *J Interprof Care.* 2013;27(2):123-30.
 17. Olenick M, Allen LR. Faculty intent to engage in interprofessional education. *J Multidiscip Healthc.* 2013;6:149-61.
 18. Bennett PN, Gum L, Lindeman I, Lawn S, McAllister S, Richards J, et al. Faculty perceptions of interprofessional education. *Nurse Educ Today.* 2011;31(6):571-6.
 19. Mickan SM. Evaluating the effectiveness of health care teams. *Aust Health Rev.* 2005;29(2):211-7.
 20. Sheldon M, Cavanaugh JT, Croninger W, Osgood W, Robnett R, Seigle J, et al. Preparing rehabilitation healthcare providers in the 21st century: implementation of interprofessional education through an academic-clinical site partnership. *Work.* 2012;41(3):269-75.
 21. Breitbach AP, Sargeant DM, Gettemeier PR, Ruebling I, Carlson J, Eliot K, et al. From buy-in to integration: melding an interprofessional initiative into academic programs in the health professions. *J Allied Health.* 2013;42(3):e67-73.
 22. Paul Olson TJ, Brasel KJ, Redmann AJ, Alexander GC, Schwarze ML. Surgeon-reported conflict with intensivists about postoperative goals of care. *JAMA Surg.* 2013;148(1):29-35.
 23. Karimi R, Pelham-Foster S, Scott BJ, Aamodt G. Developing and implementing an interprofessional course and identifying its strengths and challenges. *Health Interprof Pract.* 2012;1(2):eP1019.
 24. Friend ML, Friend RD, Ford C, Ewell PJ. Critical care interprofessional education: exploring conflict and power-lessons learned. *J Nurs Educ.* 2016;55(12):696-700.
 25. Thistlethwaite J, Moran M; World Health Organization Study Group on Interprofessional Education and Collaborative Practice. Learning outcomes for interprofessional education (IPE): literature review and synthesis. *J Interprof Care.* 2010;24(5):503-13.
 26. Doman T, Littlewood S, Margolis SA, Scherpbier A, Spencer J, Ypinazar V. How can experience in clinical and community settings contribute to early medical education?: a BEME systematic review. *Med Teach.* 2006;28(1):3-18.
 27. Gonzalo JD, Haidet P, Wolpaw DR. Authentic clinical experiences and depth in systems: toward a 21st century curriculum. *Med Educ.* 2014;48(2):104-5.