



Student Perceptions of Health Professions Prior to Participation in an IPE Program

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Background

Health Care Professions in Lebanon

- Physician oversupply
 - Societal high regard
 - Large number of medical schools
 - Many 'underemployed'
 - Many private hospitals are physician-owned, family businesses
- Pharmacists also in oversupply
 - Societal high regard
 - Independent, family-owned pharmacies
 - Clinical pharmacist role being developed
 - Many seek employment in medical and pharmaceutical sales

Health Care Professions in Lebanon

- ▶ Nutrition and dietetics
 - ▶ Many programs
 - ▶ Body image and fashion highly valued
 - ▶ Start health and diet counseling businesses
- ▶ Nursing
 - ▶ Many programs, but still in short supply
 - ▶ Some choose the field because of employability
 - ▶ Relatively low status, but varies among segments of the population
 - ▶ Three levels of education lead to comparable roles & confusion
- ▶ Social work
 - ▶ Few hospitals employ social workers
 - ▶ Highest employment sector is in NGOs that address health and social care needs
 - ▶ Relatively low status

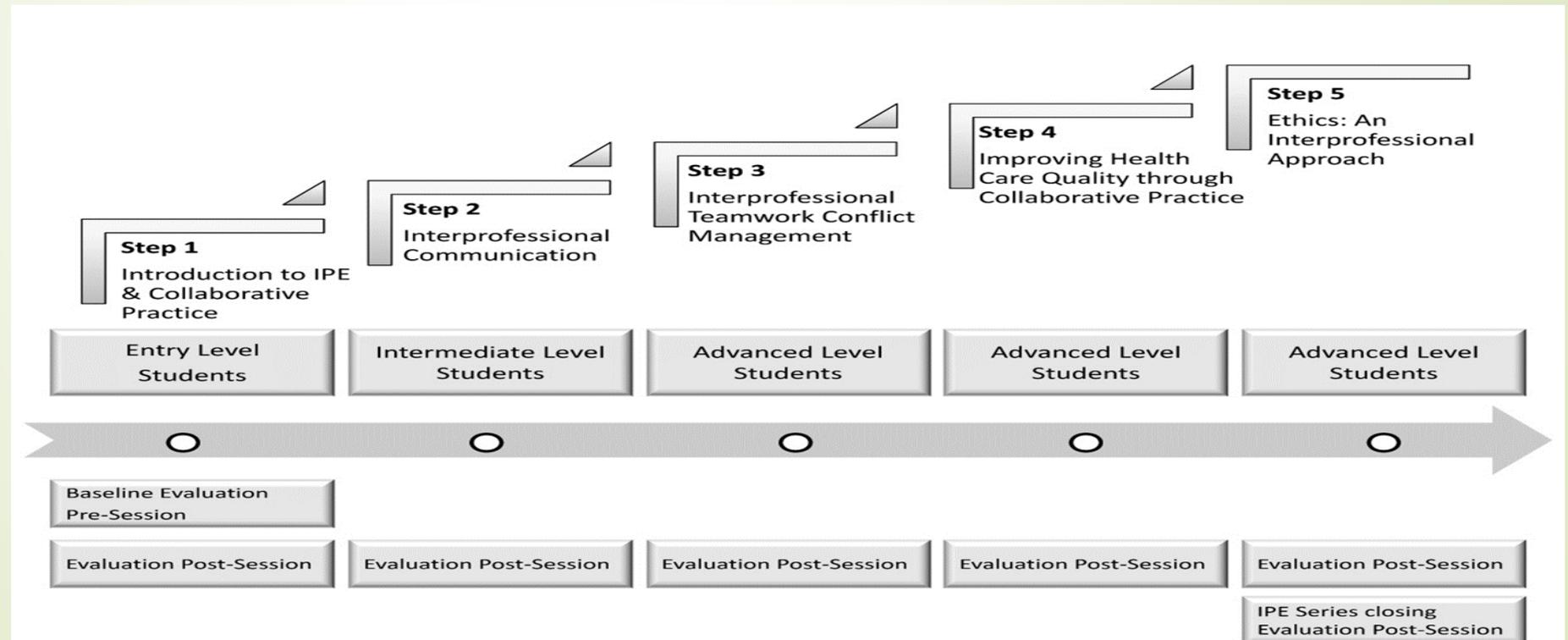


Lebanese American University (LAU)

- ▶ Chartered in NY State, two campuses in Lebanon
- ▶ Five health and social care majors
 - ▶ Social Work (BA)
 - ▶ Pharmacy (BS and PharmD)
 - ▶ Medicine (MD)
 - ▶ Nutrition and Dietetics (BS)
 - ▶ Nursing (BS)
- ▶ Impetus to start the IPE program
 - ▶ Charge from Board of Trustees when Schools of Medicine and Nursing were being launched (2009 & 2010)

LAU Interprofessional Education Program

- ▶ Launched in spring 2012
- ▶ A 5-step program that runs over 2 – 3 years depending on major
- ▶ From *Zeeni, N., Zeenny, R., Hasbini, T.D., Al Asmar, N., Bassil, M., Nasser, S.C., Milane, A., Farra, A., Habre, M., & Hoffart, N. (2016). Student perceptions toward interprofessional education: Findings from a longitudinal study based in a Middle Eastern university. *Journal of Interprofessional Care*, 30(2), 165-174, DOI: 10.3109/13561820.2015.1117060





Methods



Purpose

- Determine the perceptions that health and social care students have about their own and other health professions prior to participating in IPE
- Research questions
 1. How do students describe the roles and responsibilities of the five professions before they have participated in an IPE program?
 2. Are there differences in the perceptions of the students based on their major?
 3. Are there differences in the perceptions of the students who began the IPE Steps in 2012 compared to those who began in 2015?



Design

- One element of ongoing formative program evaluation
 - Approved as exempt by the LAU IRB
 - Descriptive qualitative approach
 - Analysis team included nursing, pharmacy and medical faculty
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Sample

- ▶ Preclinical students
 - ▶ Medical – first year
 - ▶ Nursing – sophomore
 - ▶ Nutrition – senior
 - ▶ Pharmacy – junior (2012 also PharmD students)
 - ▶ Social work – sophomore
- ▶ Students attending IPE Step 1 (n=405)
 - ▶ 2012 (n=259): medicine 35, nursing 34, nutrition 34, pharmacy 149, social work 7
 - ▶ 2015 (n=146): medicine 47, nursing 33, nutrition 46, pharmacy 17, social work 3



Data Collection

- First activity of IPE Step 1 session
- Single page form
 - Write 1 – 3 statements to describe each of the 5 professions:
 - Nutritionist
 - Pharmacist
 - Physician
 - Registered Nurse
 - Social Worker
 - Demographic information: program enrolled



Data Management

- ▶ Transcribed verbatim
 - ▶ Sample of transcribed data reviewed for accuracy
 - ▶ Most data elements were short phrases, sometimes only 1 or 2 words (e.g. “performs surgery,” “peripheral but important,” “the bridge between patients in hospitals and physicians”)
 - ▶ English 2nd or 3rd language for LAU students → unconventional terms (e.g. “improve social life”)
- ▶ Subsets of data created
 - ▶ One workbook for each profession
 - ▶ Data sheets by programs (nursing, medicine, pharmacy, nutrition & social work) and year (2012 & 2015)



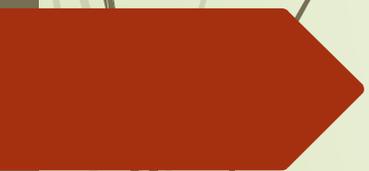
Data Analysis

- Each data subset coded by 2 team members
 - First, independently coded, with emergent codes and definitions
 - Codes, definitions and application refined between the two coders
 - Finalized when agreement reached
- Most data units coded with multiple codes
 - E.g. data unit “diagnoses and treatment” coded twice: diagnosis as well as treatment
 - 1723 coded units
- Entire team compared codes and definitions across the five professions



Bias Control

- No team member analyzed data for her/his profession
- Repeated meetings between 2-person team members till agreement reached
- Several meetings of entire team for peer debriefing
- Peer debrief by a social work faculty and a nutrition faculty to review the coding/analysis of the data about those professions
- Used data from surveys of students who did not identify their major (n=31) as a means of checking referential adequacy



Findings



Main Categories

- Roles and functions (examples)
 - Profession specific therapy/care
 - Assessment
 - Counseling/teaching
 - Education and work settings
 - Knowledge gained in academic program
 - Settings in which the profession may work
 - Collaboration with other professions
 - Perceptions and traits
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Q1: Descriptions of Roles and Function of the Professions

➤ Explicit functions

- Physician: diagnose (25%), treat disease (24%), prescribe medication (15%), perform surgery (5.5%)
- Nutritionist: promote health (28%), prescribe diet (24%), assist with weight control (11%), counsel patients (9.4%)
- Pharmacist: provide drugs (24%), monitor drug therapy (14%), counsel patients (8.6%), treat patient with right drug (7.7%)

➤ Less well defined functions

- Nurse: take care of patient (21%), help doctor (10.7%), help patient and *family* (10%), give medication (8.9%)
- Social worker: assist community (18.9%), do not know (14.5%), provide social help to individual (9.4%), provide emotional, psychological and moral support to patient and *family* (9.4%)

Common Codes

	Physician	Nurse	Nutritionist	Pharmacist	Social Worker
"X" therapy/care	24%	21%	24.4%	7.7%	1.4%
Assessment	5.1%	5.5%	4.7%	2.2%	2.6%
Promote health	3.9%	1.3%	28%	0.25%	5.1%
Counsel/Teach	2.9%	1.5%	9.4%	8.4%	9.4%
Perceived value-positive	6.7%	3.8%	2%	3.9%	2.2%
Setting of work	0.5%	11.7%	4.1%	3.5%	3.6%
Work with others	2.2%*	13.6%	1.7%	2.6%*	1.3%
Knowledge	1.9%	<1%	5.8%	13%	1%
Traits	2.6%	2.4%	1.5%	1.7%	0.9%
Perceived value-negative	<1%	<1%	<1%	<1%	<1%
Other					



Unique Codes

- Physicians: perform surgery
- Pharmacists: business skills; develop drugs
- Nutritionists: concerned about body image; involved in food services
- Social workers: provide social help to communities and needy people; provide economic support for individuals and communities
- Nurses: none



Q2: Differences by Student Program

- ▶ Nurse – descriptions related in part to the students' own profession
 - ▶ All 5 groups reported that nurses help doctors
 - ▶ Medical students were more likely to attribute this role to nurses than the other students
 - ▶ Nurses were least likely to name this role
 - ▶ Pharmacy students were more likely to describe nurses as giving medications than the other professions
 - ▶ Social work students viewed nurses as helping families more than any of the other groups



Differences by Student Program

- Nutritionist
 - All attributed health promotion to nutritionists
 - Nutrition students identified this role much more frequently than other students
 - Nutrition students much less likely to identify weight control as a function than others
 - Pharmacy students more likely to identify knowledge of nutritionists than others
 - Nutrition students were more likely to describe themselves as working with other members of the health care team than others



Differences by Student Program

► Pharmacist

- Pharmacy students perceived pharmacists' primary role as monitoring drug therapy, a role that other students rarely identified
- In contrast, the other 4 student groups saw pharmacists' primary role as providing drugs
- Pharmacy students saw teaching as one of pharmacists' major roles, but this was infrequently mentioned by the other students



Differences by Student Program

- Physician – more differences between their own and other students' descriptions
 - Medical students more likely to describe a health promotion role than other students
 - Medical students more often attributed positive value to their profession than did the other students
 - Medical students more often described physicians as working with others than did the other students
 - Social work and medical students less likely to identify surgical function of physicians than were nursing, pharmacy and nutrition students
 - Nutrition and pharmacy students twice as likely to describe physicians as diagnosticians than were nursing, social work and medical students



Differences by Student Program

- ▶ Social worker
 - ▶ “Do not know” was a response by all students except social work students
 - ▶ Provide social help was a function mentioned by all students except the social work students
 - ▶ Nursing and pharmacy students were the only ones to describe the social worker’s role as helping families
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Q3: Differences Between 2012 & 2015

- Few differences between students beginning in 2012 and those beginning in 2015
- Differences may reflect changing curriculum emphasis and/or sampling issues
 - Positive perception of physicians higher in 2015. Medical students describing themselves as “merciful healer” – part of SOM mission statement
 - Counseling function of pharmacists higher in 2012. Possibly due to inclusion of PharmD students in 2012, and low number of pharmacy student participants in 2015



Limitations

- ▶ Students asked to provide only three descriptions for each profession
 - ▶ Wide variation in number of participants based on differences in enrollment in the five programs
 - ▶ English language fluency
 - ▶ Combination of BS Pharmacy and PharmD students in 2012 data
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Discussion

- ▶ Studies of student perceptions of health profession groups using Hean's Student Stereotypes Rating Questionnaire
 - ▶ Michalec et al., 2013 – students in 5 of 6 areas of study rated their own profession highest on elements such as professional competence, leadership, ability to make decisions, etc.
 - ▶ Thurston et al., 2017 – pharmacy students rated higher than nursing by both pharmacy and nursing students.
 - ▶ Foster & Clark, 2015 – students in 10 areas of study who had participated in a 3-year IPE program showed variable change in stereotyping, and limited significant decreases. However, a comparison group showed no decrease in stereotypes among the same period.
- ▶ Wilbur & Kelly, 2015 - qualitative study of Qatari nursing and pharmacy students' perceptions of each others' professions. Similar findings related to pharmacists' view of nursing role in medication admin. and communication with others. Also similar findings related to nurses' view of pharmacists' knowledge of medications.

Discussion – the So What Question

- ▶ Huber & Lewis' (2010) work on Cross-Understanding
 - ▶ The extent to which a group's members possess an accurate understanding of the mental models of other members
 - ▶ Mental model – a person's mental representation of a system and how it works
 - ▶ Factual knowledge
 - ▶ Beliefs about relationships among system variables
 - ▶ Scope of the variables a member assumes to be within the system
 - ▶ Desired system properties that the individual prefers, expects or demands
 - ▶ Stereotyping and cognitive errors lead to inaccurate mental models and thus interfere with cross-understanding
 - ▶ Improving mental models and cross-understanding can improve collective work

Mental Models Among Our Sample

- ▶ Factual knowledge
 - ▶ Little knowledge about social workers
 - ▶ Recognition that all do some type of assessment
- ▶ Beliefs about relationships among system variables
 - ▶ Individual – nurse, nutritionist, pharmacist, physician
 - ▶ Family – nurse, social worker
 - ▶ Community – social worker
- ▶ Scope of variables assumed to be within the system
 - ▶ Illness -- nurses, nutritionists, pharmacists, and physicians
 - ▶ Health – nutritionists
- ▶ Desired system properties that individual prefers, expects or demands
 - ▶ Perceived value of the other professions



Implications

- Reinforces the need to provide accurate information about each profession to students as they begin IPE
 - Knowing that they have stereotypes is not enough
 - Need to better understand what the stereotypes are
 - The concept of Mental Models may offer a new way of helping students (and faculty) move beyond stereotypes
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