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Library as a Research Support System for AHSS Doctoral Students:
Impact of Marital Status and Gender on Researchers

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ABSTRACT

Researchers, particularly doctoral students, face numerous challenges in their academic pursuits. The influence of gender and marital status factors in a researcher's Ph.D. journey in this context was examined. The study aimed to identify whether researcher problems were influenced by marital and gender factors and attempt to determine how the library could support the researchers. Few studies explore the role of support systems, especially the library, to meet researcher needs and help alleviate their doctoral challenges. The present study examined a sample of 500 AHSS (Arts, Humanities, Social Sciences) doctoral students, from five top-ranking Indian state universities regarding their researcher problems. Data was collected with a structured questionnaire. The study found conclusive evidence that a researcher's marital status and gender played an essential part in their research career. The authors recommended the library's possible roles as research support within this framework and how best the library could help assuage doctoral challenges.

KEYWORDS

Research Support; Researcher Development; University Libraries.

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1. Introduction

Researchers all across the world, in pursuit of their Ph.D. degree, face problems of varying complexities. Regardless of how experienced or skilled the individual, every researcher endures problems related to their research work sooner or later. Depending on the form of support system they have in place, or lack thereof, a researcher's work may flourish or suffer. The body of a researcher's work is thus directly influenced by the form of problems they face during research and whether they can handle them or are affected by them.

The toll research work takes on the researcher leads to physical and primarily mental health problems. Most Indian state universities do not provide any systematic counseling sessions or counselors for their researchers. Even if provided, these are seldom known to the researchers. Compounding this, researchers may hesitate to approach help due to the continuing stigma surrounding mental health in South Asian countries. Researchers require more awareness of the possibilities of help and assistance available to them within their universities or educational institutions, which will enable them to navigate the complicated pathways within a Ph.D. program efficiently. Providing the doctoral student with every possible service that will make their Ph.D. process less of a burden, less of a complication will go miles towards helping the researcher complete their Ph.D. with relative ease.

Acquiring research skills and related information management and software skills is integral to conducting the research successfully. Along with the individual's efforts and abilities, it is essential that the university's organization structure be supportive of the researcher. This directly translates into streamlining administrative processes related to Ph.D., library services to train the researcher, supporting them in their research life cycle throughout, providing necessary resources and facilities, and support from the departmental level. A significant amount of the researcher's time is consumed in figuring out complicated administrative procedures – the time which would have been more well used for their research instead.

The link between researchers and library support is yet to be explored significantly. The library has its own crucial role to perform in this scenario. Based on an assessment of problems researchers face, the library should alleviate these issues through its services. If the library can help the researcher manage the problems from their root, this can vastly help the researcher. Consequently, this helps improve the research work quality of that individual. Researchers found library facilities and services essential to their work (Sari, Turkan, and Yolcu 2015). More and more academic libraries are now redesigning their services to provide what is generally termed Research Support (RS) for their research students and faculty and staff engaged in research activities.

2. Literature Review

Every researcher has to deal with problems related to their Ph.D. at any point in time during the program. The persistence each may show differs according to the support system they may or may not have and the coping strategies they may or may not employ. However, for many, the stress of the

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work, the pressure, and its toll on their physical and mental health may be more than they can handle, leading to them deciding to drop out of the Ph.D. program. Studies across the past two decades all consistently found that the attrition rate among doctoral students was significant, and 50% left before completing their degree (Young *et al.* 2019). Schmidt and Hansson (2018) observed that attrition rates were higher in Humanities and Social Sciences. Studies have found that the completion time of the doctorate program for female candidates was longer in comparison (van Rooij, Fokkens-Bruinsma, and Jansen 2019). Another important factor affecting the time taken to complete research was marital stability (Wollast *et al*. 2018). The problems researchers face range from purely work-related frustration, research skill-related, to micro-aggressions from departmental peers, emotional, relational, or cultural discord, time management difficulties, and financial problems. Rohilla (2018) found that the mental health of majority of researchers suffers during the duration of Ph.D.

Irrespective of their gender, married researchers endure additional mental burdens in case of familial discords and issues. This makes research all the more stressful for married researchers (Sari, Turkkan, and Yolcu 2019). They observed that the additional burdens upon female married researchers included personal life changes such as if they had a child in the course of their Ph.D. program or if they were going through marital problems or divorce proceedings. These were some of the problems that interfered with the research work of female married researchers. There were gender-based differences in problems suffered by the researchers regarding child-rearing, parental guilt associated with not giving due attention to the child due to the workload of a Ph.D.

Although academic libraries worldwide have implemented research support models, they remain a very recent phenomenon in the Indian academic setup. Discussions of research support have been occurring within library professional circles for the past decade and more. The significance of research support is not to be disregarded or minimized. As observed, the researcher faces problems in their research life cycle. The institute's role should be to find ways to help them complete their research studies in the most efficient manner possible. Though researchers may yet be unaware, the library's role in this juncture is of most importance and value. Parker (2012) defined research support as a "library's role in assisting to increase the productivity of research and scholarship". By this understanding, the support library provides researchers through their services, facilities, and resources is collectively termed "research support". In the present study, based on examining researcher problems, the authors have attempted to identify how the library can guide the researchers better and ease hindrances in their work.

He *et al.* (2019) concurred with previous studies in research support. They noted that libraries need to advance from their traditional triad form of service consisting of collection development, instruction, and reference services. They embed themselves within the institutional mission and support researchers in a more immersive form. Resistance to change will hurt librarianship's future as a whole. Librarians need to be proactive and ready to support researchers based on their requirements and encompass newer scholarship communication methods and practices. Research Support recognizes those aspects of librarianship that are supportive of the research process and researchers. Traditionally, academic libraries tend to be geared to meet generic needs at the cost of research needs.

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Researchers have claimed the same, stating that their needs are neglected by the library, consequently leading them to not depend on the library to meet their research requirements (Research Information Network 2011).

Among researchers, those belonging to Arts, Humanities, and Social Science (AHSS) disciplines are found to be more dependent on the library, treating the space as their "laboratory" (Hoodless and Pinfield 2018). Unlike their colleagues in sciences, AHSS researchers do not have time-sensitive experiments or laboratories with a team of researchers working alongside them. Research for the AHSS researcher is solitary in nature. It deprives them of the benefits and learning experience of working with a team of senior researchers and experienced lab mates which is possible to the science discipline researchers. Understanding the challenges faced by AHSS researchers who are more dependent on libraries is necessary, so librarians can understand how best they could improve the research support services, leading to an enriching and productive environment for the doctoral students.

The present study looks into problems faced by AHSS (Arts, Humanities, Social Sciences) doctoral students and how the library could support them better so they may work and complete their Ph.D. program successfully.

3. Research Support

Traditional services of library consist primarily of collection management and reference service. Research Support (RS) is a relatively new concept to libraries. The purpose of RS is to help researchers with their research work. Librarians observed that researchers lost a lot of time to administrative work and from irrelevant search results, and such. The objective of RS is to reduce time lost by researchers, and not further add to it (RIN and RLUK 2011). Raju and Schoombee (2013) defined research support as "the proactive engagement of the librarian with the researcher throughout the research process". It is considered a fluid concept (Hoffman 2016), dynamic and ever growing with changes in its surroundings. Research Support is essentially a collective of services, facilities, and anything that aids in improving upon research culture in the academic environment, as provided by the library.

Although researchers are keen for help, they are mostly ignorant of how the library can add value to their work and help ease the load. Library can meet researcher needs in a comprehensive approach through RS. This will include but not be limited to:

- the Library Collections and Resources
- Library Website,
- Library Staff Personnel,
- Library Information Services and Training Programmes,
- Library Space and Library Working Hours.

Librarians and experts have explored different methods of research support. These include different approaches and models. One approach is to embed support services throughout the research life cycle. This ensures the researcher has help through all phases of their work. Du and Evans (2011)

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spoke of the need for informal meeting space for librarians and researchers to interact with each other so they may understand how well library can satisfy their requirements. Provision of RS could be internally or externally performed. If internally, the library can either create a section or department specially to focus on researchers, or designate particular staff well-versed with research work to act as a point-of-contact for dealing with research queries and requirements. If the university has assigned research support activities to a separate administrative body (external approach), the library can collaborate with them to help researchers. As an administrative body will not be familiar with library resources or research process, the library is more suited for the function.

3.1 Significance of Research Support

With the fast pace of growth in ICTs and the changes wrought consequently, libraries with their traditional services are found declining in relevance and visibility. However, this does not imply loss of value or significance of libraries for society. What it does imply is that libraries need to keep up with recent changes and embrace technology and social media, instead of side stepping them. Instead of waiting for users to reach library, the library should become proactive and reach out to users. Let them know of the various vital services and facilities available at library.

Introducing the narrative of library research support within the existing milieu of doctoral challenges, to explore how the library fits into the context of this ongoing and very pressing concern within the academia was determined to be of significance to the authors. A researcher has to carry out a balancing act with all their research work, personal responsibilities, academic and administrative work unrelated to research, all at once. This takes a toll on researchers. The library and librarian's role in this is to identify the researchers' information and academic requirements and habits and the researcher's life cycle impediments to understand how the library ought to support researchers. Research support from the library can be immensely impactful and beneficial for the researchers, particularly for AHSS researchers, as confirmed by various previous studies (Zhang, *et al.* 2020; Hoodless and Pinfield 2018; Ducas, Michaud-Oystryk, and Speare 2020).

The library is a non-profit academic facility that does not get the credit it is due. They hold resources and knowledgeable staff who can guide the scholars on how to search, research, and study most effectively. The library is a combination of supportive factors: its staff, resources, infrastructure, space, services, and facilities. All of which are equally important and go towards helping the researcher succeed in their work. The significance of research support is that it emphasizes these library factors and specifically driven towards supporting the researcher's academic career. The difference between research support and general academic services is thus the highly precise focus entirely on the research aspects, and help given to those engaged in Ph.D. or research work.

A researcher needs researcher skills, along with supportive network of colleagues, peers, and friends, and research supportive systems within their academic ecosystem so they may flourish in their research environment. The future of the library can be shaped around the existing requirements of researchers. Academic libraries must meet the needs of not just their students but also their research

scholars, who often feel that the library neglects their needs. In this backdrop, the authors considered research support from the library to need discussion and resolution.

3.2 Researcher problems and RS

Doctoral researchers, who conduct the bulk of research activity in universities, require utmost attention and support in their endeavour. Their requirements are highly specific and belonging to a very niche area of knowledge. Researchers are often struggling with problems their research work may throw up, along with problems related to the financial aspect, balancing their personal with the professional, managing familial duties if any. A facet of research support from libraries should be focused entirely on helping allay researcher problems, in whatever intensity it may be present. If librarians are able to mitigate the problems a researcher is facing, as well as providing resources and facilities, the latter will be well prepared to focus on their research and be more productive.

4. Research questions

- Is there a difference between researchers in problems faced based on their gender and marital status?
- How to provide and design services which will help meet needs and lessen researcher problems?

5. Aims

The study aimed to examine and identify the intensity of common research problems among researchers across gender and marital status demographics. The study's second objective was to examine how the library could support researchers to alleviate their problems. As researchers often felt neglected by their university librarians, studying their problems and how the library could help alleviate their challenges will benefit both the library and the researchers. Library Research Support components with respect to the doctoral problems examined in present study are recommended and explored herewith.

6. Methods

A random sample of 500 doctoral students from five of India's top research ranking state universities was collected for the study. The total population of research scholars from the five universities was 2340. From this population, a sample size of 331 was determined as per Krejce and Morgan's table (1970). Considering non response rate was to be expected, the sample size was increased by 60%, bringing to sample size to 828. From this, 500 valid questionnaires were collected from research

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scholars. The researchers were from Panjab University, Bharathiar University, Calcutta University, Jadavpur University, and Savitribai Phule Pune University. Their responses were collected through a structured questionnaire. Marital and gender demographics were examined.

The structured questionnaire was designed on the basis of extensive interviews with doctoral students in AHSS departments of Panjab University, and literature in doctoral education with the purpose of recommending improvements to research support in libraries which could help reduce the researcher problems as much as possible. The Chronbach's alpha was calculated to measure the internal consistency of the questionnaire items.

Table 1: Reliability of questionnaire

Satisfaction/ Agreement levels	Number of items	Chronbach's Alpha*
Researcher Problems	14	0.809

A value in the range of 0.70 and higher is reliable

0.7 < a < 0.8 is acceptable

0.8 ≤ a ≤ 0.9 is good

0.9 < a is excellent

      The test expressed that the questionnaire is reliable and valid.

7. Data Analysis

The data collected through questionnaires from the researchers was coded and analysed.

Table 2: Demographics Analysis of respondents

	N	%	N	%	Total	%
	Female		*Male*			
Respondents	278	55.6	222	44.4	500	100.00
	Unmarried		*Married*			
Female	177	63.7	101	36.3		
Male	170	76.6	52	23.4		
	Unmarried		*Married*			
First Year	106	30.5	27	17.6	133	26.6
Second Year	106	30.5	36	23.6	142	28.4

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Third year	91	26.2	51	33.3	142	28.4
Fourth year & above	44	12.7	39	25.5	83	16.6
	Female Unmarried		*Female Married*			
Below 26	55	31.1	18	17.8		
26-30	100	56.5	54	53.5		
31-35	20	11.3	16	15.8		
Above 35	2	1.1	13	12.9		
	Male Unmarried		*Male Married*			
Below 26	44	25.9	3	5.8		
26-30	101	59.4	28	53.8		
31-35	20	11.8	14	26.9		
Above 35	5	2.9	7	13.5		

7.1 Gender distribution of respondents

Results

The sample of 500 doctoral students comprises of 278 (55.6%) female respondents, and 222 (44.4%) male respondents were surveyed. As can be observed, the sample has comparatively more female respondents than male respondents.

Discussion

Female respondents make up a significant portion of the sample studied. An in-depth knowledge of the university population will help the library anticipate and design services and facilities with more accuracy. Knowledge of the users comes from periodic user studies and through frequent and genuine interactions with researchers to know which services are useful, and what more users would prefer to see.

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7.2 Gender and Marital distribution of respondents

Results

Of the respondents, the majority were unmarried (69.4%, n=347). Only 30.6% (*n*=153) of the respondents were married at the time of data collection. The majority of the respondents in both genders were unmarried, with 63.7% (*n*=177) among female respondents and 76.6% (*n*=170) among male respondents.

Discussion

It is to be noted that majority of the respondents, female and male were carrying out their doctoral work as unmarried. As marriage especially in South Asian countries like India carries additional responsibilities and familial ties, it is interesting to note a significant majority of the respondents choosing to remain unmarried while conducting their Ph.D. work. In discussion with several of them on the topic, they confirmed the theory of how marriage could further complicate their work-life balance and require even more of their attention and energy. As Ph.D. brings pressure and distress to researchers, several agreed they would prefer to remain unmarried till the completion of the degree. As those without significant familial responsibilities will tend to spend more time on their research, and thus in libraries, it is essential that the library working hours should be ideally expanded and accommodating of the different working routines of researchers. Some may prefer to work early morning onward, whereas some may prefer to work throughout the night. Several researchers also responded with similar comments, "keep library open 24/7", "increase library hours", "at least keep library open with minimal services on weekends as well" etc.

7.3 Ph.D. stage wise distribution of respondents

Results

From the sample, comparatively more respondents were in their second and third year of Ph.D. Lesser researchers were found to be in the fourth year and over. Among unmarried researchers, 61% were in their first (30.5%) and second-year (30.5%) of the Ph.D. programme. Among married researchers, comparatively more were in the third year of Ph.D. (33.3%).

Discussion

Comparatively, more unmarried researchers were in the early stages of Ph.D. (first and second years), and their numbers were found to drop progressively after that. Based on which age group they belong

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to, researchers will have different methods of approaching the library and different styles of using library resources. Library has to take into account of this and see how to meet the requirements as such.

7.4 Age-wise distribution of respondents

Results

Most female researchers, both married and unmarried, were in the 26-30 age group. Representation in the age groups across both genders was found to be of a similar pattern.

Discussion

Majority of the respondents irrespective of gender belonged in the 26-30 age group. Fewer belonged to the above 35 group. As Ph.D. is seen as a qualification for many professions in India and is required for promotions, many choose to join for Ph.D. directly after completing their Masters. The respondents in the above-35 category noted that the main motivator for them to join Ph.D. was for promotion in their respective professions. Based on their motivation for doing Ph.D., each researcher will be having different approaches and issued. Library should consider their age and stage of Ph.D. to provide support.

7.5 Financial support distribution for respondents

Table 3: Financial support for Ph.D.

Whether funded?	Female				Male				Total			
	Unmarried		Married		Unmarried		Married		Unmarried		Married	
	N	%	N	%	N	%	N	%	N	%	N	%
No	98	55.4	59	58.4	76	44.7	33	63.5	174	50.1	92	60.1
Yes	79	44.6	42	41.6	94	55.3	19	36.5	173	49.9	61	39.9

Results

The majority of both unmarried and married female researchers were working on their Ph.D. programme without fellowship. Among male researchers, most unmarried researchers were receiving fellowship, whereas, among married researchers, the majority were not receiving any fellowship. The majority of the researchers stated they were not receiving any fellowship to support their research.

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Compared to male researchers, more female researchers were not funded by any scholarship or fellowship.

Discussion

Majority of researchers did not have any scholarship or funding for financing their research work. The respondents were mostly in agreement that the lack of scholarship, delay in disbursement of scholarship in the case of funded researchers, were all causes for distress and difficulties for them.

Problems faced by researchers	Agreement	Female				Male				Female total		Male Total		Unmarried total		Married total	
		Unmarried		Married		Unmarried		Married									
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Difficulty without Fellowship	SD	2	1.1	2	2.0	0	0.0	0	0.0	4	1.4	0	0.0	2	0.6	2	1.3
	D	12	6.8	12	11.9	11	6.5	5	9.6	24	8.6	16	7.2	23	6.6	17	11.1
	N	26	14.7	8	7.9	27	15.9	10	19.2	34	12.2	37	16.7	53	15.3	18	11.8
	A	57	32.2	29	28.7	61	35.9	15	28.8	86	30.9	76	34.2	118	34.0	44	28.8
	SA	80	45.2	47	46.5	71	41.8	22	42.3	127	45.7	93	41.9	151	43.5	69	45.1
Excess Workload	SD	2	1.1	1	1.0	4	2.4	0	0.0	3	1.1	4	1.8	6	1.7	1	0.7
	D	15	8.5	4	4.0	11	6.5	5	9.6	19	6.8	16	7.2	26	7.5	9	5.9
	N	34	19.2	14	13.9	40	23.5	8	15.4	48	17.3	48	21.6	74	21.3	22	14.4
	A	90	50.8	47	46.5	79	46.5	23	44.2	137	49.3	102	45.9	169	48.7	70	45.8
	SA	36	20.3	35	34.7	36	21.2	16	30.8	71	25.5	52	23.4	72	20.7	51	33.3
Fieldwork	SD	2	1.1	1	1.0	3	1.8	0	0.0	3	1.1	3	1.4	5	1.4	1	0.7
	D	25	14.1	13	12.9	30	17.6	8	15.4	38	13.7	38	17.1	55	15.9	21	13.7
	N	45	25.4	22	21.8	40	23.5	7	13.5	67	24.1	47	21.2	85	24.5	29	19.0
	A	71	40.1	31	30.7	62	36.5	24	46.2	102	36.7	86	38.7	133	38.3	55	35.9
	SA	34	19.2	34	33.7	35	20.6	13	25.0	68	24.5	48	21.6	69	19.9	47	30.7
Anxiety	SD	1	0.6	1	1.0	3	1.8	1	1.9	2	0.7	4	1.8	4	1.2	2	1.3
	D	19	10.7	6	5.9	19	11.2	1	1.9	25	9.0	20	9.0	38	11.0	7	4.6
	N	23	13.0	16	15.8	34	20.0	7	13.5	39	14.0	41	18.5	57	16.4	23	15.0
	A	83	46.9	36	35.6	73	42.9	20	38.5	119	42.8	93	41.9	156	45.0	56	36.6
	SA	51	28.8	42	41.6	41	24.1	23	44.2	93	33.5	64	28.8	92	26.5	65	42.5
Stress	SD	3	1.7	1	1.0	4	2.4	1	1.9	4	1.4	5	2.3	7	2.0	2	1.3
	D	15	8.5	5	5.0	16	9.4	4	7.7	20	7.2	20	9.0	31	8.9	9	5.9
	N	16	9.0	7	6.9	26	15.3	6	11.5	23	8.3	32	14.4	42	12.1	13	8.5
	A	97	54.8	37	36.6	82	48.2	23	44.2	134	48.2	105	47.3	179	51.6	60	39.2
	SA	46	26.0	51	50.5	42	24.7	18	34.6	97	34.9	60	27.0	88	25.4	69	45.1
Depression	SD	11	6.2	2	2.0	15	8.8	6	11.5	13	4.7	21	9.5	26	7.5	8	5.2

Category	Response	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
	D	37	20.9	24	23.8	27	15.9	9	17.3	61	21.9	36	16.2	64	18.4	33	21.6
	N	37	20.9	20	19.8	40	23.5	18	34.6	57	20.5	58	26.1	77	22.2	38	24.8
	A	61	34.5	30	29.7	68	40.0	10	19.2	91	32.7	78	35.1	129	37.2	40	26.1
	SA	31	17.5	25	24.8	20	11.8	9	17.3	56	20.1	29	13.1	51	14.7	34	22.2
Isolated	SD	11	6.2	3	3.0	10	5.9	3	5.8	14	5.0	13	5.9	21	6.1	6	3.9
	D	34	19.2	18	17.8	31	18.2	7	13.5	52	18.7	38	17.1	65	18.7	25	16.3
	N	38	21.5	18	17.8	27	15.9	6	11.5	56	20.1	33	14.9	65	18.7	24	15.7
	A	65	36.7	34	33.7	73	42.9	22	42.3	99	35.6	95	42.8	138	39.8	56	36.6
	SA	29	16.4	28	27.7	29	17.1	14	26.9	57	20.5	43	19.4	58	16.7	42	27.5
Sleeplessness	SD	13	7.3	2	2.0	12	7.1	1	1.9	15	5.4	13	5.9	25	7.2	3	2.0
	D	39	22.0	25	24.8	35	20.6	8	15.4	64	23.0	43	19.4	74	21.3	33	21.6
	N	30	16.9	16	15.8	29	17.1	12	23.1	46	16.5	41	18.5	59	17.0	28	18.3
	A	64	36.2	33	32.7	66	38.8	21	40.4	97	34.9	87	39.2	130	37.5	54	35.3
	SA	31	17.5	25	24.8	28	16.5	10	19.2	56	20.1	38	17.1	59	17.0	35	22.9
Inadequate	SD	7	4.0	2	2.0	9	5.3	1	1.9	9	3.2	10	4.5	16	4.6	3	2.0
	D	36	20.3	23	22.8	33	19.4	6	11.5	59	21.2	39	17.6	69	19.9	29	19.0
	N	35	19.8	13	12.9	25	14.7	10	19.2	48	17.3	35	15.8	60	17.3	23	15.0
	A	66	37.3	39	38.6	76	44.7	20	38.5	105	37.8	96	43.2	142	40.9	59	38.6
	SA	33	18.6	24	23.8	27	15.9	15	28.8	57	20.5	42	18.9	60	17.3	39	25.5
Lack of Family Support	SD	46	26.0	21	20.8	30	17.6	10	19.2	67	24.1	40	18.0	76	21.9	31	20.3
	D	70	39.5	36	35.6	64	37.6	13	25.0	106	38.1	77	34.7	134	38.6	49	32.0
	N	32	18.1	19	18.8	34	20.0	9	17.3	51	18.3	43	19.4	66	19.0	28	18.3
	A	22	12.4	16	15.8	32	18.8	18	34.6	38	13.7	50	22.5	54	15.6	34	22.2
	SA	7	4.0	9	8.9	10	5.9	2	3.8	16	5.8	12	5.4	17	4.9	11	7.2
Work-Life balance	SD	19	10.7	9	8.9	18	10.6	5	9.6	28	10.1	23	10.4	37	10.7	14	9.2
	D	31	17.5	10	9.9	32	18.8	5	9.6	41	14.7	37	16.7	63	18.2	15	9.8
	N	37	20.9	12	11.9	24	14.1	7	13.5	49	17.6	31	14.0	61	17.6	19	12.4
	A	44	24.9	32	31.7	65	38.2	18	34.6	76	27.3	83	37.4	109	31.4	50	32.7
	SA	46	26.0	38	37.6	31	18.2	17	32.7	84	30.2	48	21.6	77	22.2	55	35.9
Guide issues	SD	40	22.6	34	33.7	39	22.9	12	23.1	74	26.6	51	23.0	79	22.8	46	30.1
	D	77	43.5	34	33.7	61	35.9	18	34.6	111	39.9	79	35.6	138	39.8	52	34.0
	N	35	19.8	27	26.7	41	24.1	15	28.8	62	22.3	56	25.2	76	21.9	42	27.5
	A	20	11.3	4	4.0	25	14.7	6	11.5	24	8.6	31	14.0	45	13.0	10	6.5
	SA	5	2.8	2	2.0	4	2.4	1	1.9	7	2.5	5	2.3	9	2.6	3	2.0
Departmental issues	SD	40	22.6	35	34.7	39	22.9	9	17.3	75	27.0	48	21.6	79	22.8	44	28.8
	D	69	39.0	33	32.7	61	35.9	23	44.2	102	36.7	84	37.8	130	37.5	56	36.6
	N	42	23.7	26	25.7	41	24.1	13	25.0	68	24.5	54	24.3	83	23.9	39	25.5
	A	20	11.3	4	4.0	23	13.5	5	9.6	24	8.6	28	12.6	43	12.4	9	5.9

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	SA	6	3.4	3	3.0	6	3.5	2	3.8	9	3.2	8	3.6	12	3.5	5	3.3
Cultural issues	**SD**	40	22.6	26	25.7	40	23.5	10	19.2	66	23.7	50	22.5	80	23.1	36	23.5
	D	63	35.6	38	37.6	64	37.6	14	26.9	101	36.3	78	35.1	127	36.6	52	34.0
	N	47	26.6	26	25.7	39	22.9	19	36.5	73	26.3	58	26.1	86	24.8	45	29.4
	A	23	13.0	9	8.9	23	13.5	6	11.5	32	11.5	29	13.1	46	13.3	15	9.8
	SA	4	2.3	2	2.0	4	2.4	3	5.8	6	2.2	7	3.2	8	2.3	5	3.3

The study participants were asked regarding common researcher problems they faced. Their agreement or disagreement with each question was scored according to Likert Scale measurement. The participants were provided five options for each question, ranging from Strongly Disagree to Strongly Agree. Based on examining the data collected, the following conclusions could be drawn regarding researchers and researcher problems.

7.6 Financial Problems

Results

The majority of researchers across gender groups and marital status groups agreed that the lack of fellowship or financial aid affected them negatively. Three-fourth of male (76.1%) and female (76.6%) researchers each, and similarly, of unmarried (77.5%) and married (73.9%) researchers each, agreed that they faced difficulty in research if there were no financial aid. Male and female unmarried researchers (77.7% and 77.4% respectively) agreed that the lack of financial support made research difficult than their married colleagues.

Discussion

Comparatively, fewer married researchers had difficulty when there was no financial support, which may be due to the financial stability that being married couples is supposed to guarantee. The library can help researchers with training in how to write proposals for seeking funds or grants, source other options for financial support in research programme, and help minimise the confusion surrounding the administrative aspects of the same. Library can be a bridge between researchers and the administrative branches of the university.

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7.7 Research work-related

Results

- The majority of researchers from each group agreed that excessive workload in their Ph.D. programme was a significant problem they faced. More females (74.8%) than male (69.4%) researchers stated that they faced difficulty due to excess workload. Comparatively, more married (79.1%) researchers agreed they faced challenges due to excess workload.
- Significantly more female married researchers (81.2%) stated that they had excess workload in Ph.D., followed by male married researchers (75%).
- The majority of all respondents across the gender and marital status groups agreed they had faced or were facing problems in their research study fieldwork. Responses regarding difficulties with fieldwork were similar across female (61.2%) and male (60.4%) respondents. However, it can be observed that married (66.7%) researchers were more hindered by research fieldwork problems compared to their unmarried (58.2%) counterparts.
- When asked if they faced problems during fieldwork for research, male married researchers (71.2%) were most in agreement, followed by female married researchers (64.4%).

Discussion

Researchers are mostly in agreement of the workload they bear in the Ph.D. Based on the responses of the present study, librarians can explore solutions on how to help researchers be relieved from this load as best as possible. In the case of most researchers, their routine at the university consists of working on their own topic, along with teaching any subject, preparing material for that, completing administrative duties as may be assigned from time to time by their department, completing administrative related forms and formalities which may be required for continuing their research, along with miscellaneous other duties handed to them by their supervisor or other departmental faculty. The problem at the core of the workload for researchers is how they lose time to non-research related work, when they could be instead focusing on research. As such, the mission of librarians is to find methods by which they could help researchers find more time for research and reduce time spent in run-arounds for administrative, non-research tasks. For this, librarians need to work with researchers.

Female married researchers were significantly more in agreement to facing difficulties with excessive workload and in their fieldwork. This may be a troubling indication towards the patriarchal system inbuilt in the cultural setup. The library should study further on what support could be extended to them in particular.

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7.8 Psychological/Emotional problems

Results

- The majority of the researchers suffered from anxiety, stress, a sense of inadequacy due to their research work and found it challenging to balance work and personal life. Female researchers were found to be relatively more anxious or prone to anxiety (76.3%), and more stressed (83.1%) than their male peers (70.7% and 74.3%, respectively). In addition to this, married researchers were found to be more anxious (79.1%) and stressed out (84.3%) than their unmarried counterparts (71.5% and 76.9%, respectively).
    - Comparatively, more male married researchers (82.7%), followed by female married researchers (77.2%), were observed to suffer from anxiety stemming from their research work.
    - Female researchers found that both married (87.1%) and unmarried (80.8%) were more stressed than their male counterparts. However, more than three fourth of all subsections were still found to be suffering from stress.
- More than half of married and unmarried female researchers and unmarried researchers responded that they had or were still suffering from depression. Female researchers were more in agreement (52.9%) than male researchers (48.2%). Although only a slight difference was found, unmarried researchers were curiously found more depressed (51.9%) than married researchers (48.4%).
    - More than half of female respondents, married (54.5%) and unmarried (52%), and unmarried male respondents (51.8%) had answered that they were depressed or were suffering from depression. However, only slightly different, more female researchers responded affirmatively to whether they had depression than male researchers.
    - The only deterrent in this were male married researchers, among whom only 36.5% agreed, which is significantly lower than the 50% mark crossed by all other demographics examined in the present study.
- More than half of all researcher subsets studied agreed they suffered a sense of isolation due to their researcher identity. More male researchers were found to agree that they felt isolated due to their research work (62.2%) than female researchers (56.1%). Married researchers (64.1%) agreed more with this statement than unmarried researchers (56.5%).
    - Going against the observed pattern so far, it was found that comparatively more male married researchers (69.2%) were found to feel isolated due to their Ph.D. work, compared to other subsections of respondents. This was followed by female married researchers (61.4%).
- More than half of all respondent subsets agreed they suffered from sleeplessness. More than half of both male (56.3%) and female (55%) researchers were suffering from sleeplessness. Comparatively, slightly more married researchers were found suffering from sleeplessness (58.2%) than unmarried researchers (54.5%).

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- Comparatively, more male married researchers (59.6%), followed by female married researchers, suffered from sleeplessness more than their unmarried counterparts.
- Across all subsections, both male (62.2%) and female (58.3%), married (64.1%), and unmarried (58.2%), more than half the researchers stated they felt inadequate in their researcher identity. This is part of the impostor syndrome many researchers suffer from during their doctoral degree pursuit. Among them, comparatively more male researchers felt such inadequacy and based on marital status analysis, relatively more married researchers had a sense of inadequacy.
  - Similarly, comparatively more male married researchers felt inadequate in their research identity (67.3%) than other subsections of the sample. This was followed by female married researchers (62.4%).

Discussion

It is known within academia anywhere that researchers face psychological stress and other related problems during their research work. It is a significant reason for attrition amongst Ph.D. students (Schmidt and Hansson 2018). The present study found that a significant majority of researchers in the sample suffered psychological/emotional problems to varying degrees. Married were found more anxious than unmarried, and female married and unmarried were both more stressed than male researchers. That more than half the sample stated they suffered from depression is a note of concern. Interestingly, unmarried were found more depressed than married. This may imply that companionship helped married researchers cope with the burden of research and its consequent mental load more. Researchers also suffered from sense of isolation and sense of inadequacy with regard to their research. In this context, librarians could work with the university's health care system and explore options of providing discreet support from within the library. One of the significant reasons researchers choose to visit and use the library is for space. The university library should ensure space for researchers so they can focus uninterrupted on their work. As not all university departments and homes may have quiet spaces where higher productivity can be achieved, university libraries are the best option for researchers. This can come in the form of carrels, lockers to keep personal belongings, supportive staff who can answer researcher-specific queries, low levels of noise, quiet halls and so forth. The ability to work is one method of helping researchers battle their sense of loneliness and inadequacy.

7.9 Relational

Results

- Only a minority of researchers stated they lacked family support. Among the subsets, curiously, comparatively more male married respondents agreed that they lacked family support (38.4%). Among married female respondents, 24.7% also agreed to such lacking of familial support. Less

than 30% of researchers in each subsection stated any lack of family support in their research work.

- Comparatively, more male researchers (27.9%) than female researchers (19.4%) and more married researchers (29.4%) than unmarried researchers (20.5%) faced this challenge.
- More than half the researchers in each cross-section had difficulty balancing work and personal life. Comparatively, more male researchers (59%) than female (57.6%), and more married researchers (68.6%) than unmarried researchers (53.6%) struggled with balancing their research and personal lives.
  - Female married researchers (69.3%) in the sample found it most challenging to manage their work and life in a balance, followed by male married researchers (67.3%). Although the percentage of male and female was similar, a clear distinction was found between married and unmarried researchers. Owing to their additional domestic responsibilities along with work and research, married researchers struggled more with balancing all their priorities.
- In relational problems, only a minority of researchers had issues with their supervisor, department, or cultural differences within their research environment.
- Comparatively, more male researchers faced difficulties with their Ph.D. supervisor (16.2%) than female researchers (11.2%). Significantly more unmarried researchers (15.6%) faced this problem than married researchers (8.5%).
  - Only a minority of researchers in the sample had difficulties with their Ph.D. supervisor. Comparatively, more male unmarried researchers stated they faced issues (17.1%).
- When asked whether they faced problems with others in the department, more male researchers (16.2%) than female (11.9%) responded in the affirmative. Likewise, more unmarried researchers faced problems (15.9%) than married researchers (9.2%).
  - Relatively more male married researchers (17%) faced any departmental relational issues.
- Respondents were asked whether they faced any problems due to cultural differences in their research life, and similar to supervisor and departmental problems, more male researchers faced this issue (16.2%) than female (13.7%). Similarly, more unmarried researchers (15.6%) agreed to have this problem than married researchers (13.1%).
  - Male married researchers (17.3%), followed by unmarried male researchers (15.9%), faced cultural issues more than their female counterparts.
- Overall in relational problems, a pattern can thus be observed that comparatively, more male researchers and unmarried researchers had difficulties. This may indicate that married researchers and female researchers may be more adept at resolving relational problems and are more social.
- Very few had problems with their supervisor, department or faced any issues due to cultural differences. As state universities generally attract more people from the same state, cultural differences may not have been a significant issue for most.

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Discussion

Significantly fewer had any issued from the relational aspect of doctoral problems. However, majority struggled with balancing their personal and work lives. Female married researchers were again found to be facing this problem relatively more than other subsets of the sample. The library should conduct outreach programmes for researchers who faced isolation, had difficulties from their department and such. For many, library is an isle of solace and comfort. Especially in AHSS. The library should work to its advantage, explore the problems of researchers in depth, and bring solutions based on its skillsets and facilities.

8. Summary

The study observed that though married and unmarried researchers were found to be equally motivated to finish their Ph.D. early, there were hindrances to this goal for them. The similarity in agreement and disagreement levels in challenges faced by doctoral students was noticed. Compared to unmarried researchers, married researchers faced more problems, and among them, female married researchers even more so.

The majority were in agreement that without financial support, research would be complex. However, it was found that, comparatively, married female researchers were more in agreement that they faced problems than the remaining subsections of the sample. Comparatively, more married female researchers faced difficulties with research workload, were more stressed, depressed, faced difficulties in family support for their research, and struggled in balancing their work and personal lives. Male married researchers faced comparatively more problems with their fieldwork, were more anxious, felt more isolated, suffered from sleeplessness, and felt inadequate in their researcher identity. As is conclusive from the data, the majority of researchers suffer from varying mental health issues. Departmental and university libraries can provide resources and support to help them find mental health support. Through their research support components, the university library can be a valuable aid for researchers.

9. Conclusion and recommendations

Not all homes, academic departments may have harmonious environments conducive to research productivity. Libraries provide a productive and neutral space where the researcher can work without interruption or noisy surroundings. Universally, libraries are one of the rare places in a community where one does not need to spend money to occupy space. Users can access resources, and if unavailable, they can approach their library staff to provide these for them through other libraries or sources. The library should streamline the research process to easily comprehend and provide research support activities across each research stage for the researcher's benefit.

- Research supportive services

- Introduction of more research-intensive services including, but not limited to, research impact services (bibliometrics, altmetrics, etc.) and Research Data Management (RDM) (Pham and Williamson 2020).
- Website/research portal- Designing a library website that attracts users and is informative, with a user-friendly interface, is essential. As the website is where most users may access the library services, instead of physically visiting the library, it needs to be aesthetically pleasing and useful.
    - Provision of a specific researcher portal within the website so researchers can have access to information and documents related to their Ph.D. process at the university and the required resources and tools to support their research work will be valuable.
- Trained library staff- Training of library staff in the research lifecycle and research skills. Trained research support staff can help researchers effectively. The presence of doctorate holders in the research support staff will be beneficial as they will have an innate understanding of the research process, but not essential.
    - Staff should be available to help researchers- Researchers should feel they need not hesitate to ask for help.
- Space
    - Discussion rooms- Researchers may prefer to engage in scholarly discussions with their peers. The provision of such spaces within the academic and solemn ambiance provided by the library can attract researchers and boost their productivity.
    - Quiet spaces- In the case of larger university libraries which attract more students, the provision of quiet spaces or halls, and research carrels will help the Ph.D. student to focus better on their work. Not all departments may be able to house all the researchers owing to lack of space, and thus the library is the preferred space for many of them.
    - Provision of soft foods and refreshments – Providing food and refreshments will help the researcher to stay on track with their research and not have to leave the library and their research, thus avoiding interruptions and distractions.
    - Child care room in library/ crèche in the library- The provision of such a designated space will help researchers who have children, in the context of India, generally married researchers, who face more challenges in their Ph.D., in managing their work and life better. This will enable them to be more productive.
- Marketing of services

Library services tend to be invisible to the users, as the library may not inform the users through any programmes. The library needs to rectify this and put itself in the public eye. Through user awareness sessions regarding the library's resources and services, which are beneficial, especially for researchers, and marketing the library through social media and other methods is required.

The library can be a highly demanded service within the academic institutes. This is if the librarians rise to the occasion and redesign the structure of the library to meet all users' needs, not just students.

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The library can support researchers and ease their workload and doctoral challenges through its space and services. In the era of globalization where researchers choose Ph.D. without limiting to nearest university, and instead choose based on ranking of university, preferred research topic, ideal guide and similar other factors, we see that researchers travel abroad as well. International Ph.D. students are now common all over the world, including Europe. As European universities provide ideal research culture sans a toxic academic environment and the quality of researcher life is also found to be better, they are home to large number of international Ph.D. students. As such, Italian libraries need to consider that the context of working for international Ph.D. students, including those from South Asia, will be different from the needs of European researchers. However, as research process and its requirements are more or less universal, there is a need for more studies in the knowledge base, no matter the geography.

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