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Needs Assessment of an International Service-learning Program: An Innovative Approach to Community-Based Learning

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ABSTRACT

This study used an original survey to evaluate the physical therapy and education needs of health care workers affiliated with a community hospital in the Dominican Republic. Results suggest that health care workers affiliated with this hospital could be an ideal audience to focus the initiation of a sustainable rehabilitation training program. The survey described can assist other academic physical therapy and medical programs in the planning and implementation of international service-learning opportunities for students and faculty by providing a guide for assessing the needs of local stakeholders.

Background and Purpose

In the past several years, community-based learning in medical education has seen a dramatic rise as it is integrated into curriculums and as students choose to actively participate in community engagement (Stoltenberg, Rumas, & Parsi, 2012). These experiences are beneficial to students and universities when they are offered on both a local and an international level. In either context, community-based, service-learning activities must provide academically rigorous expectations and objectives, sustainable site partnerships, and appropriate student mentoring (Stoltenberg et al., 2012).

Bringle, Clayton, and Price (2009) refer to civic engagement/service-learning as a mutually beneficial collaboration of “teaching, research, and/or service that is both in and with the community.” The authors state the importance of forming partnerships within the communities served and of proper evaluative methods; however,

they do not include the concept of ongoing needs assessments.

Needs assessment is a common method used to increase knowledge about a community for the purpose of planning or modifying health promotion programs in public health (Stoltenberg et al., 2012; Parsi & List, 2008). These assessment methods also encourage collaboration between health professionals and community members (Bartholomew, Parcel, Kok, Gottlieb, & Fernandez, 2011).

Increasingly, physical therapist (PT) education programs recognize the benefits of academic service-learning and are offering International Service Learning (ISL) opportunities to students. In their 2013 *Evaluative Criteria PT Programs*, The Commission on Accreditation in Physical Therapy Education (CAPTE) reports the expectation that PTs “participate and show leadership in community organizations and volunteer service” (2013). In a 2009 survey, 28% of United

States and 50% of Canadian participating PT education programs reported using ISL as a component of their education curriculum in the past 10 years and 15% of all respondents were expecting to integrate ISL into their programs in the next two years. (Pechak & Thompson, 2009). These trends suggest that ISL will continue to grow as a means of essential pedagogy in PT curriculums.

San Francisco de Macoris, Dominican Republic, is the site of an ISL project between the Emory University Doctor of Physical Therapy (EUDPT) program and Hospital San Vicente (HSV). According to the Dominican Republic's national census data, in 2010, 12.41% (n=1,160,847) of the country's population was living with some type of disability, resulting in limited access to basic services such as health care, education, rehabilitation, and employment (Oficina Nacional de Estadísticas, 2013). The leading causes of disability among adults, in order of prevalence, include illness, congenital conditions, and old age (Consejo Nacional de Discapacidad, 2006). Higher standards of living and increased urbanization have made disability due to work, motorcycle, and motor vehicle accidents more common in this country (Rathe & Moline, 2011). Hospital San Vicente serves a four-providence area known as Región III, where the burden of disability is 5.0% of the adult population (Oficina Nacional de Estadísticas, 2012).

As the region's only specialty hospital, Hospital San Vicente bears the responsibility of managing the complex medical and hospital admission needs of community members in its service area. Although many patients experience decreases in physical function while admitted at Hospital San Vicente, PT is not provided by the hospital and the majority of Región III residents do not have access to other rehabilitation services and/or follow-up care after

hospital discharge (Amarante, 2008; Seguro Nacional de Salud, 2011). Moreover, high rates of poverty make it difficult to receive physical therapy services from private entities on an out-of-pocket, fee-for-service basis (Oficina Nacional de Estadísticas, 2012).

The Emory University-Hospital San Vicente (EU-HSV) partnership was established in January 2012 to help meet the PT needs of the target community, while providing students with a unique ISL opportunity. For one week each year, the EUDPT program sends a team of two PT faculty and/or alumni and eight PT students to deliver PT education to health professionals and community health workers (CHW), engage in ongoing needs assessments, and provide PT services to underserved community members.

Medical programs such as Doctor of Physical Therapy engage in ISL with the objectives not simply to have a positive impact on students, but also to provide medical assistance to the international community (Pechak & Thompson, 2010). When planning and implementing these programs, it is essential to first perform a needs assessment to ensure that the communities' needs are being met and that it is a good fit for the academic program. However, many PT education programs (and medical programs in general) do not have formal needs assessment measures that are congruent with these objectives. Evaluation measures for ISL programs are well documented in the literature, however a gap exists in the research regarding initial, formative needs assessments for the international communities served. In addition, outcomes tend to focus on the students' experiences and not on the communities being served (Pechak & Thompson, 2010).

The expansion of ISL programs without adequate assessment of the ongoing needs and effect of service-learning activities on the host

communities poses ethical concerns regarding project sustainability, balance, and reciprocity (Ethics of International Engagement and Service-Learning Project, 2011). In a 2009 study, Pechak and Thompson mention community-identified needs as one of the seven essential pillars of a strong ISL program for PT students (Pechak & Thompson, 2009). Community driven goals and objectives that have formal measures of progress can help to facilitate partnerships with host communities that are mutually beneficial and effective (Ethics of International Engagement and Service-Learning Project, 2011).

The purpose of the present study is to describe the implementation and results of an original needs assessment tool as a model for enhancing the needs assessment methods of ISL programs among PT and other medical educational institutions. The aims of this study were as follows:

1. To identify the physical therapy needs/common impairments of community members affiliated with San Francisco de Macoris, Dominican Republic.
2. To identify the educational needs of health care workers regarding PT interventions for their patients.

METHODS

Subjects

The survey was conducted using a convenience sample of health workers (n=29) in San Francisco de Macoris, Dominican Republic. In order to participate, survey respondents were required to be able to complete the survey independently and to be a health professional and/or CHW affiliated with HSV. Recruitment for the survey took place in March of 2012 following an in-service at HSV about PT in the hospital and community setting. Recruitment

consisted of the health care workers in attendance voluntarily taking the survey after the in-service; respondents were informed that participation was strictly voluntary. Written informed consent was obtained prior to distribution of the survey. This study was deemed exempt from Institutional Review Board (IRB) approval by the IRB at the home institution.

Survey Instruments

The original survey (Appendix A) was piloted to two nurses and one community health worker in the target community in January 2012. These pilot participants made suggestions regarding wording and content to best apply to the target community. The actual survey was distributed in March 2012 and collected demographic information about the respondents' profession, number of patients seen on a daily basis, most commonly seen health conditions and perceived PT needs for the hospital. The survey consisted of two open-ended and five multiple-choice questions, concluding with the option to provide additional written feedback in the comments section. The survey was given in Spanish, the native language of all of the participants.

Given that the aim of this study was to provide an innovative approach to needs assessment, an original survey was used which was specifically designed to assess the physical therapy needs of an international, underserved community. Experts recommend that a pilot study sample be 10 percent of the projected sample for the larger/parent study, although there may be variability based on the individual study (Connolly, 2008). Three individuals were chosen for this pilot study, which is slightly more than 10% of the larger study (n=29). None of the three pilot participants reported any confusion or difficulty completing the survey. Similarly, all of the larger study participants were able to complete the

survey independently. Although the pilot and parent samples were relatively small, the sizes were deemed appropriate for the purposes of this particular study by the investigator. The survey was prepared in the two months leading up to the pilot study and tested on the date described above.

Data Analysis

All data analysis was performed using Statistical Package for the Social Sciences (SPSS), version 20.0. Open-ended, textual data collected in a list format were reviewed and coded for themes by two reviewers. Data were made into figures using Microsoft Excel.

OUTCOMES

Nearly one-third of respondents identified themselves as licensed nurses (n=9, 31%), while another 37.9% (n=11) were non-licensed nursing professionals (equivalent to a nurse technician in the United States). Volunteer community health workers accounted for 17.2% (n=5) of participants. The remainder of the sample included one physician (n=1, 3.5%) and a variety of allied health professionals, including one occupational therapist and one psychologist (n=3, 10.3%).

There was wide variation in the number of patients that participants reported attending to on a daily basis. Numbers ranged from as low as six to 10 patients to as high as 60 patients per day. The most common ranges of patients seen per day were six to 10 and 21-25, with 20% of the sample reporting for each of these ranges. Seven percent of respondents reported seeing greater than 50 patients per day. In contrast, none of the CHWs who completed this survey item could estimate the average number of patients they saw daily as this number varied greatly day to day.

Aside from general medical conditions, the most common diagnoses

seen by the respondents were orthopedic and neurologic conditions (34.5% and 48.3%, respectively). These categories were followed by pediatric (27.5%) and maternal health conditions (24.1%).

When asked if patients would benefit from PT services, 100% of respondents replied 'yes.' One hundred percent of respondents who completed the survey item indicated that patients experiencing traumatic injury would benefit from PT services. Ninety percent agreed that patients with general weakness, neurological, and orthopedic conditions would also benefit from physical rehabilitation. Additional detail regarding the specific types of patients survey participants felt could benefit from PT is represented in Figure 1. More than 60% of all respondents indicated that their patients needed crutches, canes, and walkers. Nearly 30% of the sample added wheelchairs as a needed assistive device. Participant responses regarding the necessity of rehabilitation training and education are detailed in Figure 2.

One hundred percent of respondents indicated that their patients would benefit from PT. Three out of four CHWs added that providing rehabilitation services to the community and rehabilitation training for CHWs was desired.

DISCUSSION AND CONCLUSION

The results of the survey reveal important information about the physical rehabilitation needs of patients at Hospital San Vicente and the training needs of health care workers. In addition, this needs assessment provides a valuable tool for PT and other medical academic programs to use in their international community-based learning opportunities, as the evaluation and results can be generalized and used widely.

Figure 1: Types of Patients Who Could Benefit From Physical Therapy Services

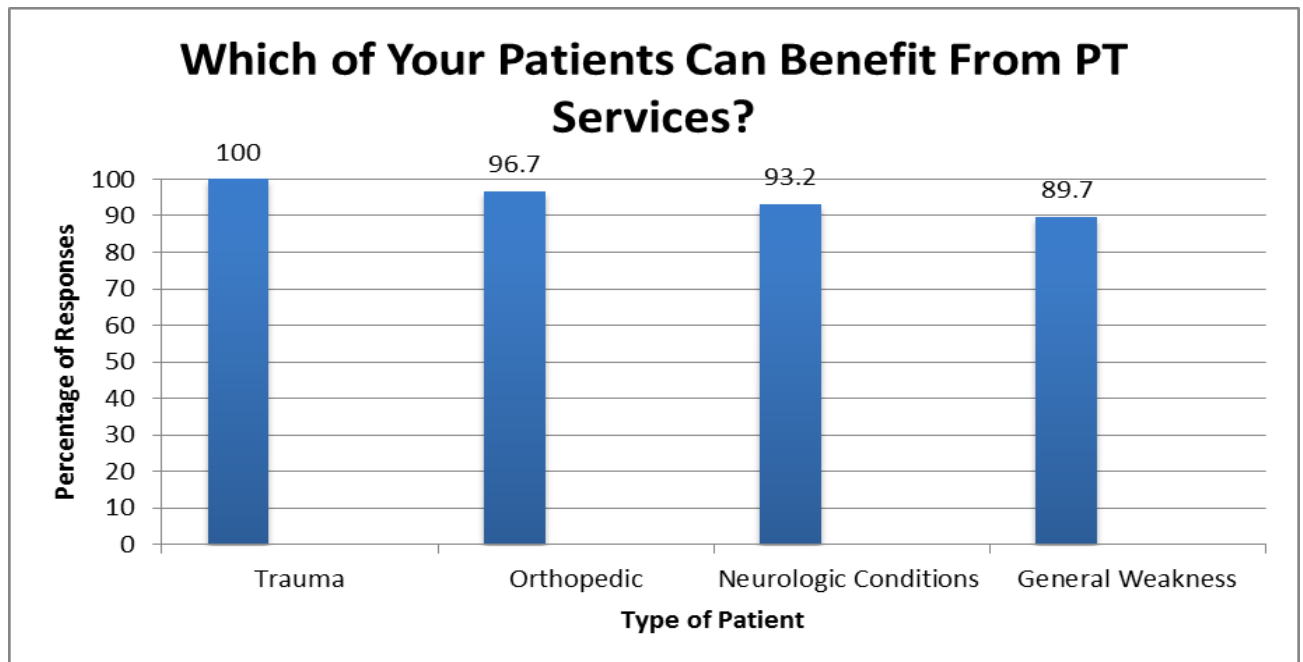
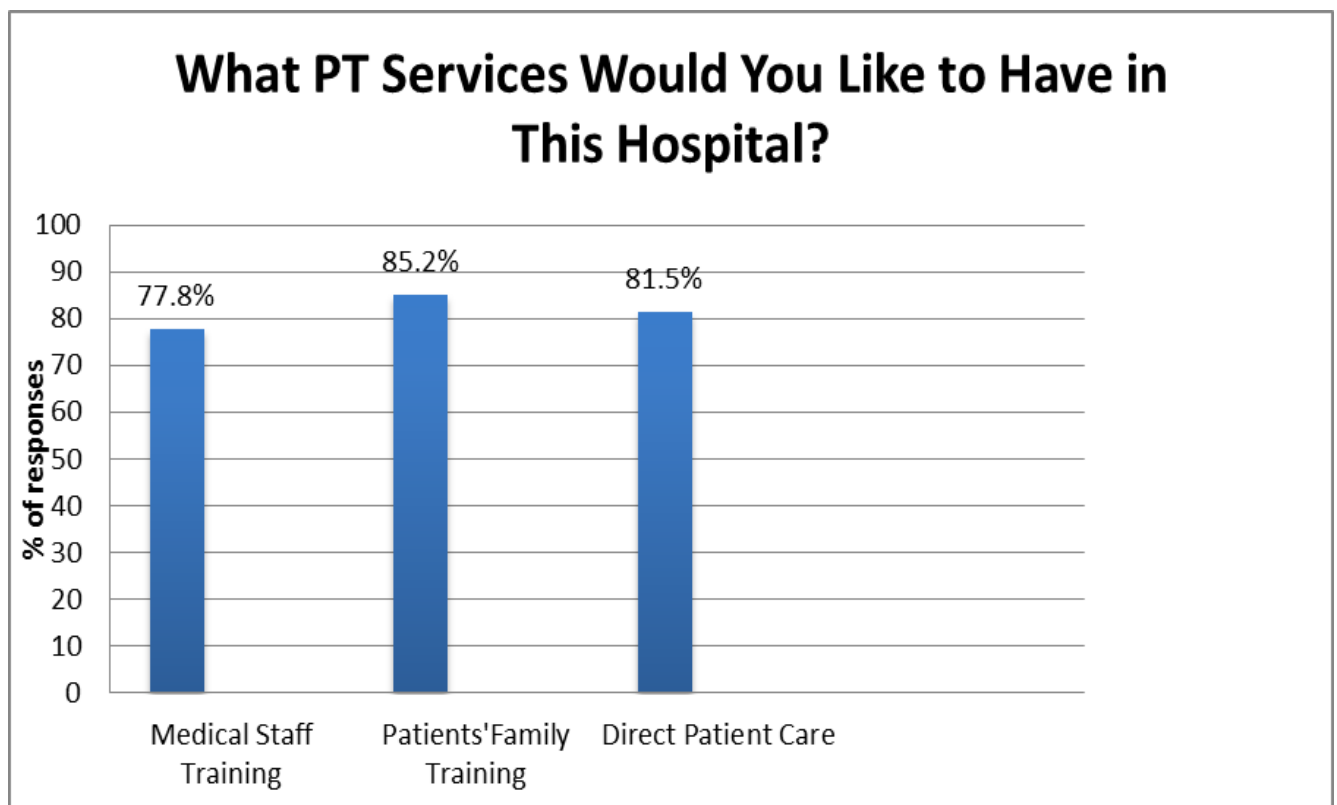


Figure 2: Physical Therapy Services Desired in Hospital San Vicente



At Hospital San Vicente, general medical and orthopedic/neurological conditions (including trauma) were among the most commonly seen medical diagnoses. The perceived PT needs of respondents mirror many of the leading causes of disability on a national level. In the Dominican Republic, accidents account for 16.1% of disability among males and 4.4% among females; violence/abuse is reported to account for 1.8% of disability among males and 0.7% among females (Consejo Nacional de Discapacidad, 2006). All respondents indicated that patients admitted secondary to trauma could benefit from PT. Moreover, there was strong consensus that all major patient populations would benefit from PT services, although it appears trauma and neurological conditions may play a larger role in disability at the hospital than in the general population.

The survey also indicates that although trained personnel and material resources for physical rehabilitation were low, interest in receiving training in PT techniques was high. The demographic information of respondents is helpful in determining how future interventions resulting from the EU-HSV partnership may need to be tailored. Nurses represented approximately 60% of the sample in the survey. Given the shortage of rehabilitation professionals in the area as well as the educational background, variety of work settings, and breadth of patients treated, nursing professionals make for a strong target audience to implement rehabilitation training programs. Furthermore, many successful rehabilitation training programs in low-resource countries use nurses to provide follow-up rehabilitative care (World Health Organization, 2011; Atwal, 2006). Physical therapy students and faculty can therefore include nursing professionals as well as community health workers when training local health professionals in the

implementation of simple PT exercises and assistance for those in need.

Sustainability of consistent rehabilitative care may be enhanced by providing graded, mid-level training to CHWs (World Health Organization, 2011). In conjunction with rehabilitation training programs, a reliable method of tracking patients in the community is necessary as evidenced by respondents' stated inability to estimate the number of patients seen on a daily basis. Another avenue for intervention is to find a sustainable way to provide the hospital and surrounding community with assistive devices for ambulation and mobility. These devices may be either kept by community members with chronic disability, or passed along within the community once an acute injury has resolved.

The present study was an exercise in using a needs assessment survey to solicit the needs, preferences, and involvement of host communities participating in ISL partnerships. The results indicate that the perceived need for PT services and equipment across the most common patient types/injuries is high. Sample demographics suggest that the nurses affiliated with Hospital San Vicente could be an ideal audience to focus the initiation of a sustainable rehabilitation training program. Results regarding the patient population and needs serve as background information that can be used to inform community driven interventions using evidence-based, health promotion program planning frameworks.

The needs assessment methods described in the paper can assist other academic PT programs in the planning and implementation of ISL opportunities for students and faculty. The method and results can be generalized to other academic programs and to other countries, as the needs assessment is highly generalizable and may be replicated to suit the needs of PT educational and other medical

institutions. This instrument was innovative in that it focused on assessing the physical therapy needs of an underserved, international community in the Dominican Republic. As stated previously, evaluation measures for ISL programs are well documented in the literature, but there is a gap in research regarding initial, formative needs assessments for the international communities served.

LIMITATIONS

Various limitations should be considered in this study. The small sample size and use of convenience sampling limit the power and external validity of the survey results; therefore, conclusions should not be overstated to a larger population. Because the participants were all part of a single hospital system within the same city, the conclusions of this study should not be generalized to a larger demographic or population and scale of effect must be considered. Moreover, the literacy level of respondents was not pre-determined and may have limited the ability of respondents to complete the questionnaire independently. Despite these limitations, the survey was a convenient method chosen to provide a depiction of the PT needs of an underserved international community.

This original survey had no existing reliability validity data; however, the piloting process did allow for content validity. A survey pilot followed by revisions based on participant feedback helped to improve item wording and instruction, especially given that it was piloted to HCWs from the target community.

Respondents left several comments in the final feedback sections and in the fill-in-the-blank portions. These additional remarks suggest that this population and/or phase of project development may have lent itself better to an evaluation using qualitative

methods such as interviews and focus groups.

Areas for Future Investigation

The assessment tool described in this paper opens doors for future investigation. This needs assessment was performed for one institution's ISL program in an individual country. However, more research can and should be done in different international communities. This needs assessment was performed in a community-based hospital setting. It will be important to further this type of assessment to home settings as well as outpatient facilities to make sure that the full scope of communities' PT needs are properly captured. Assessing the needs of the community before an ISL program is established is the best method to ensure a positive, sustainable experience for target communities and academic institutions alike.

REFERENCES

- Amarante, J. (2008). *Nuevo modelo de atención primaria en la República Dominicana*. Retrieved from: <http://www.slideshare.net/jayabero/nuevo-modelo-de-atencion-de-salud-en-la-republica-dominican>
- Atwal, A. (2006). Multidisciplinary perceptions of the role of nurses and healthcare assistants in rehabilitation of older adults in acute health care. *J Clin Nurs*, 15, 1418-1425.
- Bartholomew, L., Parcel, G., Kok, G., Gottlieb, N., & Fernandez, M. (2011). *Planning health promotion programs: An intervention mapping approach*. San Francisco, CA: Jossey-Bass.

- Commission on Accreditation in Physical Therapy Education. (2013). *Evaluative Criteria, PT Programs: Accreditation Handbook*. Retrieved from: http://www.capteonline.org/uploadedFiles/CAPTEorg/About_CAPTE/Resources/Accreditation_Handbook/EvaluativeCriteria_PT.pdf
- Connelly, L. M. (2008). Pilot Studies. *Medsurg Nurs*, 17(6), 411-12.
- Consejo Nacional de Discapacidad, Unidad de Investigaciones Oficina Nacional de Estadísticas, & Oficina Panamericana de la Salud. (2006). *La Discapacidad en la República Dominicana: Un perfil a partir de datos censales*. Retrieved from: [http://lgdata.s3-website-us-east-1.amazonaws.com/docs/2267/349097/DiscapacidadRD_PerfilDatos_Censales\[1\].pdf](http://lgdata.s3-website-us-east-1.amazonaws.com/docs/2267/349097/DiscapacidadRD_PerfilDatos_Censales[1].pdf)
- Oficina Nacional de Estadísticas. (2008). *Perfiles Sociodemográficos Provinciales y Municipales*. Retrieved from: <http://one.gob.do/index.php?module=articles&func=view&catid=217>
- Oficina Nacional de Estadísticas, Panorama Estadístico, Departamento de Investigaciones. (2013). *Poblacion con Discapacidad en Republica Dominicana: un Acercamiento a Partir del IX Censo Nacional de Poblacion y Vivienda 2010*. Year 5, no. 55, April 2013.
- O'Meara, K. A., & Niehaus, E. (2009 fall). Service-Learning Is...How Faculty Explain Their Practice. *Michigan Journal of Community Service Learning*, 17-32.
- Parsi, K. & List, J. (2008). Preparing medical students for the world: Service-learning and global health justice. *Medscape J Med*, 10(11), 268.
- Pechak, C., & Thompson, M. (2009). International service-learning and other international volunteer service opportunities in physical therapist education programs in the USA and Canada. *J Phys Ther Educ*, 23(1), 71-79.
- Pechak, C. & Thompson, M. (2009). A conceptual model for optimal international service-learning and its application to global health initiatives in rehabilitation. *Phys Ther*, 89(11), 1192-1202.
- Pechak, C. & Thompson, M. (2010). Going global in physical therapist education: International service-learning in US-based programmes. *Physiother Res Int*, 16, 225-236.
- Rathe, M. & Moline, A. (2011). Sistema de salud de República Dominicana. *Salud Pública Mex*, 53(2), 255-264.
- Seguro Nacional de Salud (SeNaSa). (2011). *Prestadores Servicios de Salud*. Retrieved from: <http://www.arssenasa.gov.do/index/index.asp>
- Stoltenberg, M., Rumas, N., Parsi, K. (2012). Global health and service learning: Lessons learned at US medical schools. *Med Educ Online*, 17. doi: 10.3402/MEO.V17i0.18848
- World Health Organization. (2011). *World Report on Disability*. Retrieved from: http://www.who.int/disabilities/world_report/2011/accessible_en.pdf

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APPENDIX A: SURVEY 1 (English translation)

Number _____

1. What is your profession?

Doctor _____ Nurse _____
Other _____

2. Roughly how many patients do you attend to each day?

3. What types of conditions or diseases do you see most often? (Make a list)

4. Do you think that the patients in this hospital are able to benefit from physical therapy?
Yes _____ No _____
I don't know _____

5. Which of your patients can benefit from physical therapy services? (Mark all that apply)

- a. Those with orthopedic conditions
- b. Those with neurologic conditions

c. Those with general weakness

d. Other _____

6. What type of equipment do your patients need that are not available at this time?

- a. Crutches
 - b. Walkers
 - c. Canes
 - d. Other _____
- _____

7. What physical therapy services would you like to have in this hospital? (Mark all that apply)

- a. Training of medical personnel in how to care for patients
 - b. Training of patient families in how to take care of them at home
 - c. Direct care to patients
 - d. Other _____
- _____
- _____

Comments: