AN APPLICATION OF INFORMATION SEEKING ANXIETY SCALE TO A UNIVERSITY LIBRARY: A CASE STUDY AT UNIVERSITY OF PERADENIYA, SRI LANKA

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Abstract

Libraries and their users are nervous of falling behind with the rapid rate of technological change. All the forms of academic-related anxiety, and frustrations associated when searching information. Most of the research studies have shown that, majority of the undergraduates do not use the library resources in an expected level due to variety of anxieties. Therefore, the main aim of this paper is to assess and apply the Information seeking Anxiety Scale (ISAS) among university library users at University of Peradeniya and determines the suitability of application of this scale to a Sri Lankan university students relating to seeking of information. A survey research method was applied. Close-ended questionnaire was used as the research tool and data was collected from undergraduates in 2013/2014 academic year. The ISAS developed and validated by Mohammadamin, Abrizah and Karim, (2012) was taken as the base construct for this study. The overall $\alpha=0.902$ of the original scale indicated and the Sri Lankan study

increases up to 0.937. It indicates more or less similar results of the original study and it has been proved that, this scale can be applied to the Sri Lankan university context too. All the students are suffering with different types of anxieties related to the seeking of information. Therefore, it is better to have a year-based user education program for them to develop their skills to use resources without getting anxious.

Keywords

Information Seeking Anxiety, Library Anxiety, Humanities Undergraduates, Sri Lanka

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1. Introduction

The libraries profound changes have taken place in everywhere in the world and based on that the explosion of knowledge, advancement of technical innovations and information have contributed to the increasing of access information. With the knowledge that any information is available in the library or can be accessed using the Internet or via online access to other libraries comes a new form of anxiety for users i.e. the fear of not being able to locate the information or information source from the web. It is a well known fact that to a certain extent of library users have included information seeking for their academic research and they face unintentional or intentional anxiety in the information seeking process. Chien, 2012 claimed that e-learning experiences are helpful to reducing users' computer anxiety, enhancing their computer skills, and improving learners' confidence in using computers. Further when students are familiar with a task, they perceive more chances of success, thus decreasing their anxiety levels (Simsek, 2011; Shu, Tu, & Wang, 2011; Hauser, Paul, Bradley, 2012; Hong et al., 2012).

Anxiety has always been known as a psychological barrier in educational setting which has caused different cognitive, emotional, and behavioral effects in students. Feasibly Kuhlthau, 1993 identified the various emotions experienced by searchers while learning and seeking information. Moreover, several types of academic-related anxiety have been studied; **library anxiety** (Mellon 1986; Jiao & Onwuegbuzie 2004; Jiao, Onwuegbuzie & Bostick 2006; Jiao, Onwuegbuzie & Waytowich 2008; Ahmed & Aziz, 2017), **research anxiety** (Onwuegbuzie 1997; Kracker 2002), **computer anxiety** (Maurer 1994; Jerabek, Meyer & Cordinak 2001; Jiao & Onwuegbuzie 2004; Abusin & Zainab 2010; Vidanagama, 2016), **self-efficacy and anxiety** (Khorrami-Arani, 2001; Durndell & Haag, 2002; Eastin & LaRose, 2002; Thatcher & Perrewe, 2002; Barbeite & Weiss, 2004; Sam, Othman & Nordine et al., 2005; Shu, Tu, & Wang, 2011;

Hauser, Paul, & Bradley, 2012; Hindagolla, 2014; Shu et al., 2015; Yerdelen, McCaffrey, & Klassen, 2016; Huerta, Goodson, Beigi, & Chlup, 2017; Roick & Ringeisen, 2017) and **trait anxiety** (Thatcher & perrewe, 2002; Shaikh, & Karjaluoto, 2015). Kuhlthau, 1993 mentioned that people felt indecision and apprehension when commencing the task, but felt most confused, frustrated, and doubtful during early, less-focused stages of seeking, subsequently, after gathering focus in their searches, indecision give way to optimism. Schwartz, 2005 mentioned that focusing on decision-making during search, people often feel happier with their choices if they have fewer options to begin with.

However, of all the forms of anxiety, frustration associated with the search for information in library or electronic resources appear to be among the most widespread, most likely because practically most, if not all, students are bound to find information at some point in their programs of study (Onwuegbuzie & Jiao, 2004; Williams, Slade, & Dwivedi, 2014). Computer anxiety has been described as anxiety about the implications of computer use such as the loss of important data or fear of other possible mistakes (Compeau et al., 1999). Nevertheless, according to Eastin & LaRose, 2000 both Internet anxiety and self-disparagement demonstrate a significant negative relationship to Internet self-efficacy. Moreover, according to Young & Von Seggern, 2001 frustration and anxiety have been reported to be the most prevalent negative feelings during the information seeking process among undergraduate and postgraduate students.

According to Mohammadamin et al., 2012 no valid and reliable instrument has been developed to measure levels of information seeking anxiety among students and the past studies were investigated the information seeking anxiety but did not develop a scale to measure this construct. To fill this gap they have conducted and validated a scale that could be employed to assess anxiety during the information seeking process. Based on this scale the present study was carried out with following objectives.

1.1 Objectives of the Study

The intension of this study is to use the Information Seeking Anxiety Scale (ISAS) of Mohammadamin et al., 2012 among the university library users at University of Peradeniya, Sri Lanka. More specifically the purpose of the study was to;

1. Assess and apply the Information seeking Anxiety Scale (ISAS) among university library users at University of Peradeniya.

2. To determines its suitability of application of the scale to a Sri Lankan university students relating to anxiety of seeking of information.

2. Literature Review

The way of undergraduate students selecting their information resources has changed dramatically in the last few decades. Current undergraduate students, also called millennial students or digital natives, have used the internet from an early age and are more technologically savvy than previous generations (Zimerman, 2012). Gelfand, 2002 indicated that students reported visual discomfort when staring at a monitor, and they lost patience waiting for downloads. Ray & Day, 1998 found that limited time and lack of effective information retrieval skills are the main barriers to using e-sources. Conversely, faster access to information was noted as the main advantage of electronic sources. Bar-Ilan et al., 2003 found that speed; accessibility and searchability were seen as the main advantages while the main disadvantages were lack of access, lack of coverage and low readability. Despite knowing the importance of resource credibility, students still prefer to use easily accessible web sources, and are less likely to seek credible sources from the library. However, some researchers argued that undergraduate students tend to use library sources for formal research, and are aware of the reliability issue in using digital information. Rowlands, 2007 mentioned that students were unfamiliar with search skills. Urquhart & Rowley, 2007 categorized factors influencing student use of electronic resources: organizational factors and individual factors. Organizational factors include information design, information, learning skills, infrastructure, information access, organization leadership and culture, and university policies and budgets. Individual factors include information literacy, teacher guidance, search strategies, curriculum, library-supported training courses, and pedagogy.

Internet is important to the libraries for searching information for products or services, exchanging e-mails, searching the web, and problems also encountered when using Internet. The Internet is a network of networks and a predominant means of Information and Communication Technologies (Semertzaki, 2008). Several studies have extensively explored the use of Internet in the libraries in different countries. However, the studies were conducted concerning the different aspects of usage of the Internet. In the Sri Lankan University Library context, Seneviratne, 2004 surveyed the Internet and its impact on LIS and revealed that, though, the

majority of the respondents used Internet, due to various reasons, and the students were not using the Internet University of Moratuwa library (UML). Such are problems with computer technology and lack of the followings: time, related knowledge, interest and facilities to access the Internet. It was significant that, the UML site visitors have identified the library OPAC and the online journals are the most important feature in the site. This was a significant finding compared to review studies. However, Saeed et al., 2000 survey is different than this study and he examined the status of Internet facilities in the university libraries in Pakistan. He mentioned that although half the university libraries (10) in Pakistan have access to Internet and it has become an essential part of library services, the status of hardware availability was limited. While all libraries had Internet access, more than one service such as e-mail and the www were heavily used by these libraries. Internet is also being extensively used for performing various library functions and it has played a pivotal position.

All about relating to the computer anxiety levels, Compeau et al., 1999 negatively proved that higher levels of anxiety lead to less effective computer use. Research by Anthony, Clarke, & Anderson, 2000 and Shu et al., 2011 studies indicated that the correlation coefficient between 'computer anxiety' and 'computer thought's rating scales' is related but not identical. A direct, statistically significant, negative correlation coefficient indicated that a person who experiences high levels of computer anxiety would have more negative thoughts about using computers (Thatcher & Perrewe, 2002). This is very similar to the results put forth by Compeau et al., 1999. The correlation coefficient between 'computer anxiety' and 'experience' indicated that experience with technology reduces computer anxiety. Hauser et al., 2012 and Simsek, 2011 mentioned that face-to-face medium anxiety is negatively related to both general and specific self-efficacy. Chien, 2012 claimed that e-learning experiences are helpful to reducing users' computer anxiety, enhancing their computer skills, and improving learners' confidence in using computers. Although, researchers have not found any significant relationships between three of these concepts; computer anxiety, attitudes toward the Internet, and computer self-efficacy, a significant relationship between computer anxiety and attitudes toward the Internet has been identified (Sam et al., 2005). Nevertheless, according to Eastin & LaRose, 2000 both Internet stress and self-disparagement demonstrate a significant negative relationship to Internet self-efficacy, supporting the belief that "Internet stress will be negatively correlated with Internet self-efficacy" (p.4). However, undergraduates with high anxiety generally have more negative

attitudes about Internet use. Like Sam et al., 2005, Durndell & Hagg, 2002 used the same scales and also found no significant differences in computer anxiety levels, attitudes toward the Internet, and computer self-efficacy. An overall analysis of existing research shows that undergraduates typically have low levels of technophobia.

3. Methodology

The Information Seeking Anxiety Scale developed and validated by Mohammadamin et al., 2012 was taken as the base construct for this study, which covers the several hindrances that affect to use the library resources. According to them the development and validation of this scale has followed standard pattern for psychometric research and several validation approaches were used to validate the constructs. Moreover, they stated that this study provided the first step in understanding the factors associated with the construct of Information Seeking Anxiety (ISA) and this scale should be tested at universities in different countries to determine if the students share the same type of anxiety related to seeking information resources. With this background of the overall scale, the present study used this scale to assess the information seeking anxiety of the Sri Lankan University undergraduates and it covers the six aspects of barriers faced by the undergraduates when using the library resources. Those were indicated as sub scales related to the ISA scale;

- Barriers associated with information resources
- Barriers associated with computer and the Internet
- Barriers associated with library
- Barriers associated with searching for information
- Technical barriers
- Barriers associated with topic identification

A survey research method was applied for this study and close-ended questionnaire was used as the research tool to get data from the undergraduates in 2013/2014 academic year. The sample selection was done by using stratified random sampling method according to the study year and ten percent from each year was selected for the study. The pilot study was conducted in February 2015 with 100 undergraduate to validate the questionnaire.

Based on that, for the main study, sample was selected from $2^{nd} – 4^{th}$ year undergraduates in the Faculty of Arts of University of Peradeniya (Table1).

Table 1: *Each year students' availability at Faculty of Arts in 2015*

Studying Year	Students in Special degree	Students in General degree	Total	Study Sample 10%	% of the total sample
2nd Year	674	212	886	88	37
3rd Year	500	245	745	74	26
4th Year	470	-	470	47	11
Total	**1644**	**457**	**2101**	**209**	**74%**

Source: Faculty Senior Assistant Registrar (SAR), HSS, 2015

As same as to the pilot survey, a survey research method was applied and close-ended questionnaire with five point Likert scale was used to collect data from undergraduates in 2013/2014 academic year. Stratified random sampling method applied for each subject stream and 10% from $2^{nd} – 4^{th}$ year undergraduates in the Faculty of Arts, University of Peradeniya was selected.

According to Table 1, 209 samples was taken for the main study. The data collection was done in July to September, 2015. Then the collected data were entered into Statistical Package for Social Science (SPSS) ver. 13 and when data entering, the data were corded according to the responses expected for each and every item in the questionnaire (negative questions were reverse coded). In the analysis of data following methods were adhered such as frequency presentation, descriptive analysis, Cronbach's alpha, and item total correlations for each scale of the ISAS.

4. Results

4.1 Demographic Description

In the sample, the students were in 21-27 age of the three years. Majority of them (80.3%) were female and less than 20% were male. It is remarkable that only 4th year sample has more male students than other two study years. Out of the sample, 72.1% studied with Sinhala medium and only 11.5% used Tamil medium for their studies. At the same time, out of the total sample, 16.3% used English as a medium of their education. Regarding library use, 44.7% used frequently, 49.0% used the library moderately and 6.3% used rarely. About the searching of information, 46.6% used OPAC, 31.3% used both OPAC and Card catalogue and 14.9% getting

help from library counter staff to find their information requirements. Although it is a bit out dated system, only 7.2% used the card catalogue to get their information requirements.

4.2 Validation of the Information Seeking Anxiety Scale

When entering the data into the analysis software, negatively worded statements were reverse coded during data input and therefore all statements were scored in the same direction. To measure the sampling adequacy it varies between zero and one, with values greater than or equal to 0.60 used to indicate a good fit, the Kaise-Meyer-Olkin (KMO) is used for the study. The sampling adequacy was indicated as 0.741 and Bartlett's Test of Sphericity chi-square= 7813.572, df = 1431, p<0.000. As suggested by many researchers (Mohammadamin et al,, 2012; HIndagolla, 2014; Weerasinghe, 2017) this indicated that items have common variance to proceed with exploratory factor analysis.

4.3 Factor Loadings of the Scale

Factor loading was conducted with the sub-scales of the Information seeking anxiety scale to assess the construct validity of the instrument as well as to determine how many items were grouped to each factor of the scale. For that exploratory factor analysis with varimax rotation was performed with 54 items. To create meaningfully dissimilar factors, the principal axis method was used. Statements with factor loading less than 0.4 were dropped. The factor loadings of the all 54 items in six sub-scales were listed as follows.

Table 2: *Factor Loadings for "Barriers Associated with Information Resources"*

No	Items	Loadings
1	I feel anxious when resources found during information seeking process are irrelevant	0.464
2	Unfamiliarity with information resources make me anxious during information seeking process	0.451
3	I feel anxious when the quality of retrieved information resources are unreliable	0.531
4	Finding poor quality information resources during information seeking process make me frustrated	0.527
5	Making judgment of the relevance of the retrieved information resources make me anxious	0.338
6	Making judgment of the quality of the retrieved information resources make me anxious	0.553
7	I feel anxious when I find too many unfamiliar information resources during information seeking process	0.535

8	I feel anxious when what is retrieved during information seeking process is not up-to-date	0.543
9	I feel frustrated when information resources that I found are not easy to use	0.482
10	I feel anxious when special skills are required to access information resources	0.331
11	I feel anxious when I know information resources, but I don't have access to them	0.424
12	Restricted access to required full text resources make me anxious when I seeking for information	0.406
13	I feel anxious when I cannot find necessary information on the web	0.445
14	I feel anxious when special equipments are required to access information resources	0.444

According to Table 2 of "Barriers Associated with Information Resources scale" although, 14 items were included in the original scale prepared by Mohammadamin et al., 2012 in this study two items (5, 10) were loaded with lower values. Therefore, those were excluded from the scale when it validated to the Sri Lankan university Context. In this study items with factor loading ranged from 0.331-0.553.

Table 3: *Factor Loadings for "Barriers Associated with Computer and the Internet"*

No	Items	Loadings
1	When I try to use computers for seeking information resources, I feel frustrated	0.601
2	I feel frustrated when I use computers for seeking information resources	0.589
3	I don't feel comfortable using online resources when seeking information resources	0.619
4	I feel overwhelmed when I use the Internet for seeking information resources	0.613
5	I am unsure about how to complete the information seeking process	0.620
6	The Internet plays an important role in my information seeking process	0.291
7	The computers don't play an important role in my information seeking process	0.754
8	I am comfortable using computers in seeking information resources	0.266
9	My Internet skills are not adequate for success in information seeking part of my research	0.544
10	I feel overwhelmed when seeking information on the web	0.542

The "Barriers Associated with Computer and Internet" is the second sub-scale of the Information Seeking Anxiety Scale. According to Table 3, two items (6, 8) loaded with low values and were eliminated for the final scale. When it compared with the original scale, it dropped to 04 items including the 6th and 8th items in this scale. Finally, only eight valid items

were taken for the Sri Lankan study. The items within this factor had rotated factor loadings ranging from 0.542 to 0.754, which indicated the higher range than the original scale e.g. 0.420 to 0.659.

Table 4: *Factor Loadings for "Barriers Associated with Library"*

No	Items	Loadings
1	When seeking information resources in the university library, I feel anxious because of the library's furniture	0.620
2	The librarian and library staff don't have time to help me when I seeking information resources	0.589
3	When seeking information resources in the university library, I feel anxious because of the library's policies and procedures	0.234
4	The university library doesn't offer enough services for postgraduate students	0.557
5	I feel anxious when seeking information from the library's website	0.566
6	Inadequate library lighting make me feel uneasy when using the library for seeking information resources	0.688
7	I feel uncomfortable asking for help from the library staff when seeking for information resources in the library	0.607
8	My previous negative experiences affect my feelings negatively when I use the university library for seeking information	0.592
9	The temperature in the university library is uncomfortable and I can't get my information seeking done	0.655
10	I am not comfortable using library services for seeking information resources	0.737
11	When I use library's Online Public Access Catalogue for seeking information, I feel frustrated	0.613

Table 4 indicated the "Barriers Associated with Library" and 11 items were in the original scale. According to the factor analysis of the study, 3rd item got lower factor loading value and therefore, only 10 items were taken for the final scale. The items within the third factor had rotated factor loadings between 0.557- 0.747 where originally loaded with 0.422 and 0.615range.

Table 5: *Factor Loadings for "Barriers Associated with Searching for Information"*

No	Items	Loadings
1	When seeking for information, I usually experience negative feelings like anxiety and frustration	0.743
2	I am embarrassed that I don't know how to find information resources	0.574
3	I am worried about not being able to find the necessary information during information seeking process	0.567

4	I feel anxious when I need information related to my research	0.532
5	I feel anxious from the beginning to the end of the information seeking process	0.673
6	I feel satisfied with the information found during information seeking process	0.072
7	I usually know when I have enough information to complete the information seeking process	0.119

The sub-scale of "Barriers Associated with Searching for Information" which indicated in Table 5, the same two items (6 & 7) where the original scale too were excluded and in this study also it excluded the same too items. Therefore, this scale was finalized with five items. Factor exhibited rotated factor loadings ranging from 0.532-0.743 but in the original scale it ranged 0.463 to 0.574.

Table 6: *Factor Loadings for "Technical Barriers"*

No	Items	Loadings
1	Mechanical issues during information seeking process make me anxious	0.564
2	Unknown computer errors make me feel uneasy during the information seeking process	0.584
3	I feel fear of making mistakes that cause system malfunction during information seeking process	0.633
4	I feel fear of damaging computers or other machines during information seeking process	0.633
5	Rapid changes in familiar hardware and software make me anxious when seeking information resources	0.595
6	Slow downloading of pages and files make me anxious when I seeking information resources	0.303
7	I feel anxious when different computer technologies are required to retrieve the desire information resources	0.363

Regarding the "Technical Barriers" (Table 6) only seven-item scale was given in the questionnaire and last two items (6 &7) were loaded with lower factor value. Although, only 6th item was excluded in the original scale here it has dropped two items and finalized with five items. The items within this factor exhibited rotated factor loadings ranged from 0.564-0.633 and the original scale indicated 0.451 to 0.663.

Table 7: *Factor Loadings for "Barriers Associated with Topic Identification"*

No	Items	Loadings
1	I feel anxious when selecting a general topic for my research	0.732
2	Selecting a general topic is a difficult part of information seeking process	0.593
3	Exploring information on a general topic for finding a focus make me anxious	0.475
4	Gathering information related to my specific topic make me anxious	0.537
5	I am not sure how to start searching information resources	0.645

As same as to the original scale of "Barriers Associated with Topic Identification" indicated in Table 7, none of the items need to be excluded and all items were factor loaded above the expected value. In this sub-scale the rotated factor loadings were between 0.475 and 0.732.

4.4 Reliability of the Information seeking anxiety scale

The internal consistency reliability of the six scales was assessed by using Cronbach's alpha. To assess the coefficient value of each sub scale, lower factor loadings were excluded from the scale.

Table 8: *Internal Reliability Analysis for "Barriers Associated with Information Resources"*

No	Scale Item no.	Alpha if item deleted
1	1	0.325
2	2	0.335
3	3	0.411
4	4	0.422
5	6	0.423
6	7	0.300
7	8	0.259
8	9	0.322
9	11	0.371
10	12	0.312
11	13	0.227
12	14	0.266

Table 8 indicated the alpha coefficient of the first sub-scale as 0.696 and it has indicated the adequate internal consistency. After deleting two items, it has indicated the highest value for 12 finalized items.

Table 9: *Internal Reliability Analysis for "Barriers Associated with Computer and the Internet"*

No	Scale Item no.	Alpha if item deleted
1	1	0.693
2	2	0.583
3	3	0.577
4	4	0.642
5	5	0.600
6	7	0.702
7	9	0.420
8	10	0.608

According to Table 9, the computer and the Internet scale indicated the alpha coefficient as 0. 855 which is the highest amount comparing to the table 8. The validation indicated 8 items for this scale.

Table 10: *Internal Reliability Analysis for "Barriers Associated with Library"*

No	Scale Item no.	Alpha if item deleted
1	1	0.643
2	2	0.668
3	4	0.577
4	5	0.533
5	6	0.648
6	7	0.580
7	8	0.649
8	9	0.582
9	10	0.803
10	11	0.529

The internal consistency coefficient of the third factor was 0.887. After examining the internal consistence reliability analysis, it was decided to drop one (1) item from this third factor which increased the Cronbach's alpha to a satisfactory value of 0.887. As a result, the number of valid and reliable items in the third factor decreased into ten (10) items (Table 10).

Table 11: *Internal Reliability Analysis for "Barriers Associated with Searching for Information"*

No	Scale Item no.	Alpha if item deleted
1	1	0.614
2	2	0.492
3	3	0.499
4	4	0.542
5	5	0.599

To determine the internal consistency of the fourth factor, Cronbach's coefficient alpha was calculated. It was yielded a reliability estimate of 0.657. Deletion of items 6 and 7 improved the reliability score up to 0.775 (Table 11). As a result, five valid and reliable items were remained for the fourth factor.

Table 12: *Internal Reliability Analysis for "Technical Barriers"*

No	Scale Item no.	Alpha if item deleted
1	1	0.505
2	2	0.653
3	3	0.625
4	4	0.625
5	5	0.596

The resultant alpha coefficient of 0.812 for the fifth factor provided evidence of adequate internal consistency. Inspection of Table 12 revealed that deletion of 6 & 7 items helped to increase the alpha coefficient of this sub-scale.

Table 13: *Internal Reliability Analysis for "Barriers Associated with Topic Identification"*

No	Scale Item no.	Alpha if item deleted
1	1	0.670
2	2	0.600
3	3	0.619
4	4	0.698
5	5	0.651

The alpha coefficient for the sixth factor was 0.842, which indicated a higher degree of internal consistency (Table 13).

Table 14: *Internal Reliability for Overall Scale and Sub-scales*

No.	Sub Scales	No. of items	Cronbach's Alpha
1	Barriers associated with information resources	12	0.696
2	Barriers associated with computer and the Internet	08	0.855
3	Barriers associated with library	10	0.887
4	Barriers associated with searching for information	05	0.775
5	Technical barriers	05	0.812
6	Barriers associated with topic identification	05	0.842
Total	**Information Seeking Anxiety Scale**	**45**	**0.937**

According to overall analysis of six sub-scales it has reduced the number of valid and reliable statements into forty-five (45) items. Finally, the high value of alpha coefficient for each of the sub-scales as well as the total instrument (=0.937) indicated the acceptable internal consistency of the Information Seeking Anxiety Scale (Table 14) where the original scale indicated 0.902.

5. Discussion

The purpose of the present study is to apply the Information Seeking Anxiety Scale (ISAS) developed and validated by Mohammadamin et al., 2012 into Sri Lankan university undergraduates. The ISAS scale was formally developed and validated by Malaysian researchers in 2012 and was used the same to identify the similarities and differences of the applicability of items in the anxiety scale to undergraduates in University of Peradeniya. Although there are 54 item scales finalized by the Malaysian researchers, when it applied to the Sri Lankan context, it was validated with 45 items by reducing 09 items from the original scale. The development and validation of this scale followed a standard pattern for psychometric research.

Analysis carried out for the validity of the original scale, the Cronbach's alpha was calculated to determine the internal reliability of all sub-scales as well as the overall scale.

Reliability analysis using Cronbach's alpha indicated a difference of nine items and were subsequently eliminated from the scale. These items were dropped from the first, second, third, fourth and fifth factors and it helped to increase the alpha coefficient value of these factors. After dropping the nine items from the original scale, the reliability (alpha) coefficients of the six (6) sub-scales were indicated in Table 15. This resultant the alpha coefficient of 0.937 for overall scale provided evidence of adequate internal consistency of the instrument.

Table 15: *Alpha coefficient of Original Scale and Present Scale*

Information Seeking Anxiety Scale	No of Items	Original Scale	No of Items	Present Scale
Barriers Associated with Information Resources	14	0.868	12	0.696
Barriers Associated with Computer and the Internet	10	0.726	08	0.855
Barriers Associated with Library	11	0.815	10	0.887
Barriers Associated with Searching for Information	07	0.802	05	0.775
Technical Barriers	07	0.809	05	0.812
Barriers Associated with Topic Identification	05	0.825	05	0.842
Overall Alpha Level	**54**	**0.902**	**45**	**0.937**

When comparing the items that finalized by the Malaysian research, the Sri Lankan study has rejected 09 items and some of those rejected items are the same items that rejected in the original study. Accordingly, the first sub-scale has 14 items in the original research but two items has rejected from the factor analysis by the Sri Lankan research. At the same time for the second sub-scale although the Malaysian study has rejected 4 items (4,5,6,8) here it has rejected only two items, which were item 6th and 8th items. When comparing with the rejected items in the original sub-scale, same two items were rejected by this research too. Moreover, relating to the third sub-scale although they have accepted 11 items, university of Peradeniya has rejected one item (3rd item from its sub-scale) by accepting only 10 items for the final scale. Regarding the fourth scale it shows the similarity by rejecting 6th and 7th items from the original scale and finally accepted only 5 items. From the fifth scale, Malaysian study has rejected only the 6th item, the Sri Lankan study rejected both 6th and 7th items from the scale. The final and the last sub-scale of the study were finalized with all five items as with the original research.

When comparing the reliability (α) coefficient of the scales fluctuations can be seen in both studies. The original scales indicated the 0.868, 0.726, 0.815, 0.802, 0.809, and 0.825 respectively for all sub-scales but the Sri Lanka results it is indicated as 0.696, 0.855, 0.887, 0.775, 0.812, and 0.842 respectively. It is clearly evident that accept the 1st and the 4th scales

other scales indicated the high α values than the original scale. Moreover, overall alpha coefficient of the Sri Lanka scale increases up to 0.937 (Table 15).

Results of the study further indicated that the newly developed Information Seeking Anxiety Scale had satisfactory construct validity as well as internal reliability. It contains (45) 5-point Likert format items which measures six (6) factors of information seeking anxiety in the library. Accordingly, this instrument is suitable for Sri Lankan university undergraduate context and it indicates the similarities in some aspects of the factors that identified in the research. According to Mohammadamin et al., 2012 "the Information Seeking Anxiety Scale should be tested at universities in different countries to determine if the students share the same type of anxiety related to seeking information resources" has been proved by this study and the scale can be used in other countries as well. Therefore, by replicating, the scale with Sri Lankan undergraduate it is also indicated the more or less similar results of the study and also the scale is totally related, and it has been proved that it can be applied to the Sri Lankan university context too. According to the original study the same types of anxiety relating to seeking of information resources were tested and it has been identified that all students are suffering with same type of anxieties related to the seeking of information resources. As Tati, Paul, & Golingi, 2016 and Alhammad, 2017 mentioned that this is because of the language barrier too.

6. Recommendation

As this Information Seeking Anxiety Scale is relevant to all kind of university libraries in South Asian region, this instrument could be used in future studies to determine the information seeking anxiety of other university students in the country. When it applies to the Undergraduates in Humanities and Social Sciences at University of Peradeniya, it is clearly indicated that after rejecting some of the items, the total sub-scales can be accepted to measure the information seeking anxieties among the undergraduates. Therefore, the validity and reliability of this instrument in other cultural and educational setting also recommended.

7. Implications

Future research should be needed to investigate the nature of the relationship between information seeking anxiety with newly introduced Information resources in the university libraries. As same as how long and how far this scale is valid to the other university

undergraduates who are in the developed countries can be assessed by applying the scale. Moreover, further research is needed to determine whether the instrument is acquiescent in other information seeking environments too.

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