The Demographic Effect on Information Practices of Pakistan's Urban Youth

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Abstract
This study aims to investigate the effect of demographics such as number of siblings, province, gender, and age on youth's everyday information using, managing, and sharing practices. It also exposes the demographic differences regarding information-seeking practices. A good number of studies have been carried out on youth and their information behavior but to observe their everyday information behavior and the impact of demographics very little literature is available. This study is an effort to understand the demographic effects and differences that may lead to designing systems to fulfill their everyday information needs. A quantitative approach was applied with a sample size of 1000 Pakistani urban teen students of private and public sector schools all over Pakistan. Survey methodology was applied; cluster sampling was done with a 5-point Likert scale. The data was collected through Google Forms and all the provinces were part of this survey including ICT and Gilgit Baltistan. Data Analysis was done through SPSS-21. The results revealed demographic variables were found to have a great effect on EIP, these variables were also found to polish up the proficiency of urban teen's everyday information practices. The findings would assist in developing helpful guidelines for urban teens to improve their EIP. This study will also respond to a gap in research by explaining the everyday information practices of urban teens.
Keywords: Information seeking, Information use, Information sharing, Everyday information practices, Urban Teens, Pakistan

1. Introduction

Savolainen (2008) stated that 'everyday information practices' are mostly in a non-work context, which includes hobbies, participation in social activities, and the entire problem-solving activities. Solomon (1997) pointed out that these practices are part of something that people call making sense of everyday life's events. Moreover, information practices are partially overlapped in the environments that are related to work and non-work. "The EIP model suggests that information seeking, use, and sharing are modes of everyday information practices accomplished in the daily life world" Savolainen and Thomson (2022). In general, information behavior may be conceptualized as including how in different contexts people need, seek, manage, give, and use information (Pettigrew, Fidel & Bruce, 2001).

Tuominen, Talja, Sanna, and, Savolainen (2005) mentioned that all practices which belong to humans have a social nature, and they originate from interactions between the members of the community. According to these authors, the information practice concept appears ephemerally in the early information-seeking literature of the 1960s and 1970s. Since this practice belongs to daily life routine, the people who have daily interaction must have some impact on these practices. In the same way, other demographic variables would also have some impact. So the understanding of how these demographic variables affect everyday practices would be known as an objective of the study and demographic differences regarding information-seeking practices would also be explored.

1.1. Research Questions
- What is the effect of demographics (number of siblings, province, gender, and age) on youth's everyday information using, managing, and sharing practices?
- What are the demographic differences regarding information-seeking practices?

1.2. Related Work

Today's teens are labeled as Generation Z, Net Generation, Google Generation, and Millennials as they are growing up with technologies and dealing with information differently. Thus, teens seek, use, manage, and share information in everyday life. To understand the background and the concepts of this study, relevant literature is searched and reviewed. The special focus is on the background behind the conceptual frameworks for this research such as information Seeking (IS), Information use (IU), and Information sharing (ISH). Various databases were searched such as Google Scholar, Information Science and Technology Abstract, ProQuest, etc. The literature review is done as follows:

- Information Seeking
- Information Use
- Managing Information
- Information Sharing

1.3. Information Seeking

In 1995 the term everyday life information seeking (ELIS) was introduced in library science by Savolainen (1995). Though the multifaceted phenomenon of ELIS behavior has been tested since the 1960s, various models have also been designed for information seeking, using, and sharing, and different domains are explored. Information Seeking (IS) in everyday life context is, seeking the information to solve the everyday life issues that occur daily. Different research studies have established that ELIS is essential to solving the problems of everyday life. The base of ELIS is Bourdieu's Habitus concept (which are habits) that leads to Savolainen's (1995) own two core concepts of "Way of life" and "Mastery of life" in the ELIS Framework. With the emergence of (ICTs), ways of life have changed, especially among teens, Agosto, Magee, Dickard, and Forte (2016). The literature on ELIS behavior of the young generation is less than the literature on information-seeking behavior. Few studies are conducted directly on ELIS behavior in this age group (Meyers, Fisher, and Marcoux, 2009; Agosto and Hughes-Hassell, 2005, 2006a, 2006b, 2007).

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1.4. Information Use

Information use behavior shows how the collected information is being used by someone. Everyday information-seeking has a long list of information-seeking steps, areas, and procedures, however, just collecting information does not lead to improvement. The results cannot be satisfactory if collected information is not used properly, which is why researchers declare that it is necessary to understand what happens to performance information after it has been reported and evaluated (Harty, 2006: Van Dooren & Van dewalle, 2007). The use of performance information in decision-making is a management behavior (Kroll, 2015).

González, Araújo, and Sabelli (2022) Did excellent research titled "Diffusion of theories and theoretical models in the Ibero-American research on information behavior" In this study the authors analyzed all the studies of 10 years (2010-2020) which used the theories and models. They discovered that a total of 25 studies have cited Choo's information use model. The use of information is explained by Wilson as the mental and physical behavior of people to know received information in their structure of knowledge Wilson (2000). Spin and Cole (2004) for the conceptualization of how humans find information examined the three disciplinary approaches. Gross (2005); Hirsh (1999); Large, Beheshti, and Breuleux, (1998) investigated the information use through relevancy criteria and regarding their seeking results on what judgment youth make. These studies highlighted that youth can make use of a variety of criteria on the relevance of information.

1.5. Managing Information

Managing information is also an important part of Everyday information practices and is closely related to personal information management (PIM). As defined by Jones (2010). Everyday information Management is a vast field greatly explored by (Heinström, Sormunen, Savolainen & Ek 2020) also proposed basic skeletons of information mastering. Managing information contains the everyday records stored by a person for his/her personal and everyday use or whenever required. Bergman (2013) mentioned Personal information management is related to order variables. Different researchers have mentioned different steps in managing information such as (Jones, 2010), (Lush, 2014),) and (Hwang, Kettinger, & Yi, 2015), and variables in personal information management are also identified by different researchers such as Malone (1983) identified the 'order' variable. Hanif & Warraich (2023) mentioned how youth is managing their information before sharing it with others.

1.6. Information Sharing

Information sharing varies from culture to culture. The ICT has also changed the information-sharing environment. Wilson (1981) focused on the exchange of information and its role for the first time, he further mentioned that information sharing is multidimensional and varies from context to context. Advanced technologies have also changed the information-sharing behavior of youth. Yuen and Shaheen (2007), and Majid and Wey (2006) developed a scale for measuring knowledge-sharing patterns of undergraduate students in Singapore. Mahmood and Richardson (2013) made a list of 17 Web 2.0 technologies that are mostly used, and the LISTA (Library and Information Science and Technology abstract) website has 199 built-in sharing tools.

Mohammed and Norman (2017) explored the millennial generation's organizational information-sharing practices through semi-structured interviews. Hanell (2017) measured Facebook activities for information sharing. Peel and Rowley (2010) measured the information-sharing behavior of workers, working for children and young people's organizations. Lips and Eppel (2017) shared the behaviors of information sharing, they also mentioned the conditions for which individuals share their personal information in their daily lives. Wei, Choy, Chew, and Yen (2012) highlighted that teens shared their information as the answer to questions that their fellows asked for.

2. Methodology

Survey methodology was used for this study. The survey method was considered the most appropriate method to collect the data from a huge and geographically dispersed population. Pakistani urban youth in the 13 – 19 years' age bracket were taken for the sample population. These students were studying in private and public schools in Pakistan. For data collection, the cluster sampling method was used and the following steps shown in figure no.1 were taken.
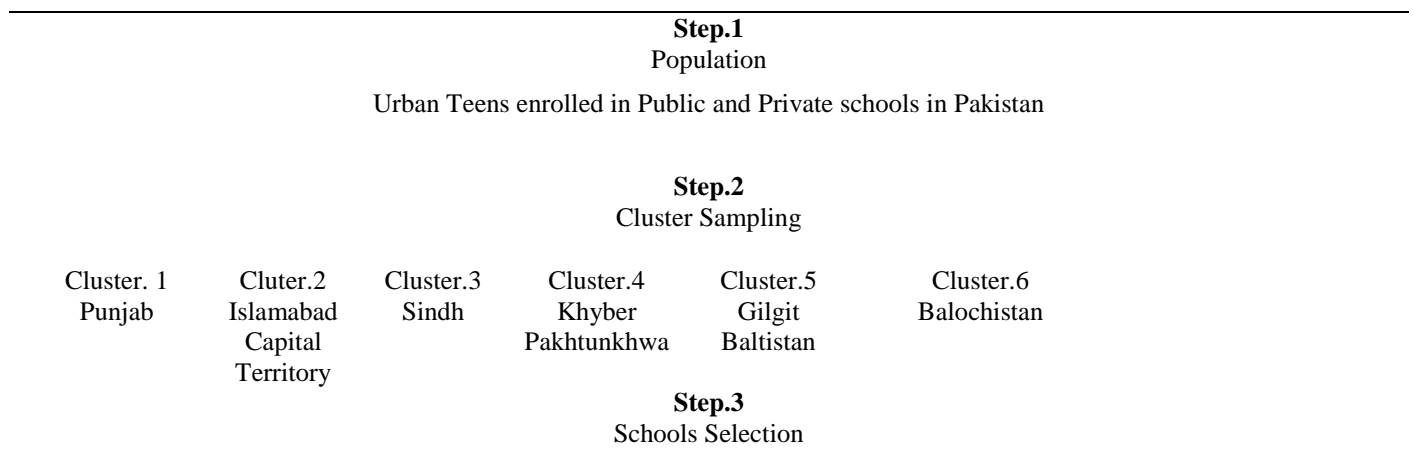

Step.1
Population

Urban Teens enrolled in Public and Private schools in Pakistan

Step.2
Cluster Sampling

Cluster. 1	Cluter.2	Cluster.3	Cluster.4	Cluster.5	Cluster.6
Punjab	Islamabad Capital Territory	Sindh	Khyber Pakhtunkhwa	Gilgit Baltistan	Balochistan

Step.3
Schools Selection

Figure 1: Process of sample selection

The first part of the questionnaire was based on demographic variables such as age, gender, number of siblings, and province. In the second part, the statements of the survey were given with a 5-point Likert scale having categories of responses such as 'strongly disagree', 'disagree', 'undecided', 'agree', and 'strongly agree'. To ensure content validity, the questionnaire was presented to three experts for content validity. The suggested changes were incorporated into the questionnaire.

3. Data Collection
The data collection process was done online, Google Forms were shared online with (1452) selected schools and 1045 responses were received. From these responses, 1000 useable responses were finalized which shows a 69% response rate. permission was obtained from the school principals and a link to the questionnaire was sent to the respective classes.

4. Data Analysis
Data were analyzed on the statistical software SPSS-21 since the first question was what is the effect of demographics (number of siblings, province, gender, and age) on teens' everyday information practices, and the following results were revealed.

4.1. Effect of Number of Siblings on Everyday Information Sharing
For identifying the effect of several siblings on everyday information sharing. Students' number of siblings consisted of three groups (0-2, 3-4, and more than 4). Table 1. indicates the mean scores of students' number of siblings have 0-2 siblings (M=3.51, SD=.60) 3-4 siblings (M=3.61, SD=.62), and more than 4 siblings (M=3.82, SD=.73). ANOVA test (F=15.80, p=.000) also showed that there was a statistically significant difference based on the number of siblings regarding information sharing practices of students.
Further post hoc Tukey HSD was applied to know the significant difference between groups. Table 2 indicates that (0-2) and (3-4) siblings have no significant difference (p= .100) regarding information practices. However, there was a statistically significant difference between (0-2) and more than four siblings (p= .000). Groups 3-4 and more than 4 have also significant differences (p= .000) in terms of information sharing practices.

4.2. Effect of Number of Siblings on Everyday Information Using
The effect of the number of siblings on everyday information use practices of students was investigated by using ANOVA. The results in Table 1. showed that there was a significant effect (F=3.74, p=.024) on the number of siblings in information-using practices. Post Hoc Tukey was also applied to know the group-based differences between numbers of siblings. Results in Table 2. indicate that there was no significant difference in information using practices between 0-2 and 3-4 (p=.214), and 0-2 and more than 4 (p=.393). However, a significant difference (p=.021) was found between the groups 3-4 and more than 4

Table 1: Effect of Siblings on Teens' information sharing, using, and managing

	0-2		3-4		More than 4		ANOVA	
	M	SD	M	SD	M	SD	F	p
Information Sharing	3.51	.60	3.61	.62	3.82	.73	15.80	.000
Information use	3.99	.47	3.93	.51	4.05	.61	3.74	.024
Managing information	3.86	.52	3.78	.54	3.97	.66	7.03	.001

4.3. Effect of Number of Siblings on Everyday Information Managing
The effect of the number of siblings on everyday information management was identified through ANOVA analysis. The results of ANOVA (F= 7.03, p=.001) in Table 1. indicate that there was a significant effect of the number of siblings on the everyday information management of students. It further investigated the difference between different groups of siblings (0-2, 3-4, and more than 4) regarding managing information of students by applying post hoc Tukey. Results in the table showed that there was a significant difference between 3-4 and more than 4 groups. However, no significant difference was between the other two groups i.e., 0-2 and 3-4, and 0-2 and more than 4.

Table 2: Post-Hoc Tukey for Multiple Comparison of the Number of Siblings regarding Everyday Information Sharing, Managing, and use

Dependent Variable	(I) Number of Siblings	(J) Number of Siblings	Mean Difference (I-J)	Std. Error	Sig.
Sharing	0-2	3-4	-.09349	.04554	.100
		More than 4	-.30850*	.05492	.000
	3-4	More than 4	-.21500*	.05546	.000
Managing	0-2	3-4	.07546	.04018	.146
		More than 4	-.10734	.04845	.069
	3-4	More than 4	-.18281*	.04893	.001
Use	0-2	3-4	.06201	.03697	.214
		More than 4	-.05814	.04459	.393
	3-4	More than 4	-.12015*	.04503	.021

*. The mean difference is significant at the 0.05 level.

It further investigated the difference between different groups of siblings (0-2, 3-4, and more than 4) regarding managing information of students by applying post hoc Tukey. Results in the table showed that there was a significant difference between 3-4 and more than 4 groups. However, no significant difference was between the other two groups i.e. 0-2 and 3-4, and 0-2 and more than 4 (Table 2).

4.4. Effect of Province on Teens' Information Sharing Practice

The effect of Provinces (Punjab, ICT, Sindh, KPK, GB, and Balochistan) on students' information sharing was investigated through ANOVA.

Table 3: Effect of Province on Students' information sharing, using, and managing practices

	Punjab		ICT		Sindh		KPK		GB		Balochistan		ANOVA	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	F	p
Information sharing	3.56	.55	3.35	.55	3.65	.62	3.88	.80	3.60	.73	3.69	.57	13.05	.00
Information using	4.00	.43	4.07	.45	3.92	.50	4.14	.58	3.80	.65	3.74	.54	11.53	.00
Managing information	3.89	.49	3.82	.48	3.83	.56	4.01	.70	3.78	.66	3.67	.53	5.23	.00

Data indicates that there was a significant difference (F=13.05, p=.000) between Provinces regarding information-sharing practices of students.

4.5. Effect of Province on Tense's' Information Use practices

Table 3 shows a significant effect of Provinces (Punjab, ICT, Sindh, KPK, GB, and Balochistan) on students' information use practices. The results of ANOVA (F=11.53, p=.000) showed a significant difference between Provinces regarding everyday information use practices of students.

4.6. Effect of Province on Teens' Information Managing Practices

The effect of students' Provinces was also checked through ANOVA. Table 3 showed that information managing practices have significant differences (F=5.23, p=.000) based on their Provinces.

4.7. Effect of Teens' Gender on Information Sharing, Using, and Managing

For knowing the results regarding the effect of gender on students' everyday information practices in terms of information sharing, use, and management. The results in Table 4 showed that there was a significant difference (-5.191, p=.000) in male and female students regarding their information-sharing practices. The mean score of male (M=3.52, SD=.594) and female (M=3.72, SD=.691) students showed that female students share more information than male students.

Table 4: Effect of Teens' Gender on Information Sharing, Using, and Managing

	Gender					
	Male		Female			
	M	SD	M	SD	t	P
Information Sharing	3.52	.594	3.72	.691	-5.191	.000
Information using	3.97	.504	3.99	.541	-.493	.622
Managing information	3.83	.502	3.88	.634	-1.257	.209

However, the results regarding information using (-.493, p=.622) and managing (-1.257, p=.209) have no significant difference between male and female students.

4.8. Effect of Age on Information-Sharing Practices:

The effect of age on information-sharing practices was measured through Simple Linear Regression Analysis.

Table 5: Effect of Age on Information-Sharing Practices

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.423	.057		59.800	.000
	Age	.092	.025	.114	3.621	.000

a. Dependent Variable: Sharing Information

The results showed that there was a statistically significant effect (B=0.11, p=.000) of age on information-sharing practices. It indicates as age increased, the information-sharing practices of students increased.

4.9. Effect of Age on Information-Using Practices

Table 6. shows the effect of age on information-using practices of students. The results (B=0.007, p=.819) indicate that there was no significant effect of age on information-using practices.

Table 6: Effect of Age on Using Information Practices

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.974	.046		85.969	.000
	Age	.005	.021	.007	.229	.819

a. Dependent Variable: Using Information

4.10. Effect of Age on Information Managing Practices

The results of the effect of age on information managing practices are presented in Table 7. The result (B=0.071, p=.024) showed that there was no significant effect of age on the everyday information managing practices of students.

Table 7: Effect of Age on Managing Information Practices

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.751	.050		74.620	.000
	Age	.050	.022	.071	2.262	.024

a. Dependent Variable: Managing Information

4.11. Gender-based Difference Regarding Information Seeking Practices

The difference between male and female students regarding everyday information-seeking practices was checked by using the Mann-Whitney U test. Table 8 showed that there was no significant difference between the Mean Rank of male and female students. Test value (p>.05) showed that there was no statistical difference between male and female respondents regarding their information-seeking practices.

Table 8: Gender-Based Difference Regarding Information-Seeking Practices

Variable	Gender	Mean Rank	Mann-Whitney U	Sig.
Information Seeking	Male	495.94	122405.000	.600
	Female	505.46		

4.12. Age-Based Difference Regarding Information-Seeking Practices

Kruskal-Willis test was applied to know the difference between different age groups regarding the everyday information-seeking practices of students.

Table 9: Age-Based Difference Regarding Information-Seeking Practices

Variable	Age	Mean Rank	Kruskal-Willis Chi-square	Sig.
Information Seeking	12-14	511.96	8.869	.012
	15-16	463.62		
	17-19	524.98		

Table 10: Difference Based on Number of Siblings Regarding Information Seeking Practices

Variable	Siblings	Mean Rank	Kruskal-Willis Chi-square	Sig.
Information Seeking	0-2	515.81	2.739	.254
	3-4	482.41		
	More than 4	504.02		

Table 9. showed that the test value was (p<.05). Thus there was no statistically significant difference between different age groups of students.

4.13. Difference Between Number of Siblings Regarding Information

Seeking Practices. The number of siblings' respondents was grouped into three groups and the Kruskal-Willis (non-parametric test) was applied to know the difference between different groups of siblings in terms of students' information-seeking practices. The results in Table 10 showed that there was no significant difference (p>.05) between different groups of several siblings of students.

4.14. Differences Based on Province of Students Regarding Information Seeking Practices

Kruskal-Willis was also applied to know the difference between the Provinces of respondents (Table 11).

Table 11: Differences Based on Province of Teens Regarding Information Seeking Practices

Variable	Province	Mean Rank	Kruskal-Willis Chi-square	Sig.
Information Seeking	Punjab	516.17	67.174	.000
	ICT	499.10		
	Sindh	552.54		
	KPK	572.00		
	Gilgit Baltistan	382.96		
	Balochistan	365.66		

It was found that there was a significant difference between teens of different Provinces (p<.05) regarding their information-seeking practices.

5. Findings

Siblings' support. Teens having a higher number of siblings are found more active in exercising everyday information practices. They are also getting quick and accurate information easily. So Pakistani youth who have more sibling are found more active in finding their daily information.

Advanced provinces. Province plays a significant role in everyday information practices. Those provinces where the facilities are common are getting information with ease. In contrast, the deprived provinces were not supporting but making hurdles. A significant difference was found (F=13.05, P=.000) between province and information practices, which shows province plays a significant role in everyday information practices.

Gender difference. No statistical difference was found between male and female respondents regarding their information-seeking practices, however, a statistically significant difference was found in male and female students regarding their information-sharing practices.

Females are good at sharing. An interesting finding was found as female students share more information than male students. The female students were more inclined towards sharing information.

Information Sharing increases with age. One more interesting finding was everyday information practices of Pakistani urban teens increase with their age. At an early age, they were found to share less information while they were found to share more in the age near adulthood.

6. Conclusion and Recommendations

The study has revealed that age, gender, province, and the number of siblings have a profound effect on the everyday information practices of urban youth. As more siblings were having a positive impact on youth there should be seminars and workshops to which the family members should also be invited so that they will have relevant and accurate information, moreover, career counseling sessions should also be conducted. As study results revealed that sharing increases with age, such platforms should be provided to the youth where they will be able to share their knowledge. This practice will be helpful for other students as well. Advance province provides more facilities and facilitates the youth in a better way so the other provinces can also adopt multiple things that can facilitate the youth living over there.

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