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Technostress in Libraries and the Development of Technology in Dynamic Library

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ABSTRACT

This study aims to explain technostress disturbances in librarians due to technological developments in libraries that are too dynamic, as well as other challenges in the form of librarian readiness in facing the times. This study also uses the literature study method by reviewing relevant literature sources such as books, printed scientific journals, and electronic versions, as well as selected online information sources. The results of this study explain that technostress disturbances in librarians can be seen from five dimensions, namely techno-overload, techno-investment, techno-complexity, techno-insecurity, and techno-uncertainty. Technological developments in the library can be seen in the new challenges for librarians who require new skills in the field of technology, among others; integrated library systems, emerging web technology, electronic resource management, web page development, institutional repositories, and database management. The benefit of this study is librarians need to regulate the rhythm of work by increasing competence in the field of information technology and addressing the development of information technology wisely as an opportunity to improve the quality of library services in the future.

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1. INTRODUCTION

The library is an information center that functions as storage, preservation, and management to the level of distribution of information to the community. These four functions are still being carried out by the librarian who manages the library and a marketing agent who offers library service products to the user community. Some librarians have relatively heavier tasks than other colleagues, especially those who work alone in managing the library with high work intensity because all service activities are borne on the shoulders of librarians who work alone. High work routines for librarians can often be found in libraries at a certain level, such as school libraries and small-scale private university libraries.

The librarian's task was helped when technology entered the library sector, various early breakthroughs were developed to support the librarian's work. The emergence of a library management information system by utilizing CDS-ISIS or Winisis at the beginning of its appearance was a spectacular breakthrough that brought ease of service and helped book data management activities in its time. The library management information system continued to change after the development of CDS-ISIS and Winisis stopped. Several new applications have started to appear by offering information system functions for libraries such as GDL, Ko-ha, SIPUS, SLiMS, Inlislite, and others.

The emergence of various library management information system applications raises pros and cons among librarians. It is undoubtedly difficult for librarians from the baby boomer generation to accept technological changes in libraries because they are already accustomed to traditional culture. Meanwhile, millennial librarians are starting to emerge with new skills and believe technology must enter the library management system. Tapscott's (2009:7) opinion also explains that boomers are beginning to feel uncomfortable because a new generation has emerged. This developing situation triggers a generation gap, so it is not surprising that there is much confusion and discomfort among the boomers because the new media (new media) also began to target young people. This is, of course. Almost the same problem always occurs in every period of library development, the pros and cons of using library management information systems have always emerged until now.

A statistical data compiled from the National Library page in 2021 states that libraries such as school libraries have a total of 94,314 units, a university library unit of 1,660 units, a public library of 4,068 units, and a unique library of 1,775 units (P.N.R.I., 2021b). On the one hand, if you look at the data of partner organizations linked to the Indonesian Onesearch page, the number of libraries that have registered their information systems on that page is only about 2,816 units, while for institutions that have joined, only about 2,122 institutions (P.N.R.I., 2021a). The data certainly explains if, until now, there are still problems that occur in libraries, especially those related to the development of library automation systems. In its development, the complete data about the library of information system users integrated online and offline is not yet precise. In some areas, many libraries still have not run the library automation system. This is also exacerbated by the lack of skilled human resources and inadequate facilities. On the one hand, libraries that have implemented library automation systems seem confused about the main functions of using automation systems in libraries.

The rapid development of information technology at this time also triggers a movement of change in a more dynamic library era. The emergence of new technology-based services has led to the development of new management information systems in libraries, such as the emergence of digital libraries and library automation. In a short period, a repository system has emerged. This is undoubtedly a big challenge for librarians who are still busy with library automation systems because library development is currently very dynamic.

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Librarians are also faced with changing needs and demands of librarians who are also very dynamic. For librarians who are currently just starting the development of libraries and those who are comfortable working according to their duties and responsibilities, the dynamics of the development of technology flows in libraries will cause turmoil. Many things can happen because the library is too dynamic to accept the changing times. Librarians will undoubtedly be nervous because the demands of work in the future will be more severe. Besides, they must also rack their minds if they follow new policies based on the latest library developments.

Technology has indeed made librarians have many choices in using information systems suitable to be applied to their libraries. The many options provided by technology also create new problems when librarians can no longer control the pressures that arise from the development of information technology. Problems that occur in the service process, of course, make librarians burdened, and new problems are presented by information technology, such as the many developments of library information systems, transfer of collection media from print to digital, digital preservation, the complexity of the budget submission procedure that is required. Not necessarily approved by policymakers, this is where the technostress syndrome can appear for librarians due to rapid technological changes in libraries. From the introduction, a formulation of the problem arises about how technostress can become a syndrome that attacks librarians in the era of technology-based library development. Meanwhile, the second formulation is about why technological developments in libraries are running too dynamically so that it can potentially cause technostress disturbances for librarians.

Technostress is not a newly emerging syndrome, the term technostress was born in 1984 and was pioneered by an expert in clinical psychology from America named Dr. Craig Brod. Technostress is defined as a form of disorder or disease that arises because of a person's inability to use computer technology in a fast way, this inability is manifested into two interrelated forms, namely the failure to accept computer technology and how to over-identify (excessive use). To computer technology (Suryanto & Sasi, 2017). Craig Brod also explained that technostress is a disease of modern adaptation that arises because of a person's inability to cope with computer technology, including software and hardware, in a healthy manner (Efilti & Coklar, 2019). Being healthy in the case of using technology means that a person must have the skills and self-control to use technology wisely. Technological skills are the main basic technical for using technology appropriately and correctly. Self-control is a person's attitude towards the extent to which technology will be used. Limitations in using technology and the information spread in it must be done so that someone is not too absorbed in the routine of using technology.

Many studies on technostress have been conducted and published in national and international journals. The survey of technostress can be said to be quite interesting because the issue raised is a field currently developing very rapidly, but most studies on technostress are more often carried out in other areas outside the library. The literature review of this study is mainly taken from research on technostress that has been carried out in different fields, such as research conducted by Hassan et al., (2019), which examined the effect of technostress on teacher organizational commitment in schools. This research was conducted with a quantitative approach at six schools in Selangor, Malaysia. This study involved 173 teachers as respondents and found that several determinants of technostress, such as techno overload, techno invasion, and techno complexity, did not affect teacher organizational commitment in the schools studied. These results indicate that the disruption from technostress created by technology does not negatively affect organizational commitment to

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continue using technology. Meanwhile, two other factors, techno uncertainty, and techno security, positively affect teacher organizational commitment to using technology.

Technostress disorders can occur in humans of various ages, this is because the pattern of acceptance of each individual to technology is certainly different from one another. Millennials are certainly quite ready to face technology than someone more mature or elderly. This is, of course, also experienced by librarians who have entered a ripe age in work, of course, the pattern of technostress disorders can arise due to various factors. Work problems and the comfort of previous technology can be one of the reasons for the emergence of technostress disorder in adulthood. In addition, the consumption of too high information can also trigger the emergence of techno-stress, especially for those who have entered a mature age in work, namely the age range of 30-40 years. Research on technostress was conducted by Chen (2015) in China by taking a sample of 221 respondents from knowledge workers such as teachers, lecturers, researchers, and so on. The findings of the study show that employees in China in the 30-39 year age group experience high levels of techno- overload and also high techno-uncertainty than the younger (25-29 years) and older (40-49) age groups year). Chen further explained that the data shows that workers in the 30-39 age group have experienced crucial life phases, such as the emergence of responsibilities in their families and careers. These employees experience role ambiguity and high conflict, besides that, techno-stress disorders increase because employees at a mature age at work tend to feel complacent and do not want to learn about new technologies.

The Technostress research is out to see the effectiveness of the use of information systems in various fields amid the Covid-19 pandemic, this can be seen from the study conducted by (Christian et al., 2021), which has the main focus on investigating technostress disturbances as the main moderator. On the quality of information and the effectiveness of e- learning used by students in Jakarta during the Covid-19 pandemic. This study uses a quantitative method and a sample of 127 students, most of whom are still in semester 2 PTS in Jakarta, the results of the study conclude that technostress is one of the essential factors in facilitating the process of delivering lecture material because technostress has an influence on the effectiveness of e-learning as a learning medium. Studies on technostress and various fields outside the library show that this topic is fascinating to study because nowadays, people are faced with a new era that attracts their attention to participate in using information technology massively, therefore technostress studies are beneficial in seeing and measuring the condition of society amid the use of technology media in particular from the point of view of psychological health.

Technostress disorder is a global disorder experienced by most people in the world. This disorder occurs in those who do not have technology media and attacks those who use technology too much. In the library context, several studies and research on technostress disorders were also found in librarians. One of the studies by Wardani (2016) examined the level of technostress in library employees at several public universities in Surabaya. The study was conducted using a quantitative approach, and as many as 100 selected respondents found that the level of technostress experienced by some librarians at several public universities in Surabaya was moderate.

2. METHODS

This study uses a literature study approach, according to Machi & McEvoy (2016) literature study is a written argument against proving problems that are described logically based on a comprehensive understanding of a current condition or phenomenon studied in a study. The literature review has several procedures, including extracting general research ideas; seeking

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relevant information; affirmation of research focus; searching for data sources through scientific reference sources; performing reorganization of data obtained through reference sources; conducting a review of the information that has been analyzed according to the formulation of the research problem; enrich resources; research data and compiling research results (Tahmidaten & Krismanto, 2020). Sources of data used in this study were taken from various sources of scientific literature, including scientific journals and books relevant to the field of technostress study.

3. RESULTS AND DISCUSSION

3.1 *Technostress* as a psychological disorder of librarians in the technology era

In librarianship studies, technostress disorders can arise due to various supporting factors, such as those related to the duties of librarians who work as information service providers. The task of librarians as managers of information centers requires them to be directly involved in the management, search, and distribution of information to the public.

Libraries have developed very rapidly due to the growth of information technology. One of the changes in the library that various libraries are currently adopting is the library automation system. Some libraries at a certain level have developed information technology-based services and facilities. The automation system in the library, of course, facilitates the librarian's work, and this system helps in terms of information retrieval. In practice, many libraries are still not ready to run a library automation system. In addition, many librarians are still confused about how the library automation system works, so many tend to implement an automation system without simultaneous development.

The automation system is only one of the development of other information technology-based libraries. Librarians are currently faced with the fact that the information needs of the community continue to increase and the media changes. Technology plays a role in changing people's consumption of information from print to digitalization, this is what drives libraries to respond too quickly to user needs by developing new technology-based services. In addition to the automation system, several developments have taken place in the library, such as a repository system, digital library, electronic journal, and so on. This development took place very quickly, thus triggering librarians to continue to think and move to respond to these developments.

The dynamics that occur in libraries are that librarians are still faced with a collection-based service paradigm. Therefore, sometimes, librarians are very busy with routine collections processing and circulation services. This paradigm can still be found in school libraries, where librarians are busy with administrative activities and can cause development at the school library level to stop at the library automation system. The story of a library information management system requires concentration and consistency, therefore the actual system management should be carried out by a competent person in that field. Librarians are system users, not system managers, serving as drafters, not system creators. Thus, librarians will be psychologically disturbed if they are charged with system development problems.

Psychological disorders such as stress, which almost everyone experiences at work, the high intensity of work, and the burden that is too heavy make a person experience heavy mental pressure. Librarians are one of the professions with a relatively heavy workload, this is because librarians carry out managerial duties as institutional managers. However, they still have to carry out administrative and information management activities. With the high intensity of work, librarians are still faced with the problem of lack of library infrastructure support, low acceptance of work incentives to personal issues such as the soft skills of

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librarians in the strategic field. According to Edward et.al in Wang & Li (2019) stress can appear on a person because it is influenced by two things, namely; (i) the environment does not provide sufficient supplies to meet the person's needs (needs-supplies misfit). A conducive work environment in a library can undoubtedly make the librarian feel comfortable while working. Still, suppose the work environment is too demanding on the librarian to improve skills in the field of information technology. In that case, this can potentially make the librarian experience technostress disorders. Librarians do not have an educational background in information technology, so they need a special information technology team to help improve librarian skills. (ii) the ability of a person who does not meet the demands of the environment (abilities- demands misfit). Librarians who do not have technological skills can be very stressed at work if there is a demand to develop information technology-based services. This demand can undoubtedly make them nervous and affect the mental condition of librarians, especially those who are not strong enough to face pressure.

In the development of library management information systems, many problems make development limited to the problem of submitting data and meta-data of online catalogs. Meanwhile, if the automation system can be developed according to the needs of users and libraries, this system will produce practical service outputs for the community. Stress disorders in librarians often appear in the form of anxiety, this can be seen by librarians constantly complaining about the lack of infrastructure support and resources that help them in developing systems in the library. The problem of stress disorders in librarians can also be due to the problem of soft skills in using technology. Librarians are currently experiencing a generational transition, so there are still many librarians with traditional cultures who work and occupy essential positions in libraries. Still, they lack skills in using information technology.

Librarians can be attacked by technostress interference is a natural thing. Sala-nova defines technostress in Abilleira et al. (2021) as a psychological disorder related to the use of information technology, this situation is conditioned by a mismatch between the amount of demand and supply for information technology resources, thus triggering the emergence of an unhappy attitude towards information technology. A librarian currently has the burden of adapting to changes in the work system. The development of information technology-based libraries can undoubtedly put pressure on librarians, so they need to improve their skills in using technology, especially in terms of operating computers, information systems, and the internet, to keep up with current developments. Many supporting factors can cause technostress disorders in librarians, this disorder can indeed disturb anyone because of its nature as a psychological disease. Shu, Tu, and Wang in Efilti & Coklar (2019) describe three main reasons for the emergence of technostress disorders in employees, namely; (i) employees cannot adapt to new technologies in their work environment, (i) one's expectations are too high for the use of information technology applications; (iii) changes in information technology media are too fast, causing changes in working conditions that adapt to technological changes. Some of the reasons above certainly have the potential to be experienced by the librarian profession, considering that currently, the development of information technology-based library services is running so massively.

The cause of the emergence of technostress disorder is due to internal and external factors that make a person anxious about new technology in the work environment. In a study conducted by Tarafdar et.al in Efilti & Coklar (2019), the factors causing technostress are divided into five main dimensions, namely;

a) *Techno-overload,* is a condition when a technology user faces many work situations. Librarians are users and operators of information technology because they use library

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information systems for service purposes. The burden of the librarian as a technology user is quite heavy than an end-user who only uses information systems to find information needs. The routine of information processing and user service is always accompanied by interaction with the library information system. The repetition of habits occurs almost every day, and sometimes the burden increases if there is a problem with the library information system-based processing process.

b) *Techno-invansion,* is when technology users are always connected with work problems. The development of information technology-based libraries produces a new system that connects librarians with users and their work. The library management information system, often known as the library automation system, is beneficial in the information retrieval process and facilitates librarians' work in data collection management. The current development of automation systems also makes librarians busier, especially when this system has entered the internet network phase. Librarians currently carry out two different roles, namely as system users and sometimes concurrently system operators, therefore when an online automation system encounters a problem (system error), the work can become homework to be completed by the librarian outside of working hours. Technology is like a double-edged sword, on the one hand, its presence makes it easier for librarians in service, communication, and promotion, but technology also connects librarians with endless work routines. In addition, several new technology-based services emerged, such as repository systems, electronic journals, library websites, and digital libraries.
c) *Techno-complexity,* is a situation where a technology user feels unable to deal with the complexity of technology. The information system built on the library is primarily a development of open source software. However, although information systems are easy to develop in libraries, librarians are faced with adapting to library information systems. Adapting to a design takes a long time because each person's acceptance is different, therefore it requires a learning process and more effort from the librarian to understand every feature/service provided by an information system. Technology seems to be intimidating its users through technology features/services, while users have different capture systems, so it takes time for them to learn to recognize features. Librarians are also intimidated by library information systems, where they must master the elements of automation systems, repositories, and others to use the system properly.
d) *Techno-insecurity,* is when a new technology user feels job insecurity caused by the latest technology. Insecurity is a person who feels afraid or is threatened with losing his job position because of new technology so that he can use other, more skilled resources. Librarians are currently faced with anxiety if the system will replace their roles. In addition, for librarians who work with traditional culture, this causes fear because the emergence of new technology is followed by the arrival of a new generation of librarians who are ready and skilled in using technology.
e) *Techno-uncertainty*, is a condition where technology gives uncertainty to its users. Technology is not a media that has a permanent nature, technology continues to experience rapid changes so that it is possible in a short period, a new system will appear that functions to improve features of the old system. Technological uncertainty can make librarians have doubts about library information systems. The doubts are not on the part of the library information system but on the information system that has very dynamic changes. Technological uncertainty in the form of software and hardware can undoubtedly affect the psychological condition of librarians, this is because the

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emotional development of a system will increase the time burden of librarians to re-learn and familiarize themselves with technology.

Librarians are very vulnerable to experiencing technostress disorders because of the intensive development of libraries towards information technology. The use of information systems not yet at the implementation stage has been faced with developing information systems for new services. Libraries in universities are areas that are experiencing rapid development of library information systems. The high work demands and the academic community's need for reliable and up-to-date information sources make libraries have to step up to meet the needs of their users. In the university library, the system development is very dynamic, meanwhile the school library sector is still busy with implementing the automation system.

Technostress disturbance can affect anyone, for librarians who still adhere to traditional work culture, the presence of new technology and a generation of young librarians who are fresh and accustomed to living with technology certainly bring significant challenges. Conventional librarians must follow the unique culture and work system, this of course, requires hard work from traditional librarians considering the habits of those who work with old technology. Young librarians also cannot be separated from technostress disorders due to the lack of experience and expectations of those still young. In addition, young librarians are also faced with a large amount of information flow on the internet which can cause decision uncertainty if they cannot filter the information they get using information technology. Technostress can attack librarians because they are busy working in front of computers that take place every day, intense work routines carried out with the support of information systems certainly make librarians have to learn to understand how information systems work, this, of course, makes the librarian's time more efficient reduced because they have to work and study the information systems in the library. Lee & Ashford in Hassan et al. (2019) confirms the implications of stressors (including technostress) that the higher the stress level on employees caused by role conflict, workload, and pressure on affiliation policies, the greater the emotional exhaustion of an employee. Librarians can experience emotional disturbances because of the busy work they do, the presence of technology in the library does help minimize the workload that is done conventionally, but on the other hand, the existence of technology can present emotional conflicts for librarians if their minds are always connected to work problems and library information system development especially when outside working hours.

3.2 The Rate of Technological Development in Libraries That Is Too Dynamic

Libraries have gone through various phases in their function as information service providers. Libraries are entering a new phase of implementing services and adding information technology facilities. As a library is an institution that is constantly developing dynamically, the technology- based library development steps taken by librarians are considered very appropriate because the needs of users are currently starting to shift towards digital.

The rate of development of the use of technology in the library is quite fast, this can be seen from the use of technology in library facilities and supporting user services. Library facilities, such as internet network facilities, multimedia, media-based conference rooms, etc., are undergoing significant changes. In addition, on the side of user service, it is now computerized, and the use of the library and internet-based information systems has begun to be developed to reach the wider community. Technological developments in libraries

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include using hardware and software, supporting the library's function as an information service provider, and assisting in the information dissemination process.

The development of the use of library technology continues to increase, this can be observed in several new services developed by librarians as part of the information dissemination process. Several services, such as repositories, library websites, and electronic journals, have begun to be developed in the university library sector. Public libraries are currently starting to build digitization with the emergence of digital libraries based on mobile applications. As a center for national knowledge, the National Library of the Republic of Indonesia also publishes the Indonesian Onesearch program. This web- based information system accommodates the metadata index process for all libraries in Indonesia, while school libraries are still developing a network-based library automation system.

The development of technology-based library services in Indonesia cannot be separated from the opening of the librarian's mindset, which is no longer centered on the problem of processing collections. Service in the library has now become the primary goal of librarians because various technology-based developments are carried out to keep up with the current development of information technology. The flow of technological developments in libraries cannot be separated from the intervention of librarians. The Canadian Association of Research Libraries (2010) in Adekoya (2018) explains that librarians must have several skills or broad knowledge in the field of technology, including;

a) Integrated library system (ILS), is the librarian's knowledge of library integration systems where librarians need to understand the network infrastructure to connect each work unit and coordinate it centrally. Librarians can play the role of drafters in developing network infrastructure. Therefore, understanding network system problems need to be studied to design an appropriate library network.
b) Emerging web technology, librarians' knowledge of web technology is currently increasing due to the massive use of the internet. Librarians need to know to see opportunities from web technology, such as using social media (Facebook, Twitter, blogs, and others) as promotional media or information dissemination. In addition, understanding the mobile platform also needs to be improved because, at this time, people are starting to actively seek information and entertainment through mobile platforms such as Instagram, TikTok, Youtube, and so on.
c) Electronic resource management, the basic knowledge of modern librarians that must be possessed is about electronic collection management skills. The basic skills of library automation systems must be mastered by librarians and can be developed to create digital libraries.
d) Web page development, librarians' knowledge in managing and developing personal and institutional websites. Digitization provides a new role for librarians. Therefore librarians need to master the basic techniques of website design and digital system analysis. Librarians can start understanding web development by building a personal blog (personal blog), the writing skills must also follow the existence of a personal blog. Web development is not just about the layout and features that are loaded on the website. Still, librarians must also be proficient in creating engaging, informative, and up-to- date content to be displayed on institutional websites.
e) Institutional repositories, librarian knowledge about developing and managing institutional repositories, namely digital storage spaces containing specific information resources created by the institution. In university libraries, repository development is carried out to collect and distribute collections of the academic community such as theses, theses, dissertations, research reports, and others in digital form.

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f) Database management, librarian's knowledge of database management. Librarians must understand database management because it aims to reduce the cost of recruiting new personnel to manage it. In addition, with the basic skills of databases, librarians can perform maintenance or repairs on information systems that have problems in data management. Database skills are a new requirement that librarians must master in digitalization.

Some new knowledge to librarians, such as that conveyed by the Canadian Association of Research Libraries, illustrates that the current flow of library development is high-speed. Efforts to accelerate technology-based services and user needs have begun to be carried out by several libraries, especially in the higher education sector. Meanwhile, developing an automation system at the school library level is still an unfinished task. There are several new demands from the school to librarians to establish digital libraries to serve users (students) amid the COVID- 19 pandemic.

Technology development in libraries is also inseparable from the paradigm of thinking built by librarians. Library development occurs based on the transition to global changes, such as the emergence of the industrial revolution 4.0 at the worldwide level, then translated by librarians that libraries must also follow these changes so that the use of the term library 4.0 appears. According to Sanjaya (2018), library 4.0 adopts all the main elements of the 4.0 industrial revolution and needs further development. In the development of library-based libraries 4.0, each library must begin preparing technology-based services to meet user needs. In addition, the Internet of Thinks (IoT) application is also carried out to follow the changing patterns of community needs that are starting to shift to the digital sector. Internet of Thinks (IoT) is defined as a global-based network infrastructure in which digital objects are connected using various types of networks such as Radio Frequency Identification (RFID), and sensor technology (Tyagi & Nair, 2020). Implementing the Internet of Thinks (IoT) in libraries is not easy for librarians. These developments give librarians quite heavy homework, this is because each library has different characteristics and various problems such as financial capability, network infrastructure, and human resource skills in running the Internet of Things Thinks (IoT).

The current technological development in libraries today is very dynamic, paradigm changes can occur anytime without the librarian realizing it. The librarian's task is quite heavy because of the new technology-based knowledge that must be mastered. The use of new technology can occur at any time in the library, therefore, mastery of software and hardware must be carried out by the librarian. Librarians cannot avoid the demands and challenges of the information technology era. Thus the workload can impact the health of the librarian's mind, so the potential for technostress disturbances can threaten at any time.

Librarians must be savvy in maintaining the rhythm of work, besides the need for the process of understanding technology can be done by networking between librarians and collaborating with other fields such as the institutional ICT team. Librarians have been too confined to the new world, even though as agents of information dissemination, librarians need to do a lot of scientific collaboration with other fields. Techno-stress disorder is unavoidable, especially for those who have a fear of new technology coming. For librarians, technostress is a challenge that has to get overcome because this disorder is an emerging part of the development of information technology in libraries. Librarians need to respond intelligently to the dynamic development of library technology because, after all, technology cannot be avoided by librarians. Information technology is unavoidable for librarians, therefore librarians need to prepare themselves with qualified skills. According Setyorini in Mulyadi et al. (2019) revealed that librarians must have abilities according to their activities,

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such as having expertise in the field of technology (skills), broad insight (knowledge), and being able to provide services (ability), as well as having psychological maturity to raise the professionalism of librarians in the information age.

4. CONCLUSION

Technostress disorder arises because of the high intensity of technology use but is not followed by self-control over the information obtained. Librarians who adhere to the traditional culture of technological change have a great potential to cause anxiety because they have to keep up with change. The workload of librarians is indeed hefty, apart from that, they also have to change the paradigm of thinking toward developing a library that grows very dynamically. The pace of technological development in libraries is part of changing times and changing patterns of community needs. This requires librarians to master several new skills in the technology field and utilize the technology developed in the library correctly and on target. Technological developments in libraries have had a significant impact, especially regarding changes in technology infrastructure and library services.

5. REFERENCES

Abilleira, M. P., Rodicio-Garcia, M.-L., Rios-de Deus, M. P., & Mosquera-Gonzales, M. J. (2021). Technostress in Spanish University Teachers During the COVID-19 Pandemic. *Froentiers in Psychology*, *12*, 1–11. https://doi.org/10.3389/fpsyg.2021.617650

Adekoya, C. O. (2018). Research Skills, ICT Application and Sustainable Library Development. *Library Philosophy & Practice.*

Chen, L. (2015). Validating the Technostress Instrument using a Sample of Chinese Knowledge Workers. *Journal of International Technology and Information Management*, *24*(1).

Christian, M., Indriyarti, E. R., & Wibowo, S. (2021). Investigating Technostress as Moderating Information Quality and E-Learning Effectiveness on Students in Jakarta During the Covid-19 Pandemic. *Ilkogretim Online*, *20*(4).

Efilti, E., & Coklar, A. N. (2019). Teachers' Technostress Levels as an Indicator of Their Psychological Capital Levels. *Universal Journal of Educational Research*, *7*(2).

Hassan, N., Yaakob, S. A., Halif, M. M., Aziz, R. A., Majid, A. A., & Sumardi, N. A. (2019). The Effects Of Technostress Creators And Organizational Commitment Among School Teachers. *Asian Journal of University Education*, *15*(3).

Machi, L. A., & McEvoy, B. T. (2016). *The Literature Review: Six Steps to Success 3*. Corwin.

Mulyadi, Z., I., & Laugu, N. (2019). Adaptasi pustakawan dalam menghadapi kemajuan teknologi. *Berkala Ilmu Perpustakaan Dan Informasi*, *15*(2), 163–174.

P.N.R.I. (2021a). *Data Organisasi Mitra Indonesia Onesearch*. https://onesearch.id/Repositories/Library?status=ok

P.N.R.I. (2021b). *Data Statistik Perpustakaan*.

DOI: https://doi.org/10.17509/edulib.v11i2.39604
p- ISSN 2089-6549 e- ISSN 2528-2182

Sanjaya, R. (2018). *Library 4.0 untuk Perpustakaan Masa Depan. Suara Merdeka*. https://www.suaramerdeka.com/smcetak/baca/85603/library-40-untuk-perpustakaan-masa-depan

Suryanto, & Sasi, T. R. (2017). Technostress: Pengertian, Penyebab dan Koping Pustakawan. *Pustabiblia: Journal of Library and Information Science*, *1*(1).

Tahmidaten, L., & Krismanto, W. (2020). Permasalahan Budaya Membaca di Indonesia (Studi Pustaka Tentang Problematika & Solusinya. *Scholaria: Jurnal Pendidikan Dan Kebudayaan*, *10*(1).

Tapscott, D. (2009). *Grown Up Digital: How the Bet Generation Changing Your World*. McGraw Hill.

Tyagi, A. K., & Nair, M. M. (2020). Internet of Everything (IoE) and Internet of Things (IoTs): Threat Analyses, Possible Opportunities for Future. *Journal of Information Assurance and Security*, *15*(5), 194–218.

Wardani, D. K. (2016). *Tingkat Technostress Pada Staf Perpustakaan Perguruan Tinggi Negeri Di Surabaya*.

DOI: https://doi.org/10.17509/edulib.v11i2.39604
p- ISSN 2089-6549 e- ISSN 2528-2182