Chapter- 2

Review of Literature

2.1. Introduction:

The background of this study is essential to review several parts, figures, frames, methodologies of previous studies and literature. Study has made basic seven parts of library security; these are General Security, Building Security, Access Control, Collection Security, Equipment/ Furniture Security, Staff / Patrons/ Visitors/ Personals Security, Emergency Security / Disaster Preparedness. It helps to know what type of progress is done in specified part. Study has been made an attempt to recognize related literature published in various sources of information, it includes, books, journals, articles, abstracts, conferences/ seminars papers and electronic resources. The literature search is based on print and digital text resources. There is plenty of literature available which recognizes the importance of security, risk assessment, security inventory, stock verification, security preparedness, security prevention and security planning etc. This chapter is present a review of the literature on library security, which is useful in the preparation of this study.

The research made use of several sources in order to determine what studies on library security have been completed local, national and international level. The beginning of study of literature search includes many related and relevant studies. It was initiated that many researchers have been studied various aspects of library security. These are collection security, theft, mutilation, problem patron behavior, vandalism, book loss, crime, arson, delinquent reader, pilferage, misuse, over borrowing, misplacement etc. The maximum studies are conducted in western countries on the library security at national and international level. The researcher is covered various Indian studies on library security. In addition to this large number of research articles and few books related to the present topic have been reviewed by the investigator. Review is consists definitions of related terms, related issue, problems, various forms, delinquent activities, causes, measures etc. All these literature guided to the researcher for framing questionnaire as well as analyzing data.
Literature review also divided in main parts, subparts and related issues. It has been mentioned in the section where it was found most useful. It has also studied how the library authorities, librarian and library staff deal with these above mentioned parts and subparts related to security problems. In each part tried to review the definition, issues, examples etc. Security component may have included proper security planning, security inventory or stock verification, collection storage, access procedures, restricted access, delinquent activities, building maintenance, staff training, insurance and conservation etc.

A number of bibliographic resources are available, both in print and electronic form on the web. The main source to identify that research has been conducted from bibliography of doctoral dissertations published by Association of Indian Universities (AIU) in social sciences. All the bibliographies published by AIU since 1980-81 to 1997 were checked. Gordon, Nicole’s (2002) “Archives and Security Bibliography. Brady, Eileen E. (1995) edited 5th edition of “Library/Archive/Museum Security: A Bibliography”. Sable, Martin H. (1984) edited “The Protection of the Library and Archives: An International Bibliography”. All these bibliographies scanned to collect literature for present study. It makes easy to understand the related terms and issues. All these bibliographies categorised the resources into General Security, Security Bibliographies, Researcher Monitoring Procedures, Security Incident Management Procedures, Maintenance, Security Procedures, Staff Security Training Procedures, Building Physical Security Procedures, Security Assessment Procedures, Natural Disasters, Technological Hazards etc. Bibliography of research in library and information science in India compiled by Pathak and Ramaiah (1986) and Kumar (1987) that inspected this bibliography has covered research conducted at M.PHIL & PH.D level. The reasons for loss of library material consists limited library collection, insufficient number of copies of textbooks, excessive cost of textbooks, high cost of photocopying & less number of books allowed to be borrowed, duration of loans respectively. Further user attitudes against damage of library property is noted that selfishness, fun, unawareness of importance etc.

The website of INFLIBNET (2012), Vidyanidhi (2013) and DELNET (2013), Despace, ETD’s were searched for review of relevant literature and it is really helpful to understand the topic. Web resources are great help to remote area researcher.
Library & Information Science Abstracts (LISA) is searched for relevant articles, it is international reputed journals of library and information science.

2.2. Operational Definitions:

Before attempting to discussion of subject, it would be helpful to define and delimit the use of the term & consider some of the resulting implications. This is especially because the meaning of terms depends on the context in which they are used

2.2.1. Security

Security means “the state of being or feeling secure; freedom from fear, anxiety, danger, doubt etc; state or sense of safety, tranquility, certainty etc; protection; safeguard. 3. (a) protection or defense against attack, interference, surveillance etc. (b) protection or defense against escape c. procedures to provide such protection or defense. 4. an organization or department whose task is protection or safety, a private police force hired to patrol or guard a building, park, or other area. 5. Something given as a pledge of repayment, fulfillment of a promise etc. a person who agrees to make good the failure of another to pay, perform a duty etc.; surety. 6.any evidence of debt or ownership; a stock certificate or bond. Agnes, Michael (2007)

Security: “In the operation of libraries and archives, a general term encompassing all the equipment, personnel, practices and procedures used to prevent the theft or destruction of materials and equipment and to protect patrons and employees from the harmful actions of persons intent on mischief. Large libraries and library systems often appoint a Library Security Officer (LSO) to develop and implement a security plan.” Reitz, Joan M

As per the Webster's Unabridged Dictionary security means.

1. The condition or quality of being secure;

(a) Freedom from apprehension, anxiety, or care; confidence of power of safety; hence, assurance; certainty.

(b) Carelessness; negligence; heedlessness.

(c) Freedom from risk; safety. (Give up yourself merely to chance and hazard, from firm security)
2. That which secures or makes safe; protection; guard; defense.

(a) Something given, deposited, or pledged, to make certain the fulfillment of an obligation, the performance of a contract, the payment of a debt, or the like; surety; pledge. (Those who lent him money lent it on no security but his bare word.)

(b) One who becomes surety for another, or engages himself for the performance of another's obligation.

3. An evidence of debt or of property, as a bond, a certificate of stock etc; as, government securities.

Synonyms: Protection; defense; guard; shelter; safety; certainty; ease; assurance; carelessness; confidence; surety; pledge; bail.

**Security:** generally refers to physical security protection, but here, as elsewhere, is a common synonym for "physical protection" that includes fire protection and emergency planning. LLAMA

**Security:** Safe and secure libraries need to be created in order to become environments free of fear, violence and intimidation, where scholars can learn and educators can teach. Library environments that is safe and welcoming. Stephens, (2004).

**2.2.2. Security System:** An electronic alarm system installed at the entrance and exit of a library facility to detect the unauthorized removal of library materials (theft). Most security systems use a swing-arm or pair of uprights called a security gate, activated by a magnetic strip affixed to each item, which must be desensitized by circulation staff at the time the item is checked out to avoid triggering the alarm. Some security systems include a counting device for gathering statistics on traffic patterns. Reitz, Joan M.

**2.2.3. Security Measures:** Library is also information business profession.

Reduce unlimited access, Proper security mean or security hours, gate keeper guards, security man etc., Photo ID for admission, Retinal, Finger prints, voice recognition security, Passwords for computer used changed frequency, need to know lock is for information, An authorization code for use of equipment and materials.
2.2.5. **Audit**: An official examination of the accounts or records of an individual, company, organization, or institution to determine if they are correct. Conduct such an examination, usually on a regular basis. http://dictionary.reference.com/browse/audit

Audit:

1. An official examination and verification of accounts and records, especially of financial accounts.

2. A report or statement reflecting an audit; a final statement of account.

3. The inspection or examination of a building or other facility to evaluate or improve its appropriateness, safety, efficiency, or the like: *An energy audit can suggest ways to reduce home fuel bills.*


verb (used with object)

6. To make an audit of; examine (accounts, records etc.) for purposes of verification.

7. To attend (classes, lectures etc.) as an auditor.

8. To make an audit of (a building or other facility) to evaluate or improve its safety, efficiency, or the like. http://oxforddictionaries.com/definition/audit

**Audit**:  
An official inspection of an organization’s accounts, typically by an independent body: *audits can’t be expected to detect every fraud.*

A systematic review or assessment of something: a complete audit of flora and fauna at the site *verb (audits, auditing, audited)*

1. conduct an official financial inspection of (a company or its accounts): *unlimited companies must also have their accounts audit*, conduct a systematic review of: a method of auditing obstetric and neonatal care

2. North American attend (a class) informally, without working for credit: he made use of the knowledge gleaned from economics classes he audited, late Middle English: from Latin *auditus* ‘hearing’, from *audire* ‘hear’, in medieval
Latin *auditus (compoti)* 'audit (of an account)', an audit originally being presented orally. http://www.businessdictionary.com/definition/audit.html

1. **Accounting**: Systematic examination and verification of a firm's books of account, transaction records, other relevant documents and physical inspection of inventory by qualified accountants (called auditors).

2. **Quality Control**: Periodic (usually every six months) onsite-verification (by a certification authority) to ascertain whether or not a documented quality system is being effectively implemented. http://www.businessdictionary.com/definition/audit.html#ixzz1sOGFrgp3

2.2.4. **Security Audit**: According to Reitz’s online dictionary for library and information Science Security audit means “A thorough on-site inspection in which a person (or persons) trained and experienced in library security critically examines and analyzes all the existing security systems and procedures used in a library to ascertain current status, identify deficiencies or excesses and make recommendations based on findings. A professional security audit may include the analysis of crime statistics, an assessment of insurance needs and discussion of sensitive topics, such as internal theft and personal security issues.” Reitz, Joan M.

**Inventory**: A complete list of the things that are in a place, a supply of goods that are stored in a place, an itemized list of current assets, a catalog of the property of an individual or estate, a list of goods on hand, a survey of natural resources, a list of traits, preferences, attitudes, interests, or abilities used to evaluate personal characteristics or skills, survey or summary, the quantity of goods or materials on hand stock, the act or process of taking an inventory, the act or process of making a complete list of the things that are in a place : the act or process of making an inventory. Merriam Webster Dictionary

2.2.6. **Library**: From the Latin *liber*, meaning "book." In Greek and the Romance languages, the corresponding term is *bibliotheca*. A collection or group of collections of books and/or other print or non-print materials organized and maintained for use (reading, consultation, study, research etc.). Institutional libraries, organized to facilitate access by a specific clientele, are staffed by librarians and other personnel trained to provide services to meet user needs. By extension, the room,
building, or facility that houses such a collection, usually but not necessarily built for that purpose. Reitz, Joan M.

2.2.7. Crime: Because many libraries in the United States and other countries are open to the public, they are not immune to the disruption caused by unlawful behavior, including theft of materials and equipment, verbal abuse and assault upon patrons and staff, indecent exposure, drug use and sale by patrons and staff, mutilation of materials, vandalism of equipment and facilities, arson and more recently, computer crimes. Statistics indicate that crime is increasing in libraries, placing an additional burden on library budgets to provide adequate security. Reitz, Joan M.

2.2.8. Theft: The unauthorized removal of materials or equipment from library premises. Theft and vandalism of library materials is punishable as a misdemeanor in most states in the United States. This persistent problem is controlled by restricting access to the technical processing area and by installing security gates at public exits equipped with an alarm system that is automatically activated by a magnetic strip affixed to the item unless the strip is desensitized at checkout. Unfortunately, determined thieves learn to locate and remove the strips to avoid detection. Closed circuit television surveillance systems have been installed in the rare books reading rooms of some large libraries to deter theft. The Association of College and Research Libraries (ACRL) has issued Guidelines Regarding Thefts in Libraries (January 2003). Reitz, Joan M.

Theft – A theft may be defined as carrying a book or any material out of library a book against the rules without a prior permission of the librarian.(Goswami, 1989; Rao, 1995.)

Techno Theft – Techno theft means theft of computers & other media equipment in college libraries.

Mutilation – A book made unfit for reading purposes wholly or partially is said to be mutilated. Goswami (1989), Rao, (1995)

Un-Authorised Borrowing – It confined with the purposeful removal of material from the library without it being checked out. It implies the return of material to the library when it is no longer needed. Rao (1995).

2.2.9. Security guard: “An employee responsible for patrolling the premises of a library to discourage disruptive behavior and illegal activities, such as vandalism and the unauthorized removal of materials (theft) and to deal with individuals who do not comply with library policies and rules. Most security guards wear uniforms and are trained to handle problem patrons and various types of emergency situations. Reitz, Joan M.

2.2.10. College: College is an educational institute which teaches education to undergraduate and postgraduate students and professional education diplomas and degrees with the help of various teaching aids and faculty to improve all round development of personality of the students admitted in the college.

“College is an institution of higher education usually offering only a curriculum in a Liberal degree”.

“A major division of a university usually division of Arts and Science especially one required for admission to study beyond the completion of secondary education.” Good C.V. (1959)

2.2.11. College Libraries: Libraries are constituted by the educational authorities in the campus of college to fulfill the information needs of students and faculty related to their subject by providing reading material like books, journals, non book materials etc. and services regarding curriculum.

“A Library which is forming an integral part of a college, organized and administrated to meet the needs of its students and faculty.” Parmar P.P. (1989).

BAMU – Marathwada University is at Aurangabad that was established in August 1958 and was renamed in 1994 as Dr.Babasaheb Ambedkar Marathwada University. The jurisdiction of BAMU is Aurangabad, Jalna, Beed and Osmanabad districts.

Marathwada – Marathwada is one of the division within six divisions of Maharashtra state which includes, eight districts i.e. Aurangabad, Jalna, Beed, Parbhani, Hingoli, Nanded, Latur and Osmanabad.

2.2.12. Library system: A group of libraries administered in common, for example, a central library and its branches or auxiliary outlets. Also, a group of independently administered libraries joined by formal or informal agreement to achieve a common
purpose. Under such an arrangement, each library is considered an affiliate. Compare with consortium. Reitz, Joan M.

2.2.13. **Library security officer (LSO):** The person appointed by the director of a library or library system who is authorized by the library and its parent institution to act on their behalf in working with the institution's administration and staff, legal counsel, security force and outside agencies to develop and implement an effective *security plan*, based on a thorough understanding of security needs, particularly those of special collections. Such a plan should include a survey of the library's collections, review of the layout of the physical facility, staff training and standard operating procedures for dealing with theft and other common security problems. Reitz, Joan M.

2.2.14. **Security Manager:** Library/archives staff person who is appointed to be responsible for library security and protection issues. LLAMA

2.2.15. **Security Staff:** Staff that have security duty to perform, when they are performing that security duty. LLAMA

2.2.16. **Staff with Primary Security Duties:** Staff who are dedicated to work conduct security duties most of their working time, usually staff of a security office or security department. LLAMA

2.2.17. **Security Gate:** A device installed near the entrance and/or exit of a library, usually in the form of a swing-arm or pair of uprights positioned in such a way that persons entering or leaving the premises must pass through a magnetic detection system designed to trigger an alarm if an attempt is made to remove library materials without checking them out. Less obtrusive laser systems are also available. Some security gates include a counter that provides traffic statistics. Reitz, Joan M.

2.2.18. **Access:** The right of entry to a library or its collections. All public libraries and most academic libraries in the United States are open to the general public, but access to certain areas such as closed stacks, rare books and special collections may be restricted. In a more general sense, the right or opportunity to use a resource that may not be openly and freely available to everyone. Accessibility. In computing, the privilege of using a computer system or online resource, usually controlled by the issuance of access codes to authorized users. In a more general
sense, the ability of a user to reach data stored on a computer or computer system. Open access and perpetual access. Reitz, Joan M.

2.2.19. **Vandalism**: Damage to library collections, furnishings, or facilities that is intentional rather than accidental, usually motivated by anger or malice on the part of the perpetrator. Vandalism detracts from the physical appearance of a library and its resources. The cost of repair or replacement puts an unwelcome burden on the budget. To avoid detection, most acts of vandalism are committed in unstaffed locations or after hours. Some libraries employ a security guard to keep an eye on areas not visible from at least one public service point when the library is open. Compare with defacement. Reitz, Joan M.

2.2.20. **Library Materials**: All the items purchased by a library or library system to satisfy the information needs of its users, including books, newspapers and periodicals, reference materials, music scores, maps, microforms and non-print media, as distinct from equipment and supplies. Some libraries include subscriptions to electronic resources in the materials budget; others fund them separately. Except for gifts and special endowments, the acquisition of library materials is normally funded through the operating budget. The rapid escalation of journal subscription prices over the past decade has forced many academic libraries to cancel periodical subscriptions to maintain balance between expenditures for books and serials. Reitz, Joan M.

2.2.21. **Patron**: Any person who uses the resources and services of a library, not necessarily a registered borrower. A person who helps sponsors the creation, copying, or printing of an original work. In medieval Europe, the patron who commissioned a manuscript was sometimes depicted in a presentation miniature or other illustration in the work. In a more general sense, any person or group that encourages or supports an activity, project, or institution such as a library, especially by providing funds or other material resources. Reitz, Joan M.

2.2.22. **Key Control**: The process of establishing and maintaining the list of persons authorized to access keys to the door locks and lockable equipment in a library, as a means of securing the facility's locking system. A full survey of all locks and lock locations must first be conducted and an inventory made of all existing keys. Then key distribution is carefully recorded, including keys retrieved from employees who
leave library employment. Access to master keys is limited to essential personnel, using a two-key system in areas where security is especially important (rare books, special collections, computer equipment rooms etc.). When not in use, keys are stored in a secure cabinet, with a log for recording name of borrower, date of issue and date of return. Reitz, Joan M.

2.2.23. **Asset** – Equipment, furnishings and collections. Reitz, Joan M.

**Assets**: Refers to what the library has or owns and considers valuable, including human life, collections, structures, properties, even the good name and operations of the library. LLAMA BES

2.2.24. **Disaster**: Uncommon, uncontrollable events such as a dangerous weather storm causing damage, sometimes contrasted with "emergency" which refers to interruptions to library operations that are relatively common, controllable emergencies such as electrical power outage, often used synonymously. LLAMA

2.2.25. **Emergency**: An interruption to library operations that is relatively common, controllable, contrasted with "disaster" above, but often used synonymously with it. LLAMA

2.2.26. **Perimeter Security**: Protection concept of designing a three-dimensional ring around objects of value, often one inside another, such as a property line perimeter, building shell perimeter, non public area perimeter and high value area perimeter. LLAMA

2.2.27. **Policy**: As used in this document is a library-wide scheme, while "program" and "plan" are management procedures for specific subjects. Specific procedures may be called "instructions," "manual," or "rules". LLAMA

2.2.28. **Protection**: Includes physical security, fire protection and emergency planning, contrasted with "security" below, with which it is often used synonymously. LLAMA

2.2.29. **Secured Area**: An area who perimeter security has been reviewed and usually reinforced, with entries and exits locked or under observation and generally alarmed when empty. LLAMA

2.2.30. **Special Collections**: Refers to high value collections. LLAMA
2.2.31. **Staff**: Any persons who can be held responsible for their actions by the library, including paid and unpaid staff, volunteers, interns, researchers, contract and maintenance workers. LLAMA

**Security Audit, Assessment (Legal Status of Libraries)**

Security control plan, Do you have a: emergency and / or security plan, floor plan on display showing emergency exit and equipment, Offender Description Form on file (and staff know where to find it), Formal or informal staff training sessions at regular intervals

As a unit of government, i.e., a library organized as a part of government, and constituting a complete entity with a single administrative authority over the territory under its jurisdiction. Under this method the procedure in creating a county or regional library would be to combine existing libraries into one legal administration. When such consolidation takes place the number of existing units is usually decreased

### 2.3. History of Library Security:

When the knowledge resources were published in the world, it required the security due to various reasons such as natural disasters, anti social activities, war, fire, theft for individual benefits etc. there are various events held in history related to destroyed library and its assets.

Mohammed Bakhtiar Khilji destroyed the Universities and libraries of Nalanda, Vikramshila, Odantapura and Jagddala around 1200 AD (1193 AD). Educational centres carrying Hindu texts, scriptures and knowledge were burnt down. Nalanda, Takshashila, Vikramshila, Ujjain, Kashi etc. lost their knowledge resources. This marked the destruction, persecution and decline in Indian education, thought and structure. 600 years later, the British further damaged the Indic system of education, with State subsidies and patronage of Western education – the watershed being Bentinck’s proclamation in 1835.

Ancient Indian civilization had the world's finest universities and centres of excellence. Libraries in India existed in these universities and centers of excellence. Written literature, in manuscript form, was kept in Gurukuls or Ashramas, Jain and Buddhist monasteries and madrasas. Nalanda University, the University of Vallabhi,
Odantapuri University is some of the examples of universities which had huge libraries storing oriental literature. It is not known for sure what happened to these libraries. Over time, they were either destroyed or merged with other institutions. The University of Vallabhi built by the Maitraka Kings during the years 475-775 A.D., had a library with a variety of Eastern literature. This university and its library lasted until the 12th Century, when they were said to be completely destroyed by Arab invaders. Odantapuri University was founded by King Gopala (660-705 A.D.) and had a library that was rich in Brahmanical and Buddhist works. It is reported that Mohammad Bakhtiyar Khilji destroyed this monastic university along with its library.

The Vikramshila monastery built in the 8th Century A.D. had a rich collection of texts in Sanskrit, Prakrit and Tibetan languages. Muslim invaders are said to have caused the disappearance of the excellent collection at Vikramashila. The University of Nalanda Library was called Dharmaganja and it was housed in three buildings named Ratnabodhi (ocean of pearls), Ratnasagar (sea of pearls) and Ratnaranjak (pearls of recreation). The first building was nine storeys high and the two others were of six storeys each. The library also undertook to publish new volumes and preserve valuable manuscripts. This superb institution did not die a natural death through deterioration. It fell victim to the invading hordes of Mohammad Bakhtiyar Khilji in the 13th Century. The buildings, books and manuscripts as well as the scholars, all were mercilessly annihilated and fire was set to the establishment of Nalanda. The University at Somapuri, had its own library which possessed a wealth of Oriental literature. But the university was destroyed by fire in the middle of the 11th Century A.D. The last of the famous seats of learning in Eastern India was Navadwipa in Bengal. It reached its height of glory from 1083 to 1106 A.D. as a centre of intellectual excellence as well as for its rich library facilities. However, this library was also destroyed along with the centre by Mohammad Bakhtiyar Khilji. Akbar, the greatest of Mughal emperors maintained a very rich library. But it is said that a sizable number of books added to the library were obtained from his conquests, from libraries in Gujrat, Jaunpur, Kashmir, Bihar, Bengal and the Deccan. There is no record of how they were acquired: whether they were received as gifts, purchased or forcibly acquired.

After the downfall of the Mughals, the literary wealth of the Indian libraries was looted. In 1857, after the Sepoy Mutiny, thousands of books were destroyed and
thousands of important, valuable and rare books were siphoned to England. (Narlikar, 2003; Weeraratne, 2003; Gul & Khan, 2008; Bhatt, 2009; van der Hoeven, & van Albada, 1996)

It is believed that the Sarasvati Mahal Library at Tanjavur was under threat from Muslim rulers. They wanted to burn down the Sarasvati Mahal Library which was treated like a temple of Tanjavur. A Maharashtrian Brahmin named Dabir Pant, who was a minister, saved the library by telling the vandals that in addition to Hindu books, the library also had copies of the Quran.

The Sikh Reference Library was established at the Golden Temple in Amritsar on 08 February, 1947 and it housed rare hand-written manuscripts and scriptures on Sikhism. The library was set ablaze on 07 June, 1984 in the early hours of the morning. The destruction of the Sikh Reference Library is a loss that can never be replaced. “No wealth in the world can ever restore what was destroyed during the Operation Blue Star by the Indian Government”. Walia, (2003).

The Sikh Reference Library was a repository of over 1,500 rare manuscripts located in the Golden Temple at Amritsar, Punjab which was destroyed during Operation Blue Star in 1984. In recent years the SGPC has attempted to recover the looted material but has not yet recovered substantial materials.

Several libraries, archives and museums of India, Indonesia, Malaysia, Maldives, Thailand, Sri Lanka was destroyed by The 2004 Indian Ocean earthquake. (Library damage resulting from the 2004 Indian Ocean Earthquake)

In May 1995, the 600-year-old shrine at Charar-i Sharif was destroyed by what the Indian occupation forces described as 'cross-firing' with a group of mujahideen who allegedly had taken shelter there. No mujahid was found when the shooting stopped. Three years earlier, in 1992 the library at Srinagar's main mosque was set ablaze. A large number of priceless manuscripts were destroyed. Qazi, (2011)

During 1993, Thapar University library and Punjabi University Library were affected due to unprecedented floods on the night of 11 July 1993. Thapar Technology Campus was submerged under 1.4 meter to 2.4 meter of water for four to five days. The library on the campus had 63,000 items out of which 44,535 were destroyed completely. The library also lost computers, photocopying machines and CD’s. At Punjabi University Library, there was hardly any loss to the collection and
equipment except that a voltage stabiliser was damaged. Only those books were damaged which were borrowed by the users who lived in areas that were flood affected. Trishanjit Kaur, (2009)

At the Lal Bahadur Shastri National Academy of Administration, established in 1959 to train officers for the Indian Administrative Service and the Indian Police Service, a fire broke out in 1984 and destroyed, among other buildings and papers, its precious library rated amongst the best in the country. Sundarayya Vignana Kendram, Hyderabad, India has two libraries: 1. The main Research Library having a rich collection of rare books, journals, newspapers, reports, pamphlets, manuscripts, private papers and other materials in different languages from the 12th through 20th centuries. 2. The Urdu Research Centre Library having a valuable collection in Urdu language and literature. Both these libraries were affected due to unusual heavy rains during the week of 21 August 2000 which caused severe flooding in Hyderabad. The flood reached its peak on Thursday 24 August 2000 when a fifteen-foot wall of water inundated much of the city. Flooding ravaged the Sundarayya Vignaya Kendram building which housed the two invaluable library collections. Within minutes both collections were completely submerged in water. Sundarayya (2000). In the unique experience of the devastating flood of the Barak Valley, Assam, in the year 2004, all the major libraries in the downstream areas were completely flooded and damaged. Satpathy (2007). In Western India, too, several libraries were damaged due to natural and manmade disasters. A massive earthquake in 2001 damaged many libraries especially in Kutch region of Gujarat.

Sojitra Sarvajanik Vachanalya in Gujarat was established in 1878. This library was totally burnt on 28 June 1985 in communal riots. The library had 25, 000 books including many rare books which were turned into ashes. Sojitra (1986). Bhandarkar Oriental Research Institute, Pune in 2004 was damaged by anti social people. On 11 July 2015 Government B.Ed. College, Yatmal library rare collection was destroyed by fire. In that event 25 wooden cupboard and 13 iron cupboard destroyed (Dairly Lokmat, 12 July 2015). Floods caused by heavy rains in Mumbai and other parts of Maharashtra, in the last week of July 2005 and floods in Surat, Gujarat, due to the sudden release of dam waters on 07 August 2006, destroyed collections in many libraries. Such a type of hazards can be reduce by implementation of proper security measures.
Marathwada Agriculture University was damaged by flood as natural disaster. Purna College library, Purna, Dist.Parbhani and School Library Sonpeth, Dist. Parbhani both these libraries were also damaged by fire in Marathwada region.

The above narrative illustrates the damage caused by natural and man-made disasters to libraries. Libraries, globally and in India have suffered great losses to their buildings, equipments and collections. It is in this context that the problem of library disaster management becomes relevant.

ALA, what happened to the ancient library of Alexandria? Edited book by El-Abbadi Mostafa, He has given hundreds of examples of destroyed libraries and notable burning books list due to various wars, political reasons, anti social activities, disasters, different etc from ancient age to till today with references.

Figure No.2.1,2,3, Book chained, packing of books, book chained with shelves.

Security of library stock has been an abiding concern of librarians over the centuries. In medieval libraries books were chained and packed to prevent them from being stolen or damage. It was initiated stage of use of paper and technique of printing. Later, most libraries were run on a closed-access basis, thus eliminating direct contact of readers with the books and thereby minimizing their theft and damage.

All above examples are given to find out the origin & need of library security. At that time libraries are broken or unsecure documented in various authors in their studies. Problem and need of library security is not new one, it comes in front time to time.

William Blades, the book was first published in 1880 and has been republished in different editions in 1881, 1888, 1896 and 1902 and reproduced widely in electronic format in the 21st century. His book includes chapters on the following
enemies of books: fire, water, gas and heat, dust, ignorance and narrow-mindedness, the bookworm, bookbinders, book collectors, servants and children. The book ends with a passionate call for respect for old books. Thompson’s important work on bibliokleptomania focuses on library theft in 1940. Literature for library security thinking on this problem was rose in 1950. Thompson L.S. (1968).

Mainly studies and literature published on library security is began after 1960 and trend of publication increased. Before 1960’s literature on library security was relatively limited but since the 1960's reports on collection security were published more frequently, Bahr, (1981), Brand, (1984), Shaughnessy, (1984,). Before the 1960's literature dealing with topics on the protection of the library and its resources was primarily concerned with fire and water disasters in libraries. Morris, (1986). Trend of articles, publications on library security are distributed in Shaughnessy's summary of articles in "Library Literature", which shows decade wise as, from 1950-1959, 27 articles; from 1960-1969, 131 articles and from 1970-1979, 336 articles were published. Since the 1960's and especially 70's there was in fact a marked increase in literature regarding the library security particularly on collections. (Shaughnessy's Summary of Article Indexed on Library Security -1984).

Before the 1960's literature dealing with topics on the protection of the library and its resources was primarily concerned with fire and water disasters in libraries. Morris, (1986). Although still a major threat, modern technology has made such advances with regard to the detection and extinction of fire and the restoration of wet books that other aspects are now receiving more attention. Morris (1986) mentioned thieves, problem patrons and environmental aspects of book storage. However, technological innovations or, as Morris puts it "...the science of protection of libraries from adversities ....have made big strides in helping librarians to prevent disasters.

Many early writings on book theft focus not on how to secure collections, but rather, on the stories of the thieves. This was in part because their crimes were seen as so bold. The boldness of many of these early book thieves led to the idea of the book thief as “bibliomaniac,” and gave us literature in which the varied motivations and crimes of bibliomaniacs were explored. Works such as Bibliomania in the Middle Ages by F. Somner Merry in 1933, The Anatomy of Bibliomania by Holbrook Jackson in 1950 and Bibliokleptomania by Lawrence S. Thompson in 1968 laid out the stories
of alleged “book madness” and the crimes to which it led and attempted to understand the psychological problems and sociological implications of this affliction.

Shuman (2002) put his worried about denied of staff to work in public service building such like library in fearful atmosphere at workplace due to injury, assault, crime etc.

Sameera (2008) expresses her views about workplace security. The men and women who go to work they deserve the health safety and security and it should be provided for them. Sameera applies to all categories of workers who provide public services like library staff.

2.4. Previous Studies On Library Security:

2.4.1. Indian Perspective:

Library security contains theft, mutilation, student and staff behavioral problems, book loss, arson, delinquent reader, crime, pilferage, misuse, over borrowing, misplacement, fire, water, disaster etc. The major studies on the security have been conducted in western countries. The studies on library security have been conducted under different categories in India. These are as follows.

Basu, Munindranath studied entitled Museum Method and the Process of Cleaning and Preservation/Library Preservation, Calcutta University.


Tata Rao, Kandregula studied on Users Attitude and Behavioral Pattern Towards Theft And Mutilation In The University Libraries: A Case Study Or Andhra University Library. Waltair: Andhra University, 1991. Under the guidance of Soma Raju, P. Rao studied several aspects of regarding security i.e. theft, mutilation, misplacement and users behavior which is one of the notable works in this field. It is a case study of Andhra university library completed by Tatarao (1994),

Kale, Kishore Bhikaji studied on topic Security Care and Maintenance of Books in University Libraries in India: A Critical Study. Nagpur: Nagpur University, Maharashtra. 2004 under the guidance of Kumar. P.S.G. Kale (2004). He surveyed university libraries in India & gave importance on security care & maintenance of books in libraries, he also discussed the major threat i.e. theft, mutilation, misplacement over borrowing and vandalism in library & suggested security measures to prevent such strenuous problem. His findings are 22.03% university libraries special security servants, 52.54% university libraries building are protected by either fencing or compound wires, 77.97% university libraries are located busy area 23.73 located in central point of campus, 74.58% reading room combine with stock, 72.88% neither noise free not temperature controlled.

Gavisiddapa (2004) conducted study on the Problem of Use and Misuse of Reading Material in Engineering College Libraries in Karnataka State. Gavisiddapa (2000), conducted survey at Gulbarga University Gulbarga. The survey discussed attitude of the students and librarians towards theft and mutilation and hiding of documents in engineering and technological college libraries affiliated to Gulbarga University;


Zaveri, Parul S. (2012) research on Disaster Management in Libraries in India thesis submitted to S.N.D.T. Women’s University, Mumbai. Her study was achieve a contemporary overview of disaster management practices and issues in libraries in India. The study also proposed to develop model guidelines for disaster management in Indian libraries. Specifically, it attempted to find out the perceptions of librarians
about probability of disasters happening in their libraries, Examine the vulnerability of libraries to disasters, Assess the level of disaster preparedness among libraries, examine the damage caused in disaster affected libraries, study how the affected libraries coped with disasters, develop guidelines and a sample disaster management plan for Indian libraries

Dixit (1999) has covered all the aspects of vandalism; concerning the forms of vandalism, their definitions, categories, reasons & preventive measures, these studies have covered user behavior towards mutilation, theft, book misplacement, misuse of library material, library security etc. in engineering colleges & university level.

Garad M.D. (2011) has surveyed on Vandalism in College Libraries in Marathwada Region, under the guidance of Dr.A.A.Vaishnav. His objectives was to identify different types of vandal activities, to find out causes of vandal activities, to undertake opinions of users on vandal activities, to survey steps taken by library staff, committee, management and Government to control the vandalism. He has found out maximum loss by theft, mutilation due to patrons attitude. He suggest to UGC should make sufficient provision of funds to install modern security systems in college libraries to prevent theft, vandalism etc. Government should enact legislation on vandalism, Government should undertake comprehensive studies on book loss from academic libraries and crime rate in academic libraries as well as the cost involved in repairing, repainting, vandalized, library building, furniture, equipment and collection.

2.4.2. Ongoing Research On Security In India:

- Barman, Sanjay Kumar. Audio Visual Materials And Their Role, Management And Preservation In Electronic Media Organisation: A Case study in Guwahati Doordarshan Kendra Library under Prof. Alaka Buragohain,

Hence the researcher has undertaken the present study. Yet any studies is not conducted on such topic ‘Security audit of College libraries affiliated to Dr. B.A.M.U., Aurangabad.’
2.4.3. Studies On Security International Perspective:

Many studies were held on national and international perspective. The situation regarding security studies in the USA, where a periodical devoted to library security – “Library Security Newsletter”, which changed its title five years later in 1980 to “Library and Archival Security”, was being published. Many articles and studies published in this periodicals related to library security. These periodicals are devoted purposely to personal security and safety of library staff. It appeared in the Record and was written by Macleod. Library Association (1987)

One-day conference was held at the Polytechnic of Central London in November 1987 on ‘Safe as Libraries’. The Library Association (1987) went on to produce a leaflet titled “Violence in Libraries” to further draw public attention to incidences of violence, vandalism and theft in libraries and measures to be adopted to moderate them.

Africa, most articles on library security have come from Nigeria and have been dedicated to the security of the collections as had been the trend earlier in Britain and USA.


Lincoln (1984) thoroughly discussed library security in his articles and covered all aspects and measures. Shuman Bruce A. (2002) restricted his article to the
personal safety in library buildings only. He concluded that library staffs however are not helpless because a reasoned and coherent security policy consisting of preparations and counter measures to enhance building security is essential to safeguard their personal safety. Senyah (2004) makes an empirical study of the security, book theft and journal mutilation within the University Library system of the Kwame Nkrumah University of Science and Technology without any reference to the personal safety of staff. He concentrates on the security of materials and how this could be implemented efficiently and effectively. Akinfolarin (1992) traced the history of book theft and described it as one of the greatest problems that had bothered librarians from the earliest times to the present. Nwume (1974) was more concerned with how the security of books in Nigerian university libraries could be guaranteed in the face of inadequate budgetary allocations by the parent institutions. He made comparisons between the libraries of the University of Ibadan, Nnamdi Azikiwe University of Nigeria, Nsukka and the University of Lagos with others in Britain and the USA with regard to funding. Antwi (1989) blamed student users, library staff and unauthorized external users for book theft and mutilation uncovered between June and July 1985 at the Library, Abubakar Tafawa Balewa University in Bauchi, Nigeria. According to him, some of the preventive measures which were taken by the library on the security of the stock included review of concessions granted to users in bringing their personal books to the readers section, introduction of registration cards for users to eliminate unauthorized users and permission given to users to borrow reserved materials with their identity cards.

Many studies are found that theft and mutilation, these are Wyly (1987), Miller (1988), Eichler (1987), Delorme (1988), Trinkaus-Randall (1989), Bahr (1989), Pedersen (1990), Alemna (1992) and Chaney (1994). One common threat that runs through the literature cited above is the dual responsibilities of librarians having to preserve their collections from theft and mutilation.

Olson (1955), Cloete (1989), Saulmon (1988) and Hanson (1989) studies suggested that multiple security systems to be employed and that care to be taken. A more technical approach to library security management is the installation of electric burglar alarms in libraries. Leslie (1994) describes a recent development by the 3M system of a self-check system that permits the patrons to check out their own library
materials, thus freeing up staff members for other duties, including surveillance and security.

Various issues have become a major source of administrative headache for Nigerian librarians. Indeed, books in Nigerian University libraries are said to be pilfered at an alarming rate. Studies carried out by Antwi (1989), Olorunsola (1987), Alafiatayo (1988) and Onadiran (1988) readily come to mind. Different studies depicts that libraries have responded in various ways to the challenge of book theft. In the case of Nigeria, the temptation to steal books has been aided by poor library infrastructure i.e. the absence of good public libraries to support university libraries and the inability of both students and staff to afford personal copies of required and recommended textbooks

2.4.4. Security Systems

A security system is made up of different components, namely security aids, security measures, policies and procedures, risk assessments, risk analysis and risk control measures. A security aid comprises of both physical security and the human element. These in turn are combined to develop and implement a security measure. In brief a security aid would be the piece of equipment or manpower used to improve or add to the overall security system made up of a number of security aids these are traditional and modern technological.

2.4.4.1. Traditional Security Systems

It contains observation, control, guards patrolling, security of staff, verification of person and belongings, repair and maintenance etc. All these are implemented in conjunction with each other in security system. Security measure can be implemented. The security work is in conjunction with each other.

2.4.4.2. Modern Technological Security Systems

Modern technological security system comprises CCTV, video surveillance control room, RFID, alarms, sensors etc. All these are implemented in conjunction with each other in security system. A technological based security system incorporates a number of security principles, for example protection layers and the sitting of lights. These are managed by means of a needs analysis, risk assessments,
risk analysis and development of appropriate risk control measures i.e. the integrated security system. (Minnaar, 2007).

### 2.4.4.3. Current Views On Library Security

Today high technological environment implement and suggested RFID, 3M technology for security of library collection in various surveys. Building and vulnerable activities are protected by using CCTV alarms. Biometrics system is for controlling of access to user. Automatic book drop system is there for easy circulation. Policies implementation, rules and regulations strictly followed by institutions for reducing threats. Check lists and security standards available for security management. Skillful personnel’s own or outsourcing are available in local level for repair and maintenance equipments, damage collection etc, it can be utilized by libraries to maintain security.

**Figure No. 2.4. RFID System**

RFID system has done maximum work automatically as above. After tagging of RFID tag in book then user have self check in and out. Stock verification work can also complete easily by using RFID. Single door entry and book return by book drop system automatically maintain by RFID gate and book tags.

### 2.5. General Security/ Administrative Aspects

General Security contains security policy, rules and regulation of institution, legal action, local and International Law, audit/ stock checking/ inventory/ evaluation/ inspection/, risk assessment, threats, maintenance/ repairing. This element reflects the overall attitude of the organization’s top management. Policies and security systems place to prevent and detect theft and misuse of library resources, the hiring policies and the assignment of duties with prevention of theft as an objective. The library will have a security planning board, cells, committees whose members are actively
involved in protecting the library’s assets and is assured of support by top administration.

If the security planning is interested in seeking assistance in developing a good system of internal control for a university library, various resources are available. The institutions internal audit department can be contracted. However, the library must be prepared to answer any deficiencies found. Accounting staff and physical education teacher with expertise in internal control are other sources of security assistance. If the college teaches an internal auditing course a group of students may be interested in taking on the assignment as a class project. Certified public accountant, certified fraud examiner and certified internal auditor are professional designations that lend creditability to professionals who are experienced and knowledgeable in this type of service.

2.5.1. Security Policy

Security policy is defined as a high level statement of organizational beliefs, goals and objectives and the general means for their attainment as related to the protection of organizational assets. Security policy is a preventive mechanism for protecting important resources such as collection, people, equipments, which is considered to be the asset for the organization. It communicates coherent security standards to users, management and technical staff. Security is primarily a management problem, not a technical one, as policy obliges personnel to function in a manner that adds to the security of assets, rather than as a threat to those assets. A policy is a course of action used by an organization to convey instructions from senior-most management to those who make decisions, take actions and perform other duties on behalf of the organization. Policies are organizational laws in that it dictate acceptable and unacceptable behavior within context of organization’s culture.

It is important that librarians and library policy-makers alike understand why security decisions are made. Every organization has asset, therefore security policy start from its establishment followed by some rules such as libraries followed GFR 2005, NAAC, UGC and government rules and implemented in planning. Each cultural institution should develop a written security policy that underlines a commitment to security management. The policy should include a statement supporting prevention of incidents and the implementation of response procedures. Staff should be involved in
drafting both policy and procedures. An important part of the security program will be regular policy review and updating. While specific security policy may differ from repository to repository, depending on the institution’s size and available resources. Policy has been developed to establish strategies to ensure that library security is managed appropriately and efficiently at all times, that persons within the building can feel safe and secure and that library buildings, facilities and resources are held in a secure manner.

Security policy life cycle consists of four phases such as a. secure b. Monitor c. Test d. Improve. This security life cycle is shown below:

**Figure No.2.5. Security Policy**

![Security Policy Diagram](image)

Every organization can follow this cycle to improve security. Security policy works through monitor, test, improve it and maintain security. it has assisted to improve security by monitor and test.

Olatokun, Wole Michael. (2008) Ph.D. study find out more than an average number of the institutional libraries has preservation policies which have really provided direction to library staff in carrying out their collection management responsibilities. Cloonan (2001) and Menges (2006) indicated that National Library
and major archives and libraries in Hungary that confirmed that preservation policy formulation were a neglected area. Albrecht-Kunszeri & Kastaly (2000).

Adcock, Edward P. stress responsibility of the library manager to initiate, coordinate and implement the development of a security policy within the library. When drafting such a policy other libraries, police and staff should be consulted. He also suggested to student participation in policy making. Gregson and Hocking (1995), Alao, I. A. (2006) informed that academic libraries should, continue to improve their security system. Introducing a security policy which is opposed by students could have the undesirable effect of making the overall situation between the library and students deteriorate. Ewing David (1994) focused on need for each authority to develop its own definite security policy. Ajala, Isaac Olugbenga and Oyaboade, Samuel Adeolu (2008) mentioned that every library should have a security policy, which should be circulated or publicized among library users. Brown, Karen E. and Patkus, Beth Lindblom are described ‘The Security Policy’ as basic component -Every cultural institution should develop a written security policy that underlines a commitment to security management. The policy should include a statement supporting security planning, prevention of incidents and the implementation of response procedures and regular policy review and updating.

The first recommendation in the ACRL RBMS guidelines is to be given the authority to plan and carry out the security program. The committee’s second recommendation is the creation of a formal, written collection security policy, which should be a part of the repository’s standard policies and procedures. The first step in this policy is ensuring that access to collection materials be limited and also complete coverage or library activities. The American Library Association (ALA) published document about library security (Library Security 2001) summarized most of the five factors in the house model. ALA had emphasized the need to protect library buildings, their employees and users, suggesting preventing actions to combat collection loss, formulating disaster plan and security policy, assigning and training staff to handle security issues. The Association of College an Research Libraries (2003, 2006) has also published two guidelines for handling theft in libraries and for handling rare and special collections and also highlighted need of library security policy.


**Figure No. 2.6 ISO 17799: 2005 and ISMM Security Model**


Implementation and evaluating of security measures

Security Risk Management report- Return on investment-security risk control measures
Security Group Roles adapted from Bayuk, Jennifer, *Stepping through the Security Program*, ISACA, 2007, it also covers written and published policy Bayuk, Jennifer L. (2010). Model (a CXO) can deputize every manager to play a significant role in security policy enforcement. Security Program role(s) should be included to a job function. Policy and procedure enforces accountability for compliance with security policy; consequences for non-compliance include dismissal.

Shuman (1999, 2002) determined that library staffs however are not helpless because a reasoned and coherent security policy consisting of preparations and counter measures to enhance security is essential to safeguard their personal safety.
LLAMA BES safety and Security of Library Building Committee (2010) has mentioned security policy for preparing a library security policy that includes staff rules to protect people, collections, facilities and grounds and that applies to everyone regardless of position, rank, title, status, or similar criteria. Gelernter, Judith (2009) stress to overview of internal security policy or a more formal workshop. Maidabino, Abass Atiku has formulated one of his objectives to study existence of security policy in libraries. Yale University has framed written security policy. The collection security policy is a clear indication of management support for efforts to properly protect the collection. Cronin (1980); Brown (2007) indicated the need for a written or documented policy, A collection security policy. Boss Richard W. (1984) examined Unauthorized possession /occupancy. He found that many libraries lack written policies and procedures to guide the action to be taken upon the discovery of a person in the possession of library materials which have not been properly charged out, or when an unauthorized person is found in the building after hours. Shuman, Bruce A. (1997) suggests institutional policies and programs at York University policies and operational protocols for setting standards to enhance personal and community safety with respect to development non-violence and addressing discrimination and harassment on campus. McDonald, Andrew G, (1991) “Security Policy Formulation” focus on security policy. Mansfield, Daren. (2009) is a demanded clear written policy.

2.5.2. Security Planning

Security planning for good control of environment, the library will have a security planning committee whose members are actively involved in protecting the library’s assets and is assured of support by top administration. The library administrator should communicate expectations of competence and important to library employees along with the consequences for incompetence and unethical actions. Once the plan is finished it should be reviewed it with all staff periodically, update it when some changes occur and revise to improve it as necessary in response to any security emergency that might held.

Basic works of Security Planning consists prepare a written security policy; appoint a security staff to develop and implement your security plan; Initiate preventive measures: Use security systems. Remove weaknesses, Insure that collection storage is secure and that good records are kept, building is safe, Establish rules and regulation for patron and staff; Identify possible emergencies and maintain
action plan. Organize drilling and orientation what to do and how to respond if any problem raised; Maintain and upgrade your security plan avoiding by weaknesses.

Maidabino, A.A. and Zainab A.N. (2011), McComb and Dean (2004) highlighted the importance of risk assessment in libraries so that the library’s assets can be itemized and mapped to past security breaches to enable an effective security policy, processes and plans are in place. Hylton, (1996). The security plan will cover all phases of security operations and will be distributed to everyone who has security responsibilities.

2.5.3. Rules And Regulation Of Institution

Rules and regulation are important factor to control patrons vulnerable activities. Students break library rules by disturbing the internal and external peaceful environment of library.

Boss Richard W. (1984) reported library rules and statutes of institution frequently fail to address penalties for the unauthorized removal of, or damage to library materials. The library users are not aware of the existing library rules and regulations. Baine (1993) found that students in a high library would not steal due to the fear of getting caught. The actual fear of penalties would prevent them from attempting to steal. Obiagwu (1992) describes rule setting as making express statements of both acceptable and unacceptable behavior, as well as the consequences for misbehavior, available and well posted. Goldstein (1996), suggested enforcing their rules on the (unusual) occasions that damage are caught. Punishments may include fines, restitution, or suspension of library privileges.

Based on the findings, it is recommended that all libraries should strengthen and enforce the existing library rules and regulations that are tough enough to discourage likely offenders.

2.5.4. Legal Action:

Legal actions are defined by local law and institutional rules that are enforced violence. The institution and managers considers any violent, abusive or threatening behavior by staff as cause for disciplinary action, to include dismissal and to take action to take reasonable actions to protect life first and then property and facilities on our premises.
ACRL (2003) determined which of them has original jurisdiction over the library campus security, local or state police and under which circumstances they should be called. The library should maintain a list of contacts in each level of law enforcement and discuss the plan of action with each.

2.5.5. Local Law

Laws are intended to articulate the reasonable standards that define the balance between student rights and responsibilities. The law proclaims what must be done, implies what should be done and establishes limits for what may be done. Hester, (2003).

India or other countries don’t have special law of library crime. It uses Indian Penal codes for crime and offences under constitutional laws to libraries. Various criminal laws are available such as Negligence, Merchant Privilege Laws, Criminal law, Arrest and Detention, OSHA Occupational Safety and Health Admin, National Fire Protection Agency etc. Theft of library materials will be regarded as theft. In America specific library laws have been passed which recognize deeds such as willful concealment and overdue books as theft. In some cases mutilation of library material is also made punishable by law with a fine and imprisonment.

Arizona State University Police Department campus security policy and crime statistics report. U.S. congress enacted the crime Awareness and Campus Security Act in 1990, Clery Act for campus security in 1986 for security and access to campus building and grounds. Bahr, (1981) would like to suggest that similar legislation as per America in South Africa could fighting library crimes, i.e. punishment that can act as deterrents, defining when an overdue book is regarded as stolen in his study. Kirkpatrick (1984) indicated crime is any sequence of behavior willfully directed towards the injury of persons or property, prescribed by formal law and for which there are prescribed penalties.

The institution intends to detain and turn over to police authorities any visitors or staff who break major criminal laws or who display a serious or immediate threat.

2.5.6. International Law:

Copyright Law – internationally copyright law is abiding to everywhere but it is violated by library user.
2.5.7. Security Budget:

Budget is essential for every activity for all organizations to work actively. Institution may be assign and maintain separate budget for security for pest control, repair and maintenance, emergency expenses, technical and staff up-gradations etc.

On the other hand, some libraries simply do not have the financial resources for an independent. In this case, a self-audit is highly recommended. Budget importance for security and this aspect covered by Bahr, Lincoln, Shuman, Khan studies.

2.5.8. Security Measures:

There are various security measures that can be implemented at libraries, which can be human, physical and/or electronic in nature. It also includes improving and implementing different policies and procedures within the library. For security measures to be effectively implemented it is vital that each library know what their risks are and what types of violence are occurring at their libraries. The appropriate security measures then need to be implemented. They should be unique and customized for that particular library, with regular assessments of the risks.

Security practitioners may each recommend different security measures to be implemented, depending on their background experience and knowledge of the library environment. Present study has considered seven major areas and use to classify specific security measures. These are 1) General Security, 2) Building Security (Physical Security) 3) Access Security, 4) 5) collection Security (Library system and administration system), 5) Equipment and Furniture Security (asset Security), 6) Staff and Patron Security (workplace Security -system and security utilities), 7) Disaster and Emergency Security Measures. Library should determine and provide justification of included and excluded measures.

Rogers (2009) state that implementing and evaluating certain approved security risk control measures. He also indicates some objectives of security measures, these are Deflection, Deterrence, Detection, Delay, Reaction, Detention, Rectification of security weaknesses and Recovery of losses. Alao’s (2004) discussed “The Effectiveness of Library Measures Against Theft and Mutilation: An Opinion Survey” Hylton (1996) agrees that security measures can assist in reducing the crime
and violence, however Hylton states that it important to bear in mind that security measures cannot guarantee that no crime or violence will take place. According to Brown (2004) there is a need for effective security measures in libraries. Furlong, Bates, Smith and Kingery (2004) are of the opinion that a limited body of knowledge and research on security measures exist.

2.5.8.1. Different Forms Of Security Measures these are:

2.5.8.1.1. Human Security Measures

According to Bitzer and Hoffman (2007) human elements and its measures on the premises might decrease scholars, staff and parents’ fear of crime, as well as assist with the prevention of crime. Lombaard & Kole, (2008) discuss the human and physical security measures.

2.5.8.1.2. Physical Security Measures

According to Lombaard and Kole (2008) the purposes of physical security measures are Deter, Detect, Limit and Detain. When physical security measures are implemented in the correct and effective manner, it will ensure maximum protection. It can be divided into three categories or so-called rings of security, consisting of the outside and inside perimeter measures. The outside perimeter measures that can be found outside of the library building normally the perimeter of the premises such as signs, fences and other barriers (barricades), lighting, alarms and patrols (both humans on their own or accompanied by dogs). The inner middle ring (inside) inner ring measures are the security measures used within the boundaries of the facility and can include fences and other barriers (walls), alarms, lighting (often with motion detecting capabilities), CCTV external cameras, warning signs, doors, locks, burglar proofing on windows, security staff, access control systems.

2.5.8.1.3. Technological/Electronic Measures

Security technology, as an adjunct to physical security measures, can be excellent tools and a great contribution to the safety of scholars and staff in libraries and in reducing the crime or violence in libraries. Green, (1999).

There are various security technologies that can be implemented a library. These could include Closed Circuit Television (CCTV) systems, videoing and video
surveillance footage whether analogue or digital; alarms; metal detectors or handheld detectors; x-ray machines and card reader systems. Lombaard & Kole, (2008).

2.5.9. Audit/ Stock Checking/ Inventory/ Evaluate/ Inspection/

Inventories can help determine the state of entirety of the stock. If the collection is too large for a full inventory, parts of the collection can be inventoried on a rotating schedule, with special collections of rare and unique materials being checked on a regular basis. Library is the system every system should perform audit about every facility and his assets to fulfill the objectives of the library and user satisfaction also. The system failure by its faults, audit can be checked and helps to escape shortcomings. It is also assist to find out advantages and weaknesses.

The present study audit is carried out on some standards and guidelines. These are IS 14489:1998 on ‘Code of Practice on Occupational Safety & Health Audit, NAAC, UGC, DR.Babasaheb Ambedkar Marathwada University, Aurangabad rules, ALA, ACRL guidelines etc.

2.5.9.1. The Audit

The word *audit* implies a truly independent assessment on whether assets are appropriately handled and it is generally recognized that the staff directly responsible for maintaining the security. Without an audit it is impossible to know how vulnerabilities occur in library. The security audit will determine benefits how well the security implementation meets the library's goals potential results of a security audit are to point out problems or weaknesses in a security, to verify vendor or staff implementing measures, to provides assurance to funding agencies that resources are protected.

The library must decide what its acceptable level of risk is as per GFR 2005 loss or missing of five books acceptable from 1000 circulation in the year. By doing so, the library can determine the scope of its own audit.

Boss Richard W. (1984) defines security needs and necessity of security audit in his article. Before expending any funds on electronic security devices or any other security measures, a library should be subjected to a systematic security audit to determine its liability.
2.5.9.2. Security Consciousness and Regular Security Audits:

A first step in planning should be making a security audit with a checklist compiled with committee and staff involvement.

Brown-Syed (2003) indicated that each library needs to do a full security audit once a year or proper scheduled and should examine. Performing a security audit including a monetary valuation of library’s data and equipment considered as security measure. Lowry, Charles B. (2003). reported that after some negotiations, the ARL project commenced in October 1997 with a meeting between the Library Executive Council, Glenn Zimmerman from ARL and Robert Morse from George P. Morse and Associates, a local loss-prevention firm hired to consult on the project. Morse and Associates would conduct a comprehensive audit of the University of Maryland libraries’ safety and security environment as a foundation for developing self-study materials that might also be used in other libraries. The audit would be both a management study focusing on philosophy, policies and procedures and an assessment of existing facilities and practices, with recommendations for corrective action as needed. The Morse Report from 1998 is a 100-page, the report makes numerous and detailed recommendations for action to improve security, from detailed technology recommendations to those directed at general policy and practice. McCormack, Nancy. (2010) state that libraries can hire an expert to conduct a security audit to make sure the employees and property remains safe. A security audit should result in a variety of recommendations. This kind of expert security audit might not be realistic for smaller libraries on tight budgets. Bayuk, Jennifer L. (2010) explained the control points should be evident and this evidence should provide the basis for both management metrics for and audit examination of a Security Program. Thomas, Shirley R. (2002) provides the manual outlines the process for developed and evolving security program for collections, users, employees and facilities. RBMS, (2012) advised to conducting a security audit and an inquiry. Benantar, Messaoud. (2006) focused on regular collection inventory and auditing of security, shows auditing means tool for monitoring threats. Mansfield, Daren. (2009) state that regular stock checks is most effective method to identify missing items from the collection; President of York University Dr. Mamdouh Shoukri established a University Safety Audit Committee (USAC), chaired by Professor Livy Visano. USAC was given a mandate to oversee a safety audit of York’s campuses to improve safety policies,
procedures and operations in February, 2008. They undertake a third-party audit with some objectives. York’s Campus Safety Audit also gives some principles. Texas, Virginia passed the College Safety Audit Protocol in 1997, directing college boards to prompt all college districts to conduct campus safety audits.

2.5.9.3. **Stocktaking**

It is a form of audit or checking of asset. A preliminary literature study showed that there are different methods of stocktaking, i.e. full inventory, computerised systems, a sample stocktaking etc. Security survey is to identify and assess any weaknesses in security measures. Library may also perform stock verification on periodical basis, with a view to weed out books, as per its policy and writing off books.

Libraries can find deficiencies in the existing process after verification of collection and asset. Dhiman, A.K. (2000) conducted security survey to archive goal with stock taking. Rogers & Schoeman, (2009) Schornagel, Karl W. (2008) examine the existing state of security measures, to ensure that the minimum security measures are required, to identify any new security risks. Regular inventory of collections can identify missing items that might otherwise have been overlooked, theft, mutilation, misplacement, vandalism, crime and security measures suggested curbing the problem. Bowden, (2005), Grewal (2004) reported audit or inventories should conduct to control the system and modify when necessary.

College and library can seek assistance of expertise to develop good systems in internal control, audit and inventory by internal audit department, accounting professors, many public accounting firms etc.

**Weeding** – For the purposes of this document weeding means the reviewing of stock with disposing to it. Those items that are not disposed may as a result of the review, remain in their current location, be moved to another library, or be moved to storage.

2.5.10. **Risk Analysis:**

Risk management involves the identification and definition of specific problem areas and proper design of measures that will neutralize the problem. Once a risk is identified, one or more of five specific methods can be selected to reduce exposure. These methods are Risk avoidance, Risk transfer, Potential losses, Risk
acceptance. Any Organization or library should use Risk Management system to avoid the risk if they have any assumption or any exists. There are five different types of risk i.e. dynamic, static, inherent, speculative and pure risk. Source of risks is human factors, mechanical factors, environment and procedural factors. The goal of risk management is to design and implement plans to eliminate loss exposures wherever possible. Organization has to face typically four types of losses, these are property losses, income losses, legal liability losses, personnel losses. It should be followed by identifying what should be done to reduce risk, monitoring, revising and evaluating the risk process.

Regular risk assessment of collection involves compiling detailed information about library assets in terms of types and value of collections, identifying threats and vulnerabilities, possible risk situations and estimating the cost of loss (cost analysis). This would show serious commitment to identify collection security problems and implement programmes to mitigate it. Maidabino, A. A. & Zainab, A. N (2011), (Cowan 2003), Rogers and Schoeman (2010), Davies, Sandi J (2008).

The data problem assessing risk was described by Alan Jay Lincoln (1984) in his book *Crime in the Library: A Patterns, Impact*, Canal (1998) & Shuman (1999), Lincoln, (1984) illustrate training for staff and risk assessment by staff. According to Shuman (1999) which can help staff become more comfortable with things, that may happen in a crisis situation and allow for the taking of risks and trying different approaches. Briefs (2002) depicts risk of employee theft includes the likelihood of unauthorized purchases, theft of cash from copy machine and late fees and theft of assets such as computer equipment, valuable books and journals. McComb and Dean (2004) highlighted the importance of risk assessment in libraries so that the library’s assets can be itemized and mapped to past security breaches to enable an effective security policy, processes and plans are in place.

Adcock, Edward P. (IFLA) state that to identify any external and internal threats that might cause problems for the collections and assess any shortcomings of disaster prevention measures which are already existed.
There are three steps to be performed in the completion of Risk Assessment.

1. **Identify**  
   Review all the project plans and identify areas of uncertainty

2. **Analyze**  
   Define how the identified areas of uncertainty could affect the performance and success of the project in terms of scope, quality, duration and cost.

3. **Prioritize**  
   Prioritize each risk to determine the amount of action or effort required.

**SdLC Standards (2010)**  


### 2.5.11. Threats

Threat means to do something, it is a statement in which you tell somebody that you will punish or harm them, especially if they do not do what you want, the possibility of trouble, danger or disaster, threat a person or thing that is likely to cause trouble, danger etc.

Kale (2004), surveyed university libraries in India & discussed the major threat i.e. theft, mutilation, misplacement over borrowing and vandalism in library & suggested security measures to prevent such problem. Patkus, Beth. (2003) state that the external threats

### 2.5.12. Repair and Maintenance/

Maintenance work involves continuous monitoring of the proper stocking, arrangement and display of books on the shelves in the stack rooms and taking care of
them. No matter how well a collection is classified or catalogued, books cannot be serviceable to users unless proper care is taken to organize and maintain the book collection.

Shelf study and shelf rectification would also enable the maintenance staff to identify damaged items like books, building, furniture, equipment that needs renovation, repair, rebinding etc. The specific functions of the library repair and maintenance work include shelving, location of documents, shifting of collections, dusting and cleaning, preparation and maintenance of guides, maintenance of documents, shelf rectification, maintenance of shelf list or register, stock verification, binding, vigilance, conservation as per the day to day management concern of library, these functions are assisted to maintain all is well. Housekeeping program include waste disposal, tools, objects, materials, leakage and spillage, cleaning methods, schedules, work areas, remote areas and storage areas.

Repair and maintenance of day to day activities is one of the best practices for libraries. As per repair works defines in GFR 2005 means works undertaken to maintain building and fixtures. In all cases of buildings constructed with grants-in-aid, responsibility of maintenance of such buildings should be laid on the guarantee Institution or Organisation. GRF 2005 has given approval to repair and maintenance expenses.

Repairing the Damage at India’s National Archives
http://india.blogs.nytimes.com/2012/03/21/repairing-the-damage-at-ind...
Manpreet Romana, The New York Times Mushirul Hasan, Director General, National Archives of India, in his office in New Delhi. Patel Dinyar. Repairing the Damage at India’s National Archives

Figure No.2.9 Mushirul Hasan, Director General, National Archives of India, New Delhi.
Mr. Hasan, a researcher from a university in California, asked, “The National Archives cannot function effectively as an institution beholden to bureaucratic culture, public sector working habits and a custodial mentality that hinders research instead of facilitating it.” Mr. Hasan holds the responsibilities.

When he took charge of the National Archives of India in May 2010 first scholar in 30 years, Mushirul Hasan inherited a rudderless institution. Institution has contained that a dazzling array of material from the Mughal, British and post-independence periods of Indian History.

Mr. Hasan has since begun to take action, instituting a two-sided program for mass preservation of materials. First, the National Archives has hired and trained around 130 individuals to repair and rebind documents, many of which were still being held together by methods of stitching that date from the 19th Century. Secondly, Mr. Hasan has presided over a major efforts to scan and microfilm some of the National Archives’ oldest holdings. So far, more than 225,000 pages have been digitized — including Persian and Arabic Manuscripts, early East India Company correspondence and rare maps.

Rao, Tata (1994) the proper maintenance of books and periodicals in the libraries reduce the scope of illegal practices. It results in reducing the rate of book-loss in the library.


Activities of library repair and maintenance are worn out books, equipments and other material for repair or binding, sending books and journals for binding,
display of new books and other reading material received in the library, preparing stack room guides and shelving volumes after returned by use.

### 2.6. Building Security

Building standards specify which materials can be used for floors, walls, ceilings and structure to maintain safety and durability. The building should be designed to reduce natural and human or any kind of hazards against its resources. This study will focus on the inside security arrangements in libraries according to the building construction and strategies implemented by the college libraries to the best type of security system required. Librarians should acquire sufficient knowledge in protecting inside library buildings. Therefore studying in library architecture is an important for all library professionals because they are faced the situation to design a library building or have to be construct or renovate the existing one. Protecting materials and the construction of a well-secured library building is a responsible duty of the librarian. Main and sub stairs should be convenient for use. Stairs should not be in circular shape and fit without doorways to act as emergency escapes. Ramp facilities are to be provided for the disabled and book trolleys. Libraries should have a gate near the counter to control traffic for security reasons. Both in and out ways must be checked by security guards. Supervision only at the exits is not the safest in library protection, but it can be used as an alternative to material protection. A good planned library building is a prerequisite in a college/university for the sake of the building, materials, students, as well as the researchers and the staff. But most libraries have not paid much attention toward these aspects.

McComb and Dean (2004) proposed that physical security should be given closed attention to the building design, lighting, space planning for shelves, reading areas, office areas, windows and doors. Gustin, Joseph F. (2007) indicted that specifications for accessible routes that include walking surfaces, doors, ramps, curb ramps, elevators and platform lifts are provided. Shuman, Bruce A. (1997) discussed physical features and infrastructure: building design and layout, landscaping and planting, maintenance, lighting, signage, sightlines, secured areas, accessible routes etc in his study.
2.6.1. Security Guard

The use of security guards may be appropriate in some situations. All staff members will still need to participate in maintaining security, but guards can be a valuable supplement to staff efforts and their presence alone may prevent theft, vulnerability, abuse etc. It is important for an institution to specify its needs, communicate them clearly to the security guards and supervise those personnel.

McComb (2004) focus on security guard should check users research materials prior to their entering the secure area as well as when they depart for collection security of libraries. Lincoln (1980) reported surveillance by staff and security guard. The Council for Museums, Archives and Libraries (2003) state that large institutions this means employing a team of guards or attendants to deter and detect the actions of the criminal behavior. Senyah, Yaw, (2004) reported that patrolling Security Guards- A cheaper and more affordable security option open to the libraries of the KNUST is the deployment of uniformed security guards to patrol the libraries as against to the use of expensive theft detection equipment. Indeed, the presence of uniformed security guards in a library tends to make both staff and patrons security conscious and as such it deters them from any anti-social behavior like stealing and mutilation of books and journals. Security guards are make security conscious to user and staff to avoid vulnerability.

2.6.2. Key Control and Locks

The researcher’s aim was to determine whether the doors leading to building and collection areas has been locked and key policy used to reduce loss of library material. Theft, mutilation and various misuse of reading material are long year ago and it known universally. In ancient period writings on leaves, stone, cloth, papyrus and various metals were prevented under lock and key by king and head of temples in temple or archive rooms.

The process of establishing and maintaining record the list of persons authorized to access keys to the door locks and lockable furniture in a library, as a means of securing the facility's in locking system. Access to master keys is limited to required personnel, using a two-key system in areas where security is especially needed rare books, special collections, computer room, equipment rooms etc.
Wurzburger, Marilyn study revealed that the curator or special collections librarian in every case has a key, but only 54% of top administrators, including the University Librarian, are given keys. McComb and Dean (2004), Dean (2009), Kahn (2009) state that locks and keys for windows to prevent forced opening, they also suggest different types of windows and lock system. Oder (2004) observed keys are kept unsecured. Akinfolanin (1992) indicated that library equipment should always be kept under lock and key; Matthew McGue confess in his story, he was using wax impression to obtain duplicate key and stealing books for library at Victoriana. Boss Richard W. (1984) mentioned weaknesses in keys handling, it can be easily duplicated. Locks are hardly ever changed. He also suggested policy to key holders’ inventory.

The Council for Museums, Archives and Libraries (2003) and Merri, Hartse and BES Security Guidelines Subcommittee (2001) focus on process of key control, all keys record should be maintained enroll the key holders names and date of issue and return keep the unused keys in secure cabinet; maintain the coding system for identification etc. A proper system will enable a visual inspection at the end of the day to confirm that all keys have been returned & maintain accountability. ACRL (2003) indicate that the policy of key control. Keys and locks to secure areas should be changed on a regular basis for precaution and policy factor.

Door protection includes cylindrical locks, deadbolts and gates. A cylindrical lockset fitted into a large hole bored into the door’s face with the keyhole in the door knob. The latch assembly is locked and provides the securing of the door, though this type of lock provides the least amount of security in door protection.

2.6.3. Door Defense:

If the security risk assessment investigation determines that the library location has the potential for burglary through accessible doors, then security gates should be considered. Normally such security gates should be considered only for high crime environments. Installing locks and hinges on all exterior doors, Installing grills or screens on ground floor windows, requiring patrons and staff to enter and exit the building by one door, which is monitored at all times.

Merri, Hartse and BES Security Guidelines Subcommittee (2001) suggested that good quality, select resistant deadbolt locks on high security perimeters, which
use keys whose uniform are not commonly available from locksmiths without a registered signature. Door, window, hinges and installation nuts, pins, deadbolts or screws for high security hardware should be secured and located on the protected side of the opening. Judith Gelernter stress on electronic doors. Adup Sunil & Kumar K. Praveen (2009) suggested of partition stack and metal doors for limiting fire effect. It should maintain stack isolation from one another by shutting the doors. The Council for Museums, Archives and Libraries (2003) revealed that internal doors needed for access control. Unused doors and windows should be bricked up to the same constructional strength as the surrounds wherever possible. McComb (2004) strongly argued that folding gate should fitted proper places front and restricted areas.

An exterior door must at least be made from solid hardwood or of solid hardcore material. Frame and door strength to meet higher risk can be provided by using steel doors of varying thickness or ones with a steel sheet insert. All metal doors should include a layer of insulation and a thermal break between leafs to reduce the transmission of heat and cold air through the door.

2.6.3.1. Door Locks

The weak point of any door is often the locking mechanism, so care must be taken over the choice of system. Locks come in many different types, sizes and qualities careful consideration should identify a suitable system.

Adcock, Edward P. mentioned that close attention should be paid to doors and windows in respect of locks, security glass or film. UC Davis General Library Administrative Unit Review (2002) depicted that doors between public areas and staff areas should be locked on the public side. Certain doors could be unlocked during business hours for convenience for shelving and other staff. Bruce A. Shuman (1997) advice the front door is equipped with a passive electronic sensor designed to trigger if it detects any unauthorized removal of library books or other materials from the building. The Council for Museums, Archives and Library (2003), Lincoln, Bahr, Brown R. suggested locks for rare stack and valuable collection.

2.6.4. Windows

Windows should be also protected by grills, wooden doors, glasses etc. A wide range of security screens and films is also available. Screens and films protect
property by preventing access to through windows. They can allow over 60% of light and air transmission, which means ample air flow and visibility and no feeling of traditional security methods.

Lincoln (1986) has explained example, one public library in Georgia spent $5,000 in one month repairing windows that were repeatedly broken by delinquent. Hart (2003) is considered braking windows as vandal activity. Morris, John (1984) indicated that door or a window was forced, then the vandals went through the building looking for something to steal and set fires before leaving. One fire, at New Rochelle, was set by someone who broke a rear window and threw burning materials inside. The Council for Museums, Archives and Library (2003) recommended window defenses process. Windows and roof lights can often present major security problems. Windows should be locked with attack-resistant security. Wyly, Mary. (1987) studied in 1966 thieves broke windows on doors and moved an exhibit case at the University of Illinois Library to steal three rare books then valued at $75,000. Willis, Mark R. (ALA 2009) depict that broken windows are risk factor to library and security. Department of Educational Foundations University of Botswana (2010) recommended that gauze wire has been installed on windows to prevent users through windows. Books are thrown out through the window and collected at the other end.

2.6.5. Interior & External Security

Collection protection categories have led to poor internal control of library collections. It defines internal control as being a collection of five activities. These are controlling the collection environment, risk assessment, control activities, information and communication and monitoring.

Fire, water, theft, vandalism, mutilation of books and biological infections such as insects, mold, fungi, acidity and brittleness are the common hazards in university libraries. Those could be minimized to a certain amount by interior arrangements and the building construction. Due to the climatic condition the high temperature and humidity damages can be coursed to the collection at a higher rate. To avoid the dark atmosphere in stack areas, stores and reading areas must be reduced by providing natural or artificial lighting. Proper air circulation and selecting the colors for library ceilings, walls, floors and stacks areas must be selected according to the reflectance levels of colors. Natural lighting and air should be obtained through
glass, sky dooms, air shafts or open inner courts to be used properly according the types and condition of the building. Moisture and heating make damages in libraries. Therefore the use of air-conditioning must control temperature and humidity. If it is impossible electric fans and exhaust fans could be used to prevent stagnant air in stack areas through free air circulation.

Adcock, Edward P. identified internal construction threats of building. These internal building consultations considered issues are materials can be resist fire, use fabric, plumbing with safe distance from collection, defense of flammable material. Brown, Karen E. and Patkus, Beth Lindblom (2007) urged that well external and internal building security assists to prevent loss and damage. Kahn (2009) recommends that a lighting designer will be able to provide attractive, energy-efficient solutions for public places, office interiors and stack areas. Karunanayake, K.G.D.A. (2003) revealed that internal arrangements must be organized against fire spreading both vertically and horizontally. Ungarelli (1973) argues that the high loss factor of library materials is due to the physical arrangement of the library building where control of the exit is difficult, stating that in some cases where work stations or study desks are far from the stacks or shelving and in addition, compact shelves and limited space between the passages, all provide ideal conditions for book theft. Dean (2004) proposed that to close attention should be given to the building design, lighting, space planning for shelves, reading areas, office areas, windows and doors. Dowlin (2004) also insists, that the modern academic library building must set new standards for mitigation, ventilation, heating, lighting and openness of the building. Morris (1986) suggest that security requirements should be clearly stated in the brief for a library building project and the librarian must be actively involved in scrutinizing the design for all defects before the building becomes a security threat in future. Weber (1990) appeal with planners, architects and librarians that in planning and constructing library buildings, safety and general human wellbeing must receive utmost concerns including structural and existing human safety, safety of materials, lighting conditions and mobility by physically limited persons.

Building materials be used to produce satisfactory internal climatic conditions in preference to air control systems; internal building and materials used for furniture, including shelving as well as lighting, both natural and artificial. A well-designed vertical transportation system is needed in an effective library building. Therefore
Elevators are an essential component in multiple storied libraries. But it should be restricted only for movement of long distances within library. Elevators could be located in corners of the building at a shorter distance to the main entrance. If the main stair is in the middle, the sub stair should be in the corners together with other fixed services such as elevators, toilets and emergency escape areas to make quick movement possible. Emergency exits could be guarded by electrical alarms, which operate automatically.

Figure No.2.10 Building Structure Collapse Figure No.2.11 Building Resist Hazards.

2.6.6. Outside /Campus Security/External Security

Campus crime has become a more significant area of research, with much of the literature focusing on specific areas such as drinking water, lighting, security guard, whether university police should carry weapons, overall commentaries about the problems of campus crimes, handbooks for administrators or case studies of specific crimes that occurred either on college campus by college students. Good campus culture is one of the security features.

Shuman, Bruce A. (1997) studied that fact sheet on campus safety published by the National Association of College Personnel Administrators refers to “building a sense of community” to reduce ambiguity and strengthen relationships among students, faculty, staff and the community. A quarter of other respondents (25.1%) described safety features of the physical environment such as adequate lighting, emergency phones and site maintenance. Some respondents (21.2%) indicated that a safe campus is dependent upon campus culture. Bell, Steven. (2012) suggested that library administrator should regularly review the campus crime reports for library incidents. Massachusetts Department of Higher Education (2008) surveyed campus violence prevention and response. Soete, George J. (1999) & Association of Research Libraries (1999) study finds poor cooperation from campus security. Good working
relationship with campus security suggested for security. Kahn, 2009) surveyed of exterior building security and suggested plantings should away from library building and bushes and taller plant around the building should avoid. Regarding library building security and theft bushes around campus that grow taller than the windows obstructs the view so no one can see inside or out. So there should be distance between building and plantings to avoid theft from library. Davies, Sandi J., Minion Ronald R. and IFPO (1999) noted that administrators have established a Campus Protection Officer program. As the needs of campus asset protection are unique. Schornagel, Karl W. (2008) state that external physical controls include entrance and exit electronic screening, intrusion detection systems, closed-circuit television, electronic access controls, theft-detections devices, vaults and cages and key controls. Collectively, these components are effective to security.

U.S. Department of Education, Office of Postsecondary Education, (2011) that indicates the process checklist for campus safety and Security Compliance, Campus Law Enforcement, Campus Security Authority etc. US department of education recorded 20% and 66% respondents fear to campus during day and night respectively. That’s why the good campus security is needed. Gender was statistically related to all of the fear of crime measures.

UC Davis General Library Administrative Unit Review (2002) reported that the AUR Committee met seven times between December 2001 and March 2002 to discuss review topics, campus setting and user population. Campus Facility and contractor personnel’s need to lock roof access doors should be reaffirmed. They have made provision of separate campus crime prevention officer.

York, University (2010) in 1989, METRAC and the Council of Ontario Universities and Colleges worked in partnership to develop a Campus Safety Audit Guide combines Crime Prevention through Environmental Design (CPTED). It can result in improvements to the campus environment. It can support a reduction in infrastructural deficiencies and help foster safer, more inclusive spaces for all members of the campus community, emergency phone required.

2.6.7. Electrification

Assessment of electrical systems can explain electronic transformer, electricity distribution, accessibility, equipment, breakers, fuses, switch-boxes, junctions, special
fixtures, circuits, insulation, extensions, tools, motors, as well as emergency systems. Many incidents involving faulty electric systems, failures of equipments, staff installed small electrical appliances and wiring systems, such as portable heaters, fans, coffeemakers are another potential problem in libraries. These innocent convenience items often lead to short circuits and overloading of electrical systems. Good lighting may be the most important psychological and physical feature of a library.

**Figure No. 2.12 Lighting at Night**

Kale, K.B. (2012), Bureau of Indian Standards (1998), IS 14489 (1998) on ‘Code of Practice on Occupational Safety & Health Audit’, The Council for Museums, Archives and Libraries (2003) revealed fire can easily destroy or damage a whole collection, Standard and regulation of wiring and electrification should be considered by institutions. Periodic inspection of electrification and lighting is necessary. According to Adupa, Sunil1 and Kumar, K. Praveen (2009) recommended that electric wiring must be enclosed in metal conducts to localize the effect of sparks due to short circuits. Control switches for lighting should be fixed outside the room and mains should be off when the stack area is closed. Roark (1987) include sufficient lighting; accessible parking lots; telephones; escort services; removal of objects that obscure sightlines and create hiding places; and increased security patrols and security staffing

**2.6.8. Water Sanitation Construction/ Plumbing:**

Water damage to collections and equipment remains an ever-present danger in libraries mainly because of leaks in roofing or side walls during rainstorms, faulty piping systems and catastrophic natural events, such as a flood. The Howard-Tilton Library at Tulane University lost significant amounts of microforms, government documents and music books housed on the lower level in the flood associated with Hurricane Katrina. Boston Public Library lost several collections of rare materials when a water broke within two of the buildings on Copley Square and flooded the
basements. The loss came to more than $10 million in this instance of severe-water damage. Tsunami also destroyed the libraries. Patkus, Beth (2003) suggested that clean gutters and drains frequently. Avoid storing collections underneath water or steam pipes, bathrooms, mechanical air-conditioning equipments or other sources of water.

2.6.9. Cleaning

Dusting and Cleaning of Shelves are important and indispensable routines of libraries which have to be attended meticulously. Books have to be protected from dust and dirt. It causes to destroy life of print and non print material. Where stack area is very large, cleaning can be done by mechanical devices like vacuum cleaners. The clean environment of the Library should encourage people to visit it regularly. Keeping sidewalks clean, maintaining the buildings and decorating storefronts. Fix or replace any broken furniture, damaged carpeting, or inoperable equipment or fixtures immediately. This can help to prevent collection and building damage. Getting natural air through windows and air shafts contain dust and atmospheric pollution. Therefore air-filtering systems must be included in the air passages. Keep the building clean and provide plenty of trash receptacles.

Figure No.2.13 Cleaning of Floor and Shelves

NAAC has set of best practices for college libraries one of them is ‘Keeping the library premises neat and clean. Olatokun, Wole Michael. (2008), Sherelyn Ogden also revealed that keeping books clean significantly extends their useful life. Buchanan, Sally (1981) shows that proper cleaning of storm drains, sewer lines, roof areas and flammable material will prevent leaks. Adcock Edward P, Karunanayake, K.G.D.A. (2003) study indicates that damages by moisture, heating, insects and other animals are common hazards in libraries. Good lighting, good housekeeping, regular cleanliness, proper ventilation and proper temperature should be provided as precautions against these hazards. Horak, Daniel (1997) says to perform other library
tasks such as dusting, cleaning and help with shelving. Rao Tata K (1994), Adupa, Sunil1 and Kumar, K. Praveen (2009) suggested vacuum cleaner to proper removing of dust. Vacuum cleaners also help in saving a lot of time and prefer cleaning.

Regular cleaning and removal of waste products and an inspection system to check that the building is safe when locked up at night are essential it can give major benefits. Such potential threats can be easily eliminated if daily inspections are instituted as part of a good housekeeping regime. A Welcoming atmosphere should be must. Furniture, floor, racks, documents etc. should be neat and clean, clean, tidy and hygienic.

2.7. Access Control:

Access Control is a strategy that use architectural features and mechanical or electronic devices to keep control over entry to the library with user identification. Use of devices such as closed- circuit televisions, metal detectors, motion detectors and library book tags for conformity of access.

**Figure No. 2.14 Single Door Entry – Electronic Gate**

According to Association of College & Research Libraries, RBMS Security Committee 2006 suggested that special collections area should have as few access points as possible, with a single entry and exit point for both user and staff. Fire and emergency exits, which should be strictly controlled and provided with alarm coverage, the public should have access only to public areas, not to work areas or stack space.

Goswami (1989), Tata Rao (1995), Sager (1975) studied that the problems of theft and most of the problems caused by problem patrons are exacerbated by the effortlessness of access. Khaiser and Ramesh (1986) state that provision for free access, which in turn is major cause of mutilation and misplacement of books in libraries. Schornagel, Karl W. (2008) revealed that the audit touches to tracking collections, access methodologies, restricted collections, the reader registration
process and access to collections etc. Quinsee and McDonald (1991), Lincoln and Lincoln (1986), (1987), point out, control of access and egress to the building and access to materials should be well planned. Library access should be centralized and a control desk should be located to maximize the possibility that every patron who enters the building can provide identification; it should reduce level of crime.

2.7.1. Unauthorised Access:

It is not permitted into the building by any entrance without prior permission or Identity card.

Ramana, Y.V. (2007) suggest that biometric security system - increased preventive use & control. Maidabino, A.A. and Zainab, A.N. (2011), Wu and Liu (2001), Ameen and Haider (2007), Rude and Hauptman (1993) state that the unprocessed materials should be kept in a secured area; public access to special and rare collections should be monitored and physically protected to prevent damage, theft and other security.

2.7.2. Identity Card /Smart Card etc For Access Control

College libraries should provide identity card to patron for identification and authentication. The College Security Staff may undertake spot checking of persons on site to ensure that only approved card holders.

2.7.3. Access Area/Reference Section/ Rare Collection

Readers using rare or unique materials should be closely supervised at all times to ensure that works or portions of works are not stolen or damaged, intentionally or accidentally.

Patkus (2007) noted that special and rare collections in particular need to be stored separately, so that user can be easily checked by the staff. Accessibility to library collections can also be enhanced by proper supervision and control of the library environment, especially designated areas for library assets. According to Wyly, M. (1987) revealed that collection, equipment and furniture are protected for the use of all library users. Waller & Bangs, (2006), Shuman, (1999) focused that safety of libraries would also decrease the accessibility and convenience of the library.

SPEC Kit found that most libraries did not address of these issues: stack access, surveying collections for material to be moved to a restricted access area, for dealing with suspected theft.

2.7.4. Open Access System:

Open stacks is allowing readers direct access to the bookshelves or closed stacks is require readers to locate a book in the catalog and rely on staff to retrieve it, staff need to observe readers from time to time to discourage deliberate mutilation or damage of library materials. Bahr (1989), Verma & Gupta (1972) indicated that open access system is root cause of book loss.

2.7.5. Denied/ Restrict Access

Access may be restricted to user at rare collection, valuable items for privacy, health and safety compliance. According to Akinfolarin (1992), Boss Richard W. (1984) reading material were restricted from ancient period. Now a day libraries restriction of period, numbers of items issued, borrowed loan period etc. McComb
(2004) founded that propose restricted areas of storage are most cost effective. The Council for Museums, Archives and Libraries (2003), Wurzburger, Marilyn, Muir, Scott E. (2011) suggested that restricting late night access to those without a valid ID card. Shuman, Bruce A. (1997) noted that restricted access, closed stacks are still standard operating procedure in some libraries, only authorized people have the right to do so. Davies, Sandi J., Minion Ronald R. and IFPO (1999) recommended that staff must impose restrictions on people that frequent the security workplace. All restrictions maintain equality, dignity, without of any races. ACRL/RBMS (2003) provides policy of restriction for researcher and material in its special collections security plans. Tell, Billington focus on Library's special collections access always was and still remains highly restricted. According to Trapskin, Ben (2008) it is very difficult to restrict and provide services. Salaam and Onifade (2010) suggested that loan period restriction. Cornog and Perper, (1996) depicted special collections can be reserved, where patrons have to sign in to receive access. Curry, Flodin and Matheson (2000) suggested placing newspapers behind the circulation or reference desks to reduce loss; Smith and Olszak (1997) reported materials should be given restricted access such as the subject matter, the value, any past mutilation and the overall condition of the materials. Activities should be restricted in library. These are eating or drinking, playing audio equipment, smoking, carrying a weapon, brining animal, misuse rest room, making noise into the library should be restricted.
2.7.6. **Alarm**

There are additional advantages of modern technologies. Theft, burglary, fire, smoke, glass break, flood, water should be observed or controlled by alarm or sensor system. Modern alarm installations are relatively inexpensive and advantageous. It may be connected to the security control panel. Alarm systems can also manage display cases, windows, doors and external perimeter burglar detection devices. These systems can also automatically inform the police or an Alarm Receiving Station.

2.7.6.1. Alarms Procedure

If the alarm is set off at a remote site or building, then it must always be physically checked. The best type of alarm system will be dependent on the size of the institution.


2.7.7. Electronic Recording:

Electronic systems such as alarm systems, access control systems, RFID, CCTV, alarms etc installed in proper places. Wyly, Mary (1987), Luurtsema, David (1997), UC Davis General Library (2002). Brown-Syed, Christopher (1999), Mwantimwa, Kelefa (2007) reported electronic security systems, electronic devices such as motion detectors, alarm systems and closed circuit television, RFID, cameras
have been employed increasingly for after hours security. It can be extremely
advantageous in preventing theft in academic libraries. Another view also present
alarm or electronic systems are not complete security due to its limitations and
problems persist.

2.7.8. Personal Access/Parcel, Personal Belongings:

SPEC Kit gives procedure of registration and prohibition of garment, parcel
and personal belongings. LLAMA BES Safety and Security of Library Building
Committee (2010), Lincoln (1984) mentioned that integrating a personal access and
parcel control program into the library protection policy.

Figure No.2.20 Verification of Personal Belongings, Physical Checking and Parcel

2.8. Collection Security

Collection management is an important aspect of library security. It is difficult
to verify that something is missing in huge collection if collections are not properly
catalogued and recorded. In the worst-case scenario, cataloging records and
identification marks can help to provide proof of rightful ownership.

The term collection security in this context refers to protecting collection from
unauthorized use, displacement, defacement, modification and destruction, Corporate
Governance (2004).

Proper collection procedure and management can established by identification,
placing order, checking duplication and bills, marking of items, accessioning, making
bibliographical entries, item wise proper shelving, verification of circulated items,
maintaining of all used items, renewal, lost and missed items, cover with insurance
etc. different type of collection is available in library. These are print materials in
general, periodical collections, reference collections, reserved collections, non-pint
resources etc. In addition, regular inventory of collections can identify missing, lost, stolen items that might otherwise have been overlooked.


Maidabino, A.A. and Zainab A.N. (2011) presented The Collection Security Management Model (CSMM). The issues that comprise collection security management in libraries are resulting from published literature. The model can be viewed from five factors; governance, processes, people, physical as well as technology perspectives and the existence of security culture in libraries.

Library has made part permanent collection such as general, text books, subject reference, special or rare collection and normal used collection. Academic library user can use maximum text books and general collection.
2.8.1. Prominence of the Collection:

Libraries are spending lot of amount on collection to provide good services or reading material to its user, so that it is needed to know the importance of collection by user and staff.

Maidabino (2010), Herman, Steven J (2003) stress on staff and users should have adequate knowledge of the importance of securing library collections. Library can organize Security Awareness Week, with posters and presentations; presentations to groups of employees and displays of mutilated items or illustrations that were lost. Maidabino, A.A. and Zainab A.N. (2011) stated that library management is committed and appreciates the importance of collection security. Rao, Tata K. (1994) gave importance of document collection in educational services. Oyewusi and Oyeboade (2009) discuss the user view on importance of good collections needed for safety and security.

NAAC Collection and Services criterion depicts Collection Development / Management and Information Services Generation are two important interrelated functions that facilitate the provision of the right information to the right user at the right time and thereby conformance to the five laws of library sScience is ensured.

2.8.2. Surveillance:

Surveillance can be maintained at all times. The purpose of surveillance and event detection is to identify wrong or hateful behavior. Coverage of appropriate field is vitally important. There are different types of surveillance; these are by natural, using staff, guards, technologies, biometric, CCTV cameras etc.

Surveillance: This is the act of watching people or objects. In contemporary time, the art of surveillance has gone beyond observing or watching (closely) the movement or behavior of people through human monitoring by staff or guards. The effectiveness of human surveillance is based on three factors such as field of view, resolution and training. These factors are the same for people looking directly at the scene or monitoring it with video. Surveillance of building should be entry, exit and public areas, conference, reading, collection etc. Observation improves security effectiveness through defense. It also includes monitoring through electronic device and (other) technological and non-technological methods. Technological methods
include telephone tapping, closed-circuit television, internet and computer surveillance, GPS tracking etc.

Figure No. 2.22 Surveillance of Building and Collection - Figure No. 2.23 Biometric machine

Biometric Surveillance: It is the used for the purpose of authentication, identification or screening. The physical features that these technologies include eye retinas and irises, DNA fingerprints etc. The behavioral features may include signature, voice, retina, fingers etc.

According to Perez et.al (2009) reported that surveillance should assist to reduce abuse embarrassment, unfair and others. Chatterjee, Abhijit and Maity, Arabinda (2012) revealed that different kinds of security problems may decrease by surveillance. Oder (2004) argued that maintains that security measures such as supervision, patrolling and surveillance are lacking in libraries. Lincoln (1980) believes that surveillance should be part of any library's collection prevention approach. Goldstein recommends two types of surveillance. First is by guards and police, second is by library staff. Massachusetts, Department of Higher Education (2008) surveyed fifty-four percent of the surveyed schools do not employ CCTV cameras on campus. McComb Mark (2004) studied surveillance of collection.

2.8.2.1. Video Surveillance

Video surveillance and closed-circuit television (CCTV) systems serve as a way to monitor and record security, deter crime and ensure safety. Advances in CCTV made video surveillance a cost-effective management tool for library facilities. Libraries can use CCTV to identify visitors and employees, monitor work areas, deter theft and ensure the security of the premises and other facilities. Choose a camera on the basis of factors such as location, lighting, coverage and image quality, availability of budget. Cameras placed one or two at entrance place. The most efficient cameras record on real-time videotape only when an alarm is set off, so they don't fail when
they are needed. It requires regular checking of devices is in working. CCTV security system is included controlled area; camera type and features; best location for viewing monitors, method of signal transmission; type of recording etc.

**Figure No.2.24 CCTV System Control Room**

![Figure No.2.24 CCTV System Control Room](image)

**Figure No.2.25 Different type of CCTV.**  **Figure No.2.26 Outside surveillance**

Use of CCTV system must provide to visually observe, monitor and record. Recording provides facts, analysis and review, usually with overlaid time, date and location information.

staff trained in surveillance that should be identified as the only area in which material may be used”

Insecurity of library materials is found all types of libraries. Therefore it is recommended that libraries should install electronic security devices and electronic surveillance video cameras, staff and guards to discourage mutilations and theft.

2.8.3. Collection Security Measures:


2.8.4. Collection Arrangement, Shelving Marking etc.

Most libraries’ collections today are based on text document on paper either in book or sheet form bound volumes, newspapers, serials, manuscripts, maps, drawings, paintings etc and the collections of modern materials such as sound tapes and electronically stored information such as CD ROMs and computer discs is growing rapidly and almost all of libraries. Marking on these collections is importance for authentication of collection by stamping, embossing, stickers, printing etc.

2.8.5. Theft/ Burglar

There are some people who lost an item of property and claim it has been stolen. The property may have been prior to its disappearance is essential in the investigation. Someone have borrowed or innocently moved it elsewhere. Different type of theft are called by names these are robbery, where a person steals the items. Burglary; where a person enters any building or part of a building as a trespasser with intent to commit theft or other offence. These all are thefts and are arrest able offences. Patron thefts involve: who steal or destroy materials that they believe are inappropriate; those who steal materials in order to resell them for a profit and unfortunately, scholars and professors who often have a wide range of access to valuable collections and material. Theft from burglary can have just as overwhelming an effect on employee morale, for the employee’s workspace has been violated leaving an insecure and uneasy feeling in all staff members, especially in those who work late evenings or closed stack areas. Burglars are almost always searching for valuable items that will bring a good profit from resale. Burglars generally require access to areas normally closed to the public.

The Council for Museums, Archives and Libraries (2003) defines “A person is guilty of theft if he dishonestly appropriates property belonging to another with the intention of permanently depriving the other of it.” The maximum sentence for this offence is imprisonment; it is an arrest able offence as per law. Not only modern library has problem of theft it happens in an ancient or middle age libraries as per various literary views. It is common problem of library. The most likely ways in which thefts may be committed in library are from stack, collection, valuable equipments etc.

Most studies still suggest that supervision of readers by trained staff is the most essential factor in preventing theft and ensuring appropriate handling of material for preservation purposes. Goswami (1989) defined theft as carrying out of library a book with violating the rules without a prior permission of the librarian; purposeful removal of material from the library it implies either intention to keep the material or not to return it to the library. Goswami (1989), Tata Rao (1995), Sager (1975), Kirkpatrick (1984), Khaisar and Ramesh (1986) found that the most common library crime appears to be against property may be theft of various materials. Allen, (1997) listed there are three broad categories into which library theft can be divided: patron theft and insider theft and burglary. “Patron theft raised common disappearance or destruction of materials in libraries.” Ajala and Oyaboade (2008) mentioned theft, crime has now become a regular occurrence and therefore security control in academic libraries has taken on a serious dimension. Ajayi and Omotayo (2002) noted that novel trend in library theft: in some cases, unemployed graduates have been found to steal books from the library and sell them in the open market. Babcock (1963) reveals that respondent library showed losses of books through theft ranges from 0.6% to 0.3% of the annual circulation rate. Rao, Tata (1995), Sornam and Shyla (1997) showed the students attitudes towards theft and mutilation of library reading materials. Parvathamma and Gavisiddappa (2001) discussed stealing, mutilating & misplacement, non delinquent & delinquent users, causes of the problem, their reasons & suggested preventive measures. Richmond (1975) listed 25 approaches to deal with theft and mutilation. Hendrick and Murfin (1974) considered replacement cost and penalty warning for patrons would help to reduce loss rate. Lincoln (1986) describes five kinds of theft in the American Library Crime in his Research Project.
(ALCRP); these are theft of books, theft of reference materials, theft of equipment and theft of personal property of staff and user. Otness and Otness (1988) reported on how valuable map plates were being stolen by thieves from library special collections. According to some of this theft can be recognized to library employees. Some of the professional thieves described by Otness and Otness may actually work in libraries they steal. Zimmeran (1961) added financial aspect of loss of books, he also explains with examples. Some studies put the figure considerably higher. A 1995 study found that 12 percent of all library books in Ohio were missing and within its Web site’s Frequently Asked Questions, the American Library Association cites one paper that calculated a "$70,000 a year cost for a 50,000 volume collection, using 2005 book replacement cost figures. Ragains (1991) was hypothesized that most of the theft of plates was done by professional thieves. Bahr (1989) concentrated on internal theft from a library. Not all theft is perpetuated by patrons. Some library employees take material from the library without properly circulating it. This is one of the hardest types of theft to prevent. Verma & Gupta (1972) surveyed on the loss of books in Rajasthan college libraries and indicated that open access system is root cause of book loss.

O’Neill and Boomgaarden (1995) reported on book loss and drop in Ohio libraries. It was discovered that nearly 12% of books in 100 Ohio libraries were missing. It appeared that book theft was a bigger problem for libraries than book deterioration. Burrows and Cooper (1992) found that most libraries have little idea of the amount of stock being lost. They were calculated cost of losses due to theft and mutilation in the UK to be of the order of GBP 1,280 million, involving about 4.4% of total stock. Foster (1996) reported work on determining losses in academic libraries and examined the benefits of theft detection systems. Senyah (2004) identified the causes of theft and mutilation were the scarcity of needed books 90.9% and selfishness 81.81% as being the male cause of book theft and mutilation. Steuer, Susan M. B. (2011) suggested that all libraries must plan to deter theft, even if they have not been a target. Recommendations from the ACRL/RBMS Guidelines Regarding Security and Theft in Special Collections Mandate “reading and stock area can be continuously monitored by staff trained in surveillance. Wurzburger, Marilyn found that approximately 30 % of the reporting institutions have experienced theft.
Ranawella, Thanuja C. (2006). Galhotra, M.K. and Galhotra, A.M. (2009) suggested RFID as anti-theft security system to reduce theft. Maidabino, A.A. and Zainab A.N. (2011) suggested electronic system for security in his study to reduce security theft problem, his study were defined objectives to identify major forms of theft and mutilation, to examine the strategies to be used for effective and efficient protection of library resources; and to propose a framework for the protection of collection against theft and mutilation in university libraries. They are also present framework to action for collection prevention by theft and mutilation. Schornagel, Karl W. (2008), Lourdes, David T. (2001) noted that different kinds of inspections planned in Library of Congress. They think theft did force us to evaluate our collection.

The Council for Museums, Archives and Libraries (2003) revealed that libraries and archives, theft is often committed. Protecting a collection it should be right balance between access and security and damage. It may also helpful to warn to users and planning.

Various research findings have shown that the number of books stolen from libraries is enormous. A study in Britain by Souter indicated that the average annual rate of loss of British Academic Libraries was about 1.59 percent of the total collections, although there were differences in book losses and theft from one institution to another. Academic libraries not exempted for the problem of security. A report of the Carregic Council on Policy Studies in Higher Education in 1979 noted that deterioration of academic theft and mutilation of book by students valuable reports most specially library books and journals. Not all book losses are intentional theft; at least some books have been removed from the library because the user actually felt they were more secure in his hands than in the library. These irrational users are rather not considerate enough in their decisions to consider other credible users.

An American study also confirmed that there were 250,000 books stolen from 100 libraries per annum; this is an average of about 250 books per library per year. Book losses of American universities as reported by Lincoln may be higher than those in United Kingdom.
Mansfield identifies pressure for academic success and students’ misconception of theft as an academic crime rather than a real crime as important reasons in increasing book theft in library. He reported offenders are young, predominantly male, second-or-third year undergraduates and that book theft is usually carried out during the afternoon or evening of the semester period. Students, faculty and staff members and librarians were identified as being implicated in theft and other security cases. Economic and financial factors are also identified as the major catalysts for theft of library materials.

Non Book Material Theft: Procurement of non-book materials is a must in the modern library holdings. Thefts are restricted not only to books and periodicals but also sheets, film strips, micro fiches, tapes, newspapers, CDs, DVDs, floppies, art work and stationary have been the targets in recent times.

2.8.5.1. Methods of Theft:

Studies are recorded Different type of theft methods. Ajayi And Omotayo (2004) identified the library collections were as hiding stolen items under clothing such as suits, laboratory coats and loose dresses. According to Edem (1998) and Obikoya (1994) most used method was rush and busy hours. Another method is that of erasing library ownership stamps and removing date-due slips by razor and then tearing off the book slips. One more method is interchanging the book slips of previously loaned books and pasting them on books to be stolen. Jadhav, Mahendra N. and Kulkarni Shobha, Verma and Gupta (1972) revealed that open access facility have a problem with security and material theft. Bregel, Loren the persistent threat of item theft, once the concern of rare book shops and some academic libraries must now be confronted. Ugah (2007) considers theft problem and discussed about reasons, types in his study. Wyly quotes Belanger’s views expressed at the Oberlin Conference held in 1983 that “thieves are more likely to be students, professors, librarians, staff members, or custodians rather than professional criminals” and that “staff, who are insiders, have been held accountable for all but 25 percent of major library thefts.”
Impact of Theft on Libraries: The financial impact of these thefts can be significant. Continued library losses are sometimes viewed as a sign of poor wardenship of community resources, with consequences for management and budgets. One library system holds only children’s videos and DVDs in its collection items that might seem less attractive to thieves. After a recent inventory, the director was surprised to find that over 40 percent of these children’s DVDs were missing. Her first strategy for cutting theft was to put all of the DVDs on reserve, but this was overly demanding on staff. The next idea was to put only educational DVDs on the open shelves, on the assumption that these would be the least likely to be stolen. An inventory just four months later showed that almost 30 percent were missing. Brown-Syed, Christopher (1999) study entitled ‘Some Observations on Systematic Book Theft’, Library & Archival Security, he studied types of theft, methods and which material is stolen. Stephen Blumberg (1995) was an admirer of Victorian artifacts. Over a twenty-year period, Blumberg noted that total desirable marked collection, glass windows, about fifty thousand doorknobs and over a million dollars’ worth of rare books. The windows and hardware were obtained legally, from buildings facing demolition. The books were pilfered from libraries throughout the United States and Canada. Blumberg argued as psychology professor Matthew McGue (a real person) he defeated sophisticated security systems, entering rare books rooms by night, crawling through ducts, or using wax impressions to obtain duplicate keys. A common theme emerges in the literature of systematic book theft. Richard Rayner’s classic, The Blue Suit, describes his exploits as a Cambridge philosophy and law student and as a book thief who began by stealing John Donne’s Sermons. According to Rayner’s autobiography, he amassed over five thousand items, many of them first editions. He later sold some to support a free-wheeling lifestyle in London and financial gain. Rayner (1995) stole everything from dictionaries to the Bronte sisters,
from cheap paperbacks to attractively bound volumes. Rayner still took mischievous pleasure in altering the prices in second-hand book shops, leaving the works on the shelves as pleasant surprises for other customers. There are, of course, well-documented cases of librarians who have stolen books systematically.

The offenders hide stolen books in their clothing, as in the case of an unemployed graduate caught stealing 17 books from the LAUTECH, Nigeria library in 2002. The offender was prosecuted and found culpable of the offense by a magistrate court. He was sentenced to 12 months imprisonment, with an option of paying dues of one thousand Naira. The offender paid the dues and he was eventually released. He disclosed in court, however, that he has a ready market for such stolen books at giveaway prices.

The reference materials and textbooks in high demand were mostly affected, while academic libraries are badly hit by this form of thoughtless, senseless and criminal damage. Electronic theft detection systems have proved a major deterrent, especially in advanced countries, but they are hardly affordable in most academic libraries because they are expensive. As per the review maintain statistics, implement inventories, if event held in library legal action may taken.

**2.8.6. Mutilation**

Mutilation is a leading problem in all libraries. Threat of mutilation is everywhere exist and reason of collection damage. The term Mutilation is explained as library materials removed by ripping, cutting in order to remove the excised matter from the library. The Concise Oxford Dictionary (1964) describes mutilation as "render (book etc.) imperfect by excision etc." Msuya (1991) describes it as "the destructive action of cutting and removing pages of a book, a journal or any other document". Mutilation includes torn and missing pages as well as defacement such as underlining with pen or pencil, written on reading material, ink marks or other marks or folds. Watstein's definition (1983) is favored as it includes all these aspects, viz.: "Mutilation occurs when an item has parts removed from it or is altered so as to make it imperfect".

The most common way of mutilation is the tearing of pages, torn book spine, pictures, maps, tables and diagrams from documents. The material lifted may be wanted, to use in connection with classroom assignments, term papers, thesis etc.
Mutilation of pages or ripping of important information from the library has become common practice. It spoils the surface and structure of entire document and deteriorates the standards and maintenance of the library. It gives short term pleasure to the mutilators due to their selfish nature. But in long run it carries disadvantages to the several readers. College libraries are disturbing to readers and librarians very much. Present study has to discuss and find out the mutilation problem, which is not easily detectable and one of the core reasons of loss of library study material.

Goswami (1989), Lorenzen (1996) noted that types of removed material may not be returned to library. It means pages are removed purposefully from the library material by tearing, cutting; it is a leading problem in all the college libraries. Mutilation is common problem for all libraries. A book made unfit for reading purposes wholly or partially is said to be mutilated. He also focuses on various forms, causes and solutions for mutilation, misplacement, complete with illustrations.


Ajegbomogun (2003); Bello (1998); Lorenzen (1996) stated that lack of security and user behavior is reason of mutilation. Lincoln (1989) provides the following figures which were obtained through national studies in Canada, Great Britain and the USA. There were 526 incidents in Canada, 655 in Great Britain, 996 in USA libraries. Although mutilation is of universal concern, not much literature, especially research literature on mutilation of library material is available. The only way is to physically check the material concerned, either by random sample or by
type of material such as reference material, or journals. Bello (1998) studied university libraries in Nigeria, revealing that there is a lack of security in university libraries, which invariably tempts users to steal, mutilate, or engage in illegal borrowing. Burrows, John and Cooper, Diane. (1992) survey was dealt only with the deliberate damage, or mutilation, of library material. They suggested the checking of all material before and after its use. To reduce the mutilation library should be under take vigilance, maximizing supervision enhancing plan at the time of loan period, provision of photocopying facilities, checking of books, restriction of belongings, restrictions on access, prosecution etc.


Billington organized the inventory of mutilation. he had made management changes, cemented ties with the U.S. Attorney’s Office, further reduced staff access to the stacks, tightened up security coordination and hired an outside consultant and review LC security measures. Smith and Lydia (1997) state that restrict access to reduce the mutilation. Perez et.al. (2009) revealed various reasons of mutilation in his study. Chopra and Malhan (1979) explained on robbery and mutilation of library material, they suggested the measures to overcome the huge expenditure every year. Weiss (1981) his study discovered that pressure to succeed in a high pressure
academic environment seemed to motivate most theft and mutilation at large urban university library. Rana (1969) organized case study on mutilation of books; Ranganathan (1970) recommended that policy to reduce mutilation. Lorenzen (1993) did a study of over 100 academic libraries in Ohio. He discovered that the periodical mutilation rate for the state was only 2.33%, however the rate was higher for university libraries and 62.5% of university libraries considered periodical mutilation to be large threat to the library collection. Taylor (1981) his study was found high incidence of book mutilation. He compared this damage to putting scratches on a record. Hendrick and Murfin (1974), Gouke and Murfin (1980) theorize that academic libraries were the most vulnerable kind of library to periodical mutilation in their large academic library research. They discovered that library had a mutilation rate of 9% for periodicals and suggested electronic security system.

Weiss (1981) found that single library reported 1169 pages were mutilated in one year. Another library suffering from a wave of mutilations in 1955 made a special study and estimated $1300 worth of damage for that year. Arora (1982) did a sample study of the seventeen college libraries of the University of Delhi and reported that 38% of the collection is lost annually and 24.5% mutilated by the delinquent readers. The Council for Museums, Archives and Libraries (2003) revealed that main security threats face as a result are cutting out pages, plates or maps from books or bound items also.

Wurzburger, Marilyn observed different forms of mutilation in his study. He also focused on reasons of mutilation and how mutilation held in library. Abubakar Tafawa Balewa University (ATBU), Bauchi, Nigeria recommends to establish the motives for book mutilation in libraries. It identifies selfishness, non-availability or insufficiency of books, poverty, as the main reasons for book mutilation in libraries. Ratcliffe carried his findings on that students’ dissatisfaction or unfamiliarity with library services and the lack of knowledge of replacement costs and time; lack of awareness of collection and rules. Ajayi and Omotayo suggested provision to reduce mutilation in his study on Nigerian Academic Libraries. Ajala and Oyeboade, strongly urged library managers to employ very strict measure to prevent mutilation of library materials. Burrows and Cooper, Edem, John and Graham in their study reported the financial consequences of theft and mutilation in the UK libraries with the cost.
Literatures on mutilation incidences in libraries go beyond financial consideration to include the negative consequences. Abusin and Zainab, Martell reported how security issues in libraries can lead to negative perception towards the library environment and frustration among the library users. The study of Ajayi and Omotayo reveal that theft and mutilation has negative consequence on students’ academic performances. The analysis of the estimates of the financial, social, psychological and financial consequences of theft and mutilation as presented above strongly suggest the need for library managers to be aware of collection security breaches incidences, especially theft and mutilation in university libraries.

American University houses journals in closed stacks not only to reduce theft and mutilation but to test for collection evaluation studies. ACRL (2003) revealed that recent mutilation and damage may give an indication of a building area, subject, or type of material that will be the target of future mutilation. Salaam and Onifade (2010), Adcock, Edward P., Pedersen (1990) present the findings from her survey university students about the problem of mutilations of library materials.

Shuman (1994) found that most mutilation occurs within three years after publication. Smith and Lydia (1997) findings from a survey of academic art libraries regarding problems with mutilation, they also discussed criteria for dealing with mutilated materials and for deciding to restrict access to materials. Hart (2003) explore the insidious problem of materials mutilation. Allen, (1997) listed three broad categories into patron mutilation. “Patron theft and mutilation account for the most common disappearance or destruction of materials in libraries”.

According to Anyaobi, G. and Akpoma, O. (2012) the abuse of library materials through mutilation and other forms of abuse has posed tremendous challenge to the library profession. Jackson (1991) incidents of mutilation of library stock are increased. Sornam and Shyla (1997) reported that mutilation of library materials was common in many libraries and only the magnitude of the crime differed from place to place. Senyah (2004) identifies the lack of needed books (90.9%) and selfishness (81.81%) as being the main cause of book theft and mutilation. Ogunrombi, Samuel Adewale (2006) surveyed with objective of to conduct a quantitative analysis of books withdrawn from library shelves as a result of mutilation and damage. Mwantimwa (2007) recommended that the most valuable library
resources should be digitized to prevent them from being theft, loss and mutilated. Digitized material plays a big role in improving services and quality.

Many of studies reviewed causes of mutilation these are lack of resources and poor funding, selfishness, poverty, poor collection arrangements, unawareness of students, proper security plan is not implemented, human activities, rudeness, selfishness of patron, fear of fine, poor observation, avoiding photocopying charges, religious and political factors etc. The above studies demonstrate that all libraries encounter the problem of mutilation and theft. The mutilation is especially troublesome for academic libraries with frustration to both patrons and library staff.

Remedies are given by many authors, these are encourage readers to report evidence and avoid it, make photocopy service inexpensive, student should be aware about rules of library. Collection should arrange with separation, staff need to observe carefully from time to time, damage material needs replacement by patron or fine for damage policy, collection access should be restricted, reduce staff access, tightened up security, library can review standard security measures and implement such as ALA guidelines, LC prepare self check list etc. Inventory should conduct to find out loss, apply change in management and implement new technologies if cost effective. The present study has concerned to all views, measures and reasons for study.

2.8.7. Book Damage/ Vandalism:

Books, bounded volumes of journals, bind material also damage and mutilated all over by day to day handling, it should get damage such as loosing in form of breakage of binding, missing cared, non maintain regularly for that shelving and physical inventory of book needed to reduce damage book and library material. Binding and repair suggested by different authors.

Figure No. 2.33 Damage Books
The term vandalism defined by Concise Oxford Dictionary (1998) “vandalism is willful or malicious destruction or damage to property.” (Blacks Law Dictionary 1990, Encyclopedic Dictionary of Library Science and Information Technology 2002) "Vandalism is an intentional act of destruction or defacement of property not one's own". Garad M.D. (2011) studied vandalism in college libraries. He also suggested photocopying and regular maintenance of resources. Boss, R. (1984) observed that damage by operation or poor maintenance, improper handling of user; it should required care for books to avoid damage. Morris, John (1984) indicated insurance to maintain damage. Lincoln, Alan Jay (1984) discussed internal and external damage and suggested preventive measures. Cohen (1973) outlined the categories of vandalism, such as acquisitive; tactical; ideological; vindictive; Constantinous (1995) examined the literature regarding the motivation to vandalize library materials; Lincoln (1989) discussed thoroughly the types of vandalism that occur in libraries and a number of prevention strategies.

2.8.7.1. Intentional Damage/ Vandalism:

Lincoln (1986) listed six types of vandalism in libraries, including intentional damage to materials, vandalism outside the building, vandalism inside the building, vandalism to vehicles, vandalism to equipment and arson. Grewal (2004) recommends that the strategies must be implemented with adequate attention to the integrity, intensity and coordination of the intervention. Goldstein (1996), Hauge (1995) recommends libraries design their traffic patterns such that there are as few blind spots as possible and so that they move past the circulation or reference desk.

Loss of Book/ Measuring/ Auditing/ Sock Verifications:

It is necessary to maintain good condition by users unfamiliar with the reasonable precautions that are necessary to ensure the maintenance. Users are not using material in proper condition, they bend the spine of a book to ensure that it stays open at the right page; to wet a finger before using it to turn a page; to use as a book mark some inappropriate object, which at worst may mark or tear a page and at least may damage the spine if the book is closed tightly.

Lurtsema, David (1997) studied on dealing with Book Loss in an Academic Library. He also revealed user attitude and forms of loss. Abareh, H. M. (2001) his study entitled on An Exploratory Survey of Book Loss, Theft and Damage in Abubakar Tafawa Balewa University (ATBU), Mowat (1982) state that most
mutilators of books are motivated by one or two objectives—either to obtain more ready access to material required for their pursuits, or to secure an item for financial value. Greenwood (1985) suggested that as the way forward libraries should give priority to developing programs and strategies for dealing with book loss and especially in some cases where book loss is due to devise ways of dealing with the dishonest library users. Ogbomoso (1996) observed that the loss of books and periodicals in every academic session in libraries seriously undermines free access to library materials. A typical example of mutilation was a case of a female undergraduate student in the Ladoke Akintola University of Technology (LAUTECH) library.

2.8.8. Book Hiding/ Miss Shelving

Hiding of book is also a problem of library security due to its misplaced, items cannot be verified properly. Misplacement means the placing of books at different shelves, other place avoiding proper place than those determined by the library such as call number.

Alao, I. A.(2000) analyzed why patron hiding the books, reasons of hiding and what type of characteristics of these books. Mann (1974) studied that hiding of books and journals in doubtful corners of the library was a recognized problem. Also, Okotore (1991) reported that hiding of books to prevent other students from using them was a problem in Nigerian colleges of education libraries. Agboola (1995) found that hiding of books tops the list. The results of the Nottingham Trent University study. Gregson and Hocking,(1995) his study not only shows that the hiding of library books by students was a concern, but also count reasons of hiding are malpractice, need of material for essay, project, assignments etc. Goswami (1989), Rao, Tata (1994) observed that misplaced books may then get destroyed or made useless for user concern and lead to duplication in book ordering. They also discussed factors of misplacement, these are fear of reader, forgot the proper place at the shelving, ignorant of book arrangement system fear of punishment, Shortage of time, examination-competition of ranking, topping in the examination or monopolizing the material, limited copies of books. Ajayi & Omotayo (2002) found that user requires book but it cannot find out at proper place it make unusable.
Different type of methods of misplacement these are kept inside the books, books behind the rack, keeping the books near ventilators etc.

2.8.9. Unauthorized Browsing /Using Someone Else ID To Borrow

User can borrow the books on someone else borrower ticket such action failing to condemn. They mainly desire to get relief from over dues and fines. They aimed to misguide or manage the library staff members at circulation counter, Students’ identity is most necessary before allowing them in to the library, otherwise it comes another form of problems. The falsification of name and unauthorized borrowing is another form of theft.

Books are issued for students on other someone else’s name. Library members lost their registration or identification cards, which it found by dishonest students, may be used to withdraw books they are never returned to libraries. Tata Rao (1994).

Many studies revealed that the student activities related to book borrowing: Un-authorized correction in the renewal date, managing the due date with the help of assistants at the counter, creating the duplicate tickets or identity card, developing the personal relationship with the counter staff with a view to reduce the fines, borrowing books for friends and or family members, book pages are discolor, torn ect.

2.8.10. Non Return Of Library Materials:

Non return of books is a serious problem in libraries; thousands of books are overdue to the users since long ago. Libraries tried to send the reminders to return the borrowed books, rather than the legal action. The non-return of borrowed books by users an indirect form of theft, it is another source of worry to librarians. In a national survey in Britain conducted by Burrows and Copper (1992) discovered almost (29%) of losses in libraries surveyed was due to non- returns. Although no such national survey has been conducted in India, it is possible that the problem persists in the college libraries as well as country. Udoumoh and Okoro (2007). Maidabino (2010) have studied overdue books and effects of library policy. The reasons for non-return books increased penalty, opening hours, being valuable book etc.

Collection security refers to a process designed to protect library collections against un-authorized borrowing, removal, loss, damage, theft, mutilation, disaster. Collection security management in libraries can be conceptualized to mean the overall
manner in which collection security policies, programs, procedures, or measures are established or manage.

2.9. Equipments/ Furniture/ Other Material Security

Libraries hold valuable equipments and easily solid items, including different types of books such as brail literature, microfilms, e.books CD’s, audio-visual equipments, Computers, Laptops, tabs, artwork, antiques and so on. Along with the need for security measures, most library professionals have not yet perceived the need for training and property crime prevention techniques. Many libraries has included equipments, machinery for day to day routine operation flywheels, shafts, pulleys, key ways, belts, couplings, chains, frames, lighting tools, cable, buttons, detection tags, gates, typewriter, stamps and heating equipments, airconditioners for humidity control and exhausting.

Figure No.2.34 Furniture and Equipments in Library

Furniture of a library has to play their own role in minimizing misplacement and loss of books. Therefore, proper care should be taken towards the constructions and designs facilitating hiding of books. The readers hide the books not only inside the drawers but between the drawer’s railings beneath the table’s front surface hence avoid drawers for table. The air space between the base of an almirah and the floor should be large enough for sweeping and brushing purposes. The wall shelving should either admit of enough space between the wall and the back of the almirah or the almirah should be fixed to the wall. This would help supervision and eliminate hiding places of books. The range of possible theft is in an academic library equipment, art, media materials, display items and personal belongings. Theft can occur during open hours by an individual walking in off the street. Many studies have suggested replace any broken furniture or damaged equipment. Look for furniture that uses durable hardwoods or comfortable plastic for seating, or for fabrics that have tight weaves and high wear values.
2.9.1. Protecting Equipments:

Any organization can use some guidelines to protect their equipments these are using permanent paint to mark on main and all removable parts with serial numbers, keep recorded identification numbers on equipment or machine, mark stamps, label placed on equipment alert the thief that it is traceable if stolen, Advertising of lost item to society sometimes return, install proper place, separate space should accommodate if required, organize ergonomically as per need.

Audiovisual materials are usually kept separately from other materials. That type of materials does not circulate. To protect them, some libraries dub the sound onto cassette tapes, keeping the masters in the non-circulating collection and circulating only dubbed cassette tapes.

Khaisar and Ramesh, (1986), Dixit and Vaishnav (2003) found that vandals also cause damage to the library furniture and equipments. The catalogue and files of information often becomes their target. Several episode of throwing the computer discs in the toilet have been reported. Lincoln (1986) describes theft of equipment in American Library Crime Research Project (ALCRP), Shuman, Bruce A. (1997) reported that user may be carrying an item such as a camera case, radio or a computer, the security guard on duty is supposed to require him to open the carrying case and verify. Omoniyi (2001) surveyed security & other electronic installation in Nigerian Libraries and suggested that computers & other electronic equipments are most likely to be targeted by burglars because of economic conditions, social factors & management problems.

It also required ergonomic arrangement, proper installation, storage to reduce theft of equipments and damage.

2.9.2. Replacement, Repairing and Repainting of Equipments:

Increase the durability and maintain the beauty of furniture by repairing, replacement and repainting. Furniture’s of a library have to play their own role in minimizing misplacement of books and many other problems. Therefore, proper care should be taken towards the constructions and designs facilitating. The wall shelving should either admit of enough space between the wall and the back of the almirah or the almirah should be fixed to the wall. This would help supervision and eliminate
security problems. A library might launch fund raising efforts to replace materials or equipment lost, in an effort to make the patrons aware of the problem.

2.10. Staff / Patrons/ Visitors/ Personals Security

Library has trinity of books, staff and users without any one library cannot be carry its meaning. When users made transaction of reading material then security problem rose. The term staff includes employees, volunteers, students, office visitors, contract workers, visiting workers and board members. The term visitors includes public visitors to premises, it is called patrons. Staff functions without a supervisory span of control over line employees may be performed by managers. Training, technical support, auditing etc. are staff functions. Staff members who work with the public are an excellent source for input on how to improve security procedures and they should be encouraged to contribute their ideas.

All staff must be instructed to enforce all rules, regulations and procedures without exception. Staff should be trained in the techniques of observation. It is also essential that the staff is trained to deal with difficult situations that can make security procedures difficult to implement. Process for library user, patron, researcher, staff and visitors is to fill up form with necessary required information, photos. Identity card may hold from each patron every time when library required, everyone should maintain rules and regulation of library. Difficult patrons have been considered primarily from the perspective of the problem behaviors they present in libraries. To understand the difficult patron in academic libraries we need to answer three questions – How well do we know our patrons? Do we innocently create difficult patrons through our failure to appreciate their needs? Do we regard patrons as difficult because the way they use libraries and conduct their information research does not match our idea of how it should be done? The answers to these questions suggest that we need to redefine both our patrons and the services which we provide.

Indeed, when staff cannot predict risks, abuse or violence to which they can be exposed, their morale would be low and their ability to work efficiently questionable.

2.10.1. Staff Attitude and Behaviour:

Staff attitude and behavior should be user friendly and accountable to library security and loss.
Holt & Holt (2005) reported that library user refuses to comply with appropriate behavior guidelines as set out by the library administration and staff. Rogers (2005) realization gives staff a sense of empowerment and control over the environment in which they are responsible for work. Staff must work with users to ensure that their library needs are being met, "Disruptive behaviour can't be tolerated, as it interferes with everyone's enjoyment of the library. The library should have clear standards of behaviour and policies to enforce them." However, a balance must be achieved; ". Maidabino, A.A. and Zainab A.N. (2011) highlighted the need for library management to take the lead in developing an honest culture reporting responsibility. Ajayi and Omotayo (2004), Maidabino (2010) reported that staffs' lack of awareness of collection security incidences in libraries. Lowry and Goetsch (2001); Holt, (2007) noted that user and staffs' attitudes and awareness toward the importance of protecting collections in the library. Awareness is an unseen element but is demonstrated through perceptions; such as (a) staff’s attitudes about the importance of security policies and processes; (b) their awareness of security violation; and (c) the limitations of security. Ogbonyomi, Andrew Leo (2011) reported that the poor awareness of the library’s importance and the functions of the staff of the library might have influenced the carefree attitudes of the staff to the library. Varner (1983) indicated inadequate semi staff at nights and weekends is major cause of theft from libraries.

2.10.2. Use Behavior

Problem patron who breaks library rules by disturbing the internal and external environment of the peaceful library. The problem patron by creating noise disturbs the other sincere user hence some practical instructions may be user behavior, anti social behavior and psychological issues effects the library security.


Kumbar (1994) surveyed users’ attitude towards the resources and services of university libraries in Karnataka. Rao, Tata (1994) studied several aspects with users behavior which is one of the notable works in this field. The Council for Museums,
Archives and Libraries (2003) analyzed user behavior. Readers should try to make as little noise as possible. Where talking is necessary, it must be done quietly. Mobile telephones and audible pagers must be switched off or put on silent mode before entering the Reading Rooms. American Library Association's (ALA) formulated separate library privacy policy. Privacy is the common and minimum demand for the users to the library staff. Momodu (2002) asserts that libraries have faced varying degrees of delinquency in the use of their resources. Hart (2003), Nawe (1988) argued that selfishness is a primary motivation for damage; Adomi (2002) state that it is important to differentiate between legitimate and illegitimate behavior within the library.

Library can provide mental peace to the user; they needed privacy to pursue difficult thought process without interference, users carrying research work. User can feel safe in the library surroundings. Users can enjoy barrier free service in the library. Some practices give short term pleasure to user by making noise, misbehaviour, selfishness. But in long run it carries basket of disadvantages to the several readers. User behavior is also effect peaceful and sound library work.

2.10.2.1. Economic Factors:

Many studies revealed financial factor of user is one of the reason of users miss behaviour, it as a reason of library theft and mutilation. The individual frustration or anger with society in general utters itself upon the most convenient representation of that society. A college student who fails a course and who believed his or her entire career is ruined, may bent that range by setting fire to the campus library because it happens to be open at the time his or her temper is at the climax.

2.10.3. Staff-User Relation

Staff members who work with the public are an excellent source for input on how to improve security procedures and they should be encouraged to contribute their ideas. There are some basic precautions that can be undertaken. Staff backgrounds can be checked before hiring; staff access to restricted areas can be limited; staff belongings can be inspected when staff members exit the building; and staff can be required to sign in and out of the building, both during and after hours.

Lincoln (1986), Khaiser and Ramesh (1986), Goldstein (1996), Khaiser and Ramesh (1986) revealed that staff relations with user and authority. Khaiser and
Ramesh (1986) found that the reason for misuse and damage in academic libraries is problem patron. Users of library being the focal point upon which the usefulness of library are estimated, they are welcomed, encouraged and therefore provision for free access, which in turn is major cause of security problem. Holt & Holt (2005) Rogers (2005) recommended that librarians and library staff need to make the transition from viewing library use as a right, on the part of the patron. Shuman (1999) state that all staff must aware there duties and responsibilities, it is strongest measure of security and take responsibility for carrying out the duties outlined within the plan. Staffs that are aware and alert are the greatest deterrent to crime in the library.

### 2.10.4. Destruction /Damage by Patron:

Damage of library collections, property, furniture, facilities makes by intentional or accidental by user, usually motivated by anger or cruelty on the part of the performer. Vandalism includes salting lawns, cutting trees without permission, stone throwing, breaking windows, arson, paint on other’s properties, tagging, placing glue into locks, tire slashing.

Vandalism also covers destruction/damage of property is to willfully or maliciously destroy damage, deface, or otherwise injure real or personal property without the consent of the owner or the person having custody or control of it.

Morris, Khaiser and Ramesh (1986), Goldstein (1996), Lincoln (1980) Grewal (2004), Goldstein (1996), Constantinou (1995), Goldstein (1996), Lincoln (1989) focused on library security and discussed the problems of vandal activity and security measures suggested to control the problem. It is described as intentional damage to collection, equipment, the building etc. by user. Goldstein (1996) states how to recover and reduce damage material punishments may include fines, restitution, or suspension of library privileges for user misbehaviour and breaking of rules. Snyder (2009) focused on how fraud occurs in libraries, it requires, there conditions, financial need, rationalization and opportunity, outlines solutions covering technical aspects of detecting and preventing fraud in libraries. Salaam & Onifade (2010) examined perceptions and attitude of students in relation to damage in a university library the findings shows that 48.6% respondents strongly agreed that damage is inevitable in libraries which require urgent need to orient the students in this matter.
2.10.5. Training for Staff,

Library should try to organise training time to time for employees to protect library and to create awareness about new challenges and future problems regarding security of library. Libraries should strive to improve themselves through training and continuing education programmes particularly in security. The staffs who are already working are to be retrained to update their knowledge and may have to recruit new candidate with better / higher qualifications. Security staff training, orientation requires careful, systematic planning for developing staff knowledge, skills and abilities for both todays and tomorrow’s security work. Security Staff Training necessities are certifications, maintain skills includes practice drills, to prepare for the introduction of new technologies, employees to gain a new perspective and develop additional skills, to better manage multiple sections of security, ensure coverage for reduce audit findings of insufficient training records, user friendly with new technology migrations/upgrades to acquire social networking with other professionals, latest trends. Proper skills for maintain high risk managers such as risk management and continuity requirements drive expanding training considerations among security departments as well.

Training sessions for all employees should specifically address the unique concerns of library property security. Training should include the steps for reporting response to fire, including the use of hand-held fire extinguishers and personnel to call. Regular retraining of staff is essential. Training for all staff regarding location, use of fire extinguishers with other security equipments and procedures to follow at event held. Training focuses on how to produce relevant and needed security skills and competency. Training is a more formalized approach to building the knowledge, skills and abilities to help employees do their jobs in a way that does not compromise organizational assets.

Given that security and emergency training is not something that most staff learns during their formal education, it is that must be picked up on the job. Training should be two fold, occurring both in the library from other staff and security personnel, as well as with formal training opportunities outside the library. Support should be provided to staff that have experienced a shocking or stressful encounter with a patron, Arndt (2001). Proper training helps staff understand what behavior to expect, how to assess risks posed by problem patrons, how to use verbal tactics with
aggressive patrons and how to defuse tense situations, Canal (1998). Training can help staff become more confident with assessing situations and determining whether a patron is simply angry and aggressive, Shuman (1999). Authority should provide tools and resources to staff members for dealing with any job-related stress or disturbance, Fescmeyer (2002).

ACRL/RBMS Standards determining what training, where and for whom, as well as what technologies and methods to employ for best impact. Hobson et al (1987) developed a training program which provided staff with an awareness of their critical role in the overall functioning of the library. Effective training not only helps staff cope up with patron behaviour but also teaches staff awareness of their own attitudes and encourages them to maintain a professional detached manner. The Council for Museums, Archives and Libraries (2003) recommend that library should arrange training, motivation and supervision to staff encompass contracts and communication skill with other individuals and groups improve the staff skill. McCree, Mark (2001) noted that training will help to deal with the issue. Maidabino, A.A. and Zainab A.N. (2011) revealed that training may clear to users and staff about the safety and security policies and guidelines in libraries. Training Programmes, in his CSMM framework consisted in third section as human or staff training issues. Ives, (1996) included staff’s casual attitudes to users’ needs and ignorance about security issues are the causes for security. Saffady (2005) proposed programmes involving staff being trained, retrained and made aware of policies and procedures on collection security management processes. Adupa, Sunil and Kumar, K. Praveen. (2009) their studies have objectives to the library professional must upgrade their technical expertise by taking orientation and training programmes on conservation of library materials. Patkus, Beth. (2003) advised that preservation education and training of staff and others is also necessary. Facilitating preservation education for the institution’s administrator(s) and/or trustees can be very helpful in encouraging institutional commitment. Albin O. Kuhn, Library & Gallery University of Maryland (2012), Antwi (1989) also stress on security training. Lowry, Charles B. (2003) opined that the libraries must develop an articulated philosophy along with policies and procedures, followed by a training program for all staff. McCormack, Nancy. (2010) recommended Special training for employees. Olatokun, Wole Michael. (2008). Akussah (1991) proposed training programme should include, operating
environmental control, storage and housing, designing new buildings or renovation of buildings. Stackpole, Bill (2011) advice Security Awareness Training, General Staff Security Training, Security Staff Training Requirements, Security Awareness Training, Objectives, Elements, various benefits of training. McCann, Michael mentioned need of several levels of training. All employees should receive training in how to report an emergency, how to recognize emergency communications and how to escape from their worksite. It can also cover how to use fire extinguishers and how to give emergency first aid. Senyah Y. (2004) suggest regular training, staff would be more conscious of what poses a threat to their personal security and safety both at the workplace and in the home. UNESCO, (1996) reported that their anxiety about library staff’s problems/issues, libraries are continue suffering due to lack of training or lack of staff discipline, but also due to lack of interest from peers, administrators etc. it also focus on threats of archive collection. McGinty (2008) found that loss may be prevented personnel employment and training.

Training can also assist to library staff to prevent loss and maintain security.

2.10.6. Orientation for Student

Educate student and user to avoid and prohibit abuse of library materials, explore the legal actions against factors that are responsible for abuse of library materials, how library users can use materials in secured manner. User should be aware that security rules and policies in campus or library by educational and training programme. Library has been conducting Orientation Program to the new students admitted every year to encourage the students to attend the orientation program as per schedule. It could also be assumed that no proper orientation to fresh students and staff on the consequence of keeping security of library material. Also proper instruction and orientation should be provided to library users regarding maintaining security in library and follow the rules and regulation of library.

User orientation shall improve to promote library services on campus, to develop better relation, to evaluate the quality of library services, to provide attractive and functional library facilities, to collect materials and resources reflecting a broad variety of beliefs and research, to maintain and preserve current collections, to identify, procure and manage the needed resources for library services.
Jordan (1999) proposed that libraries should include security issues and responsibility in user education or planned orientation programmes. Wesley L. stated that staff training and user awareness in preservation management. Ajegbomogun, Fredrick Olatunji and Okorie, Chituru Nancy (2010) advocated that it could also be assume that no proper orientation to fresh students, stalemate and staff on the consequence. Anyaobi, G. and Akpoma, O. (2012) urges that some of the services the library renders include library orientation for fresh students. Senyah, Yaw (2004) depicted not only through the installation of a security system, but by educating users and encouraging them to take more responsible attitudes towards their libraries.

2.10.7. **Accident:**

Accident means medical injuries to users and staff, vehicle chemical accident, damage to building and property, damage to collection and non collection items. Safety and accident prevention process include issues and precaution are observing and reporting unsafe conditions, identify accident hazards, identify fire hazards, identify hazardous materials, know the safety rules and regulations, know how to respond to accident investigations, know how to respond to report accidents, maintain certifications in first aid. It also examines the insurance coverage of library materials. Accidental discharges occur because of human error or improper maintenance to the system. Carelessness is main reason of accidental damage.

Library or college authority can manage or organize doctor or hospital facility. NAAC standard require the periodical checking of students in college campus. Accident and injury/illness History involves tracking worker’s compensation records, insurance payments, first-aid cases and employee attendance records. Accidents are uncertain; it can be reduce by precautions.

2.10.8. **Workplace Safety**

Supervisors are responsible for continuous review of unit working conditions and procedures in order to provide a safe and efficient workplace. Supervisors should orient/train employees as to proper safety procedures and ensure familiarity of all employees with library guidelines and any changes/updates. Supervisors should periodically review these with all employees to ensure ongoing awareness and preparedness in event of an emergency. Employees are the most important assets of library. The aim of the insurance policy is to provide for adequate compensation in
case of employees sustaining accidental bodily injury, regardless of any level of liability that may be involved.

2.10.9. **Drug Use by Staff/Patrons**

Using the drug, intoxications such like alcohol etc. is prohibited at public places. It is also violation of law. It includes those who use the library for illegal purposes such as buying and selling drugs, or stealing anything of value.

Lincoln, Alan. (1984) revealed that the phenomenon of drugs being used to facilitate several abuses, it has been reported across the country in his study. Respondents indicated that drug use was known to have occurred in over 15 percent of the libraries. Drug sales were rare. Only 4 percent of the questionnaires mentioned the sale of drugs by staff or patrons. Hartse, Merri and BES Security Guidelines Subcommittee (2001) recommended a personality profile test and its process and a physical examination with drug test, where legal and properly administered, to determine the applicant's freedom from medical illnesses and drug or alcohol abuse.

2.10.10. **Verbal Abuse to Staff Or Other Patrons**

It includes language or gestures that are convey a sexually explicit message or are conveyed in a basic matter and any language that verbally abuses another individual. Other forms of abuse can be generalized into groups that include likelihood of library staff being abused verbally is very high.

Davies, Sandi J. (2008) noted incident of violence, verbal abuse and antisocial activities. Lincoln, Alan. (1984) studied verbal abuse to patron 28, 05, Verbal Abuse to Staff 45, 13. Verbal abuse was the second type of problem of patron behavior. Verbal abuse of the staff was more common than abuse by patron. Nearly half of the respondents told of at least one case of verbal abuse of a staff member. Verbal abuse was chronic in over 13 percent of the libraries as per his study.

2.10.11. **Assault on Patron or Staff**

The Council for Museums, Archives and Libraries (2003) defines assault “An assault is the intentional application of force or the threat of such force to the person of another without his or her consent.” Assault people-based attacks usually conducted in stealth and frequently involving small arms or other weaponry. Robbery is the most common form of assault. Workplace violence, disturbance and terrorism
are other examples. Common Assault is minor nature and there is no bodily harm, when someone pushes another, it is not an arrestable offence. Assaults involve the use of a firearm, knife, cutting instrument or other dangerous weapon.

Bodily Harm is when damage or cuts are inflicted and blood flows. In still more serious cases where bones are broken and serious physical injuries result such assaults are known as bodily harm. Prevent further assaults by separating the enemies, secure medical aid for the injured and arrest the guilty person. Indecent Assault are frequently carried out in crowded areas and are an arrestable offence. Should you witness an assault or if a person complains, you have the power of arrest and should detail the perpetrator and call the police.

Lincoln, Alan. (1984) indicated that assault is intentionally or by irresponsible conduct causes injury to another person. Attacks against a patron were reported by 7 percent of the sample. Three percent assault against a staff member but less than one percent reported three or more assaults. Lincoln & Lincoln (1987) compiled a list of 24 types of crime that have been committed in libraries in Great Britain. Arizona State University Police Department, (2012) founded aggravated assault or aggravated bodily injury from 2009 to 2011 study period. This type of assault usually is accompanied by the use of a weapon or by means likely to produce death or great bodily harm. Massachusetts, Department of Higher Education (2008) also shows in the schools reported a total of 384 violent offenses from 2000 to 2007, including one homicide, 73 forcible rapes, 55 robberies and 255 aggravated assaults, with no particular upward or downward trend during this time period. Assaults were involved friends or roommates. Nearly a quarter of the offenses occurred between midnight 2 a.m. and over half occurred between 10 p.m. and 4 a.m.

2.10.12. Sexual Assault:

Library should provide fearless environment to girls’ student therefore assessment of risk with every aspect. Lincoln (1984, 1987), Massachusetts, Department of Higher Education found sexual assault. The United Nations’ 1993 Declaration on the Elimination of Violence against Women makes it clear that violence and fear of violence and harassment limit the mobility of women and girls and restrict their work and educational choices. Rao, Tata K. (1994) focus on sexual behaviour one of the major threats of security. Ferraro (1996) supports this theory by
examining the idea that sexual assault might serve as the “master offense” for women. Bell, Steven (2012) he includes sexual harassment as security issue by mental ill person. Massachusetts, Department of Higher Education (2008) found sex victim male 61.3%, Female 38.7%. Different kinds of violent events result in different levels of need for victim services. Arizona State University Police Department, (2012) ASU Police, provide numerous educational programs in the effort to reduce the risk of sexual violence. Beginning term, summer orientation for students are provided the opportunity to attend educational presentations related to sexual violence prevention and survival. They planned and implemented self defenses programme for students self security. Brashear Kirk J., Malone James J. and Thorton Jaringe J. (1981) noted that librarians clearly felt threatened by such sexual harassment

2.10.12.1. **Campus Sex Crimes Prevention Act:**

Different universities in world established the law for Sex Crime Prevention Act. The Arizona Department of Public Safety (DPS) has established the Arizona Sex Offender Info Center according to the requirements of A.R.S. 13-3827 Arizona DPS is responsible for maintaining the site and annually verifying the addresses of all registered sex offenders. Campus Sex Crimes Prevention Act : The Campus Sex Crimes Prevention Act mandates that convicted sex offenders required to register under state law.

Lincoln, Alan (1984) includes those who use the library for illegal purposes such as making sexual contacts. McCormack, Nancy (2010) found that a 15-year-old boy was charged with sexual assault causing bodily harm, forcible confinement, uttering threats and robbery.

2.10.13. **Illegal Use of Weapons:**

Weapon means Gun, Knife, Personal, Handgun-(AK-47), Shotgun and Explosives are included as weapons. Security measures in place that will prohibit weapons being brought onto college premises. Only very less school colleges’ campus has metal detectors. More schools, college can use metal detectors as a security measure.

Kautzman, Amy (2011) surveyed few epidemic attacks in his study. Fortunately, most of the shootings have not directly involved campus or public libraries, but library leaders should still be aware of and prepare for such an
eventuality. McComb, Mark (2004), Robertson, Guy (2003) found that attack from weapons such as a baseball bat, flying rock, or other blunt weapons. He studied criminal and uncivil activities and their effects on library employees and operations.

2.10.14. Civil disturbances and Economic Disruption, including strikes:

Gokhale Research Institute of Economics and Politics, Pune was disturbed by some civil activities of social group after some social opinions. It includes the involvement of parents or guardian, partnerships with civil society organisations and inclusion of safe awareness, prevention of violence, substance abuse. Bloom noted that civil disturbances sabotage, labour violence, strikes or civil disturbances.

Each countries found the social problems these are community violence, child abuse, domestic violence, family disruption, poverty, depression, rejection, fear, alienation and other social pollutants that demoralize families and divide communities” It effects all over society and public places such as libraries, hospitals, temples etc.

2.10.15. Bomb Threat, Bomb Explosion, Terrorist Attack, War,

Many research reviewed that archivists and librarians need to be educated and prepared for bombing and war situations. We have many examples of bomb attacks such as 9/11 Oklahoma city, 26/11 Trade Centre in America, Indian parliament in Delhi, Lahor in Pakistan, Moscow In Russia etc.

Robinson, Brad and Marlatt, E. Greta (2006) revealed that the bombing of the Murrah federal building in Oklaloma onApril 19, 1995 and the multiple events of 9/11 showed us that we are susceptible to the desires of evil men and women who wish to do us harm. Brashear Kirk J., Malone James J. and Thorton Jaringe J. (1981) reported that at least 60 percent of the large public libraries reported at least one incident over the last five years, while only 20 percent of the Chicago Public Libraries and 17 percent of the academic libraries reported incidents over the same five year period. Morris, John (1984) reported at Delta, British Columbia a fire bomb made with gunpowder and gasoline was placed in the book return in broad day-light. Sprinkler took charge on fire and fire service officer also provided services but libraries destroyed their collection in these incidents. Adcock, Edward P. stated major
bombing incidents occurred in the past five years. Shuman, Bruce A. (1997) noted that 1994: a gunman, carrying a pistol and he says is a bomb, takes 18 people hostage at the Salt Lake City Public Library and creates a real threat an off-duty deputy manages to mingle in the hostages and subsequently shoots and kills the gunman.

Many articles repeatedly mentioned flammable in libraries, while others revealed bomb threats upon these supposed safe havens and accounts of pipe bombs in book returns.

2.10.16. **Physical Violence or Shooting in the Institution,**

Many evidences of shooting held in library covered in different literature. Every staff member is involved in the prediction and prevention of workplace violence is the first step to prevent such type of incidents.

Many forms of vulnerability are:

- Loitering in a manner that interferes with others
- Excessively emotional, hostile, threatening or uncontrolled behavior
- Use of loud profanity, obscenity or obscene gestures
- Intentional entry into restricted areas of the building
- Intrusive behavior, including staring at or following staff or patron with the intent to annoy, harass them, violate privacy or interfere with staff performance of duties or patrons use of the library

2.11. **Natural And Human Hazards/Emergency Security / Disaster Preparedness**

Libraries, Museums and Archives have been affected by disasters. Earthquakes, floods and heavy rains, hurricanes and tsunamis, fires and power outages, moulds and pests have created emergencies, damaged library resources and disrupted library services in some geographical regions and it called natural disaster. In addition to these natural disasters, libraries have also been destroyed during wars, political conflicts, terror attacks, arson and loot. These are manmade disasters. Disasters in libraries cause loss of much valuable information necessary in decision making at all levels, scientific research and educational support.

While fire-outbreak in a library may destroy all or part of the collection, it may also claim lives or threaten the safety of staff. The library could also still
experience flooding if water taps are left on mistakenly or out of sheer negligence despite the fact that it not located in a flood horizontal area. Earthquakes are unpredictable library must be prepared for them at all times. There should also be adequate preventive measures to evacuate the staff and collections should the unexpected happen.


Figure No. 2.35 Types of Disasters

<table>
<thead>
<tr>
<th>Natural Disasters</th>
<th>Manmade disasters</th>
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<td>Earthquakes</td>
<td>Terrorism</td>
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<td>Floods</td>
<td>Wars</td>
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<td>Cyclones</td>
<td>System Failure</td>
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<td>Tsunamis</td>
<td>Accidents</td>
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<td>Landslides</td>
<td>Fires</td>
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<td>Cloud Bursts</td>
<td>Bomb Blasts</td>
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<td>Tornados</td>
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<td>Droughts</td>
<td>Chemical Hazards</td>
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<td>Avalanche</td>
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Figure No.2.36 Natural Disaster

Alexandrian Library in 48 BC, till date, several hundreds of libraries have been damaged due to different kinds of disasters. Valuable collections have been lost.
Disasters are a security issue that threatens library collection. Aziagba and Edet (2008) identify disasters as natural and man-made. We have little or no control over natural disasters, which come usually as a result of flood, landslides, earthquake, storm, cyclone or hurricane. Shuman (1999) describes flooding as abnormally high water flow and it is generally conceded to be the most destructive and costly natural disaster libraries can experience. Evans, et al. (1998), depicts disaster can destroy massive loss of collection, building and so on within short time. Insect infestation, environmental factors and human cause constitute a serious security threat and may have devastating consequences. There is a need for constant security measures, such as vigilant staff and user education, to handle security threats cause by this type of disaster. Brown (2007) suggests coordinated policies to address all these threats.

Libraries are preserving the collection for country user and disseminate it present and future. When disasters affect a region, they cause damage to cultural monuments, artefacts, cultural and intellectual records. An attack on a library is an attack on a particular culture. Using the destruction of books in Nazi Germany as a primary example, Knuth argues that “libricide” (the destruction of a book) as the social and political functions of libraries and archives make them symbolic targets for political violence. Caswell, (2009)

Creber (2003) referring to a particular disaster said “The losses and damage should not be assessed purely on a statistical basis. The loss in service was vast. A city had lost its library and with it its access to knowledge and learning. A community had lost its record of heritage. Staff had lost their place of work. The work of hundreds of person/years had been destroyed”.

Examples of major global disasters have been described by many authors. These are Wei, Zhang, & Fan, (2003); Osorio & Hurych, (2004); Pech, & Slade, (2005); Pasricha, (2006); Then & Loosemore, (2006); Al-Tikriti, (2007); Son, Aziz, & Pena-Mora, (2007). Articles describing disasters in general by focussing on one particular type give an understanding about issues related to that kind of disaster. The article by Pollonais (2004) is a general overview of hurricanes and their after effects. Atwater et al. (2005) give guidelines on how to survive from tsunami.

Many organizations and government Disaster Management Cells are set up to monitor disaster related activities in their countries. For example, the primary mission...

Figure No. 2.37 Volcanic Activity, Cyclone, Landslides, Avalanche

2.11.1. Natural Disaster

2.11.1.1. Floods

Water damage to collections and equipment remains an ever-present danger in libraries mainly because of leaks in roofing or side walls during rainstorms, faulty piping systems and catastrophic natural events, such as a hurricane or flood. The Howard-Tilton Library at Tulane University lost significant amounts of microforms, government documents and music books housed on the lower level in the flood associated with Hurricane Katrina. Boston Public Library lost several collections of rare materials when a water main broke within two of the buildings on Copley Square and flooded the basements. The loss came to more than $10 million in this instance of severe-water damage.
Roofing systems can be a source of leakage problems. Libraries tend to have flat roofs because of the large spans needed to accommodate stacks. It also creates the ineffective location of gutters, downspouts and drains that may back up over stack areas. Roofing materials fail more frequently than any other external building components. Therefore, maintenance and replacement of damaged material is needed to protect the library. Harm can be caused through a tsunami or floods from a nearby water body such as an ocean or river. Heavy rains, or wind driven hurricanes, cyclones and tornados also destroy collections. Apart from these natural causes, library has water from broken sides or drainage pipes, or seep in through leakages from walls, broken windows, doors or even from the ground these are other causes of water damage. Vulnerability to water damage is higher when the library is located in the basement or the ground floor, or near a fire hazard prone area such as a canteen or a chemical laboratory.

**Figure No.2.38 Flood and Water Enter in Building**

Floods in the river seine in 1910 in Paris, France. Baryala, (2006) and in the River Arno in 1966, in Florence, Italy caused over two million rare and irreplaceable volumes and innumerable manuscripts were damaged. The basement of the Biblioteca Nazionale Centrale, Italy was filled by water and mud. Nearly 1,200,000 volumes were flooded, including 100,000 rare volumes of the Magliabecchi collection, 50,000 folios of the Palatina, a newspaper collection of 400,000 volumes. At the University Library in Florence, 200,000 volumes were under water. In the major libraries of the city, a total of 2 million volumes were submerged. Lenzuni, (1989), van der Hoeven, & van Albada, (1996).

In 1975, the Case Western Reserve University Library, Cleveland, Ohio was flooded. Buchanan, (1988) In 1985, heavy rains and overflowing of a river resulted in the flooding of the basement of the 450 years old Innsbruck Museum and library in Austria. Tarmann, (2000) the tsunami in 2004 in South and Southeast Asia affected several libraries. The magnitude of the disaster was so great that libraries were almost
wiped off from the map. In Sri Lanka huge school, public, religious institutions libraries were destroyed or damaged. Gamage, (2005); Amarasiri, (2005) Libraries in the Aceh Province of Indonesia were badly damaged by Tsunami. The Centre for Documentation and Information of Aceh with its manuscript collection was practically obliterated. Moreover there was human loss. The collection and equipment on the ground floor of the library were completely destroyed. These libraries had to be started afresh and efforts to re-establish. Robertson, (2005) Examples of hurricanes, cyclones and tornados damaging libraries are Jamaica was hurricane ‘Gilbert’ in September 1988; it caused extensive damage to the library of the Norman Manley Law School, University of the West Indies, Kingston. Aarons, (2003) Hurricane ‘Hugo’ in 1989 in Montserrat Island damaged the Montserrat Public Library. The library was under approximately four inches of water. Newspaper and paperback racks and from the magazine display had ended up in the water gathering on the ground. Children’s books were lying in water. Water damage by disaster or any kind of leakage surveyed by Cassell, (2004), Cullhed, (2006)


2.11.1.2. Earthquakes

High intensity earthquakes lead to building collapse burying the books among the garbage. The quantum of garbage makes it very nearly impossible to separate the books from the ruins. Looting and theft are frequently observed in such situations. The shaking of the earth results in books falling off the shelves, requiring a lot of re-shelving. Further, loss of lives, damage to housing, communications and transport infrastructure disrupt day to day lives of people. Often, an earthquake is followed by tsunamis, heavy rains, landslides or fire, which in turn increases the damage.

Figure No. 2.39 Earthquake
The Imperial University Library in Tokyo was hit by a massive earthquake in 1923. More volumes were completely destroyed, van der Hoeven, & van Albada, (1996). Stanford University Campus Libraries were affected by an earthquake in 1989 Loftus, (1999) while the Oviatt Library at California State University at Northridge, USA was damaged due to a 6.7 magnitude earthquake in 1994. The collection was thrown on the floor, water damaged it and mould had spread into the collection. Curzon, (2006). On 08 October 2005, a major earthquake of 7.6 magnitudes shook the Azad Jammu and Kashmir region of Pakistan. 67% of schools and colleges in the quake area were destroyed or partially damaged. The Khurshid National Library in Muzaffarabad founded in 1988 and the only public library in the area was completely destroyed as it was near the epicenter. Another huge loss is held in that disaster. Shaheen, (2007, 2008); Batori, (2009); Varaprasad, (2008) Okahisa, (2011), University of Maryland, (2011) also surveyed the earthquake disaster.

2.11.1.3. Mould

Physical climate like heat, humidity, light, animals and insects can be disastrous for libraries specifically in South-East and Asian Pacific regions which have hot and humid climate. Mould, termites and other pests flourish in such an environment. These affect the books and cause damage. Mould can damage the material such as paper, leather, parchment, by digesting them. Insects can also feed on books and cause irremediable damages by digging galleries in text blocks or binding leathers. Factors that can cause these are faulty air conditioning system, mismanagement of collections, due to bad maintenance of collection and place and contamination due to human mistakes. Basset, (2007).

Figure No. 2.40 Mould
2.11.2 Manmade/ social hazards

2.11.2.1. Fire

Fire is one more disaster threat faced by libraries. It can happen due to negligence, short circuit caused by loose or faulty wiring or faulty switches. Sometimes fire can be intentionally caused to damage the cultural history and identity of a nation. All resources and building, furniture are damage in fire. A fire in adjacent premises can easily spread in the library. All materials are soot and smoke affects the library. The damaged material can be classified as burnt and wet, completely burnt, partially burnt, heat damaged. Perry, (2006)

In May, 1943 a fire completely destroyed the National Library of Peru, with the loss of 100,000 volumes as well as 40,000 manuscripts. Another fire at the Jewish Theological Seminary Library, New York, in April, 1966 destroyed many books which had escaped destruction in Europe during the Second World War. Another event noted by the authors is a fire at USSR Academy of Sciences Library in Leningrad, in February 1988 which destroyed or damaged about 3.6 million books and newspapers, periodicals. van der Hoeven, & van Albada, (1996). The Artificial Intelligence Library at University of Edinburgh was destroyed due to fire in 2002. The library housed a unique and historic collection of publications on the topic, dating from the early years of the development of the field. Battersby, (2005) The Law School Library at University of Buffalo, USA was affected due to fire in the lower floor of the school building in March 2005. No books were burnt or destroyed, but the collection was covered with soot and the infrastructure was damaged. Holderfield, (2007) Buchanan, (1988), Hammond, (1996); Creber, (2003), Cullhed, (2006, 2003), Gugliotta, (2006) fire events covered studied by above authors.
2.11.2.2. War

Libraries are targeted during times of war, conflict and regime change. Sometimes they are simply collateral damage, in the wrong place at the wrong time. Looting of libraries, burning library collections in times of war, terrorist attacks, destroying library collections for political reasons are not uncommon, causing libraries to suffer a great loss.

The UN’s International Criminal Tribunal of former Yugoslavia for the first time in 2003 recognised deliberate destruction of libraries as a war crime in a court of International Law at the trial of Slobodan Milosevic, Riedlmayer, (2004). Royal Library of Alexandria in Egypt, was destroyed due to fire. Ancient and modern sources identify four possible occasions for the partial or complete destruction of the Library of Alexandria: Julius Caesar's fire in the Alexandrian War, in 48 BC; the attack of Aurelian in 270 – 275 AD; the decree of Coptic Pope Theophilus in AD 391; and the Muslim conquest in 642 AD or thereafter. Library of Alexandria (2012) Warfare and fire accounted for the destruction of the Hamlin Library at Peking in 1900 resulting in the loss of many manuscripts dating back to 15th and 16th centuries which were irreplaceable. Davis & Huanwen, (1997). Many libraries suffered during the period of two World Wars. In World War I, as a result of the German invasion, the Library of the University of Louvain in Belgium was damaged due to fire in 1914 destroying over 300,000 books, manuscripts and incunabula, van der Hoeven, & van Albada, (1996). The systematic cultural purification drive of the Nazis destroyed libraries in large parts of Europe during 1939-1945.

The Second World War (1939-1945) proved disastrous for German libraries also. For example The Hessische Landesbibliothek library at Darmstadt was destroyed by fire due to bombing in the area in September 1944. The Library of the Technical University lost two thirds of its collection, The National and University Library at Strasbourg, France was partially destroyed by an air raid in September 1944. Italian libraries also suffered damage during 1940-1944 as a result of war. In April, 1941 the National Library in Belgrade, Serbia was destroyed due to bombing. About 1,300 Cyrillic manuscripts from the 12th to 18th centuries were in burned. The German invasion damaged Russian libraries during 1941-1944. van der Hoeven, & van Albada, (1996).
Post World War II in Eastern Europe, the USSR in order to propagate the communist doctrine, purged the libraries of several countries such as Hungary and Romania. Nearly all small public and special libraries were destroyed and many large libraries suffered serious damage during the siege of Budapest, Hungary in 1944-1945. van der Hoeven, & van Albada, (1996)


During the Iraq war in 1990’s, archives, academic and public libraries were destroyed due to looting and fire. Many expensive equipments and books were either damaged or half burnt. University Library of Bassorah, The Public Library of Bassorah Museum of Ethnography, library of Baghdad lost all of their collections, Awqaf library lost all of their manuscripts and printed books. The Library of Congress, USA sent its team for reestablishment of the library. Al-Tikriti, (2007); Arnoult, (2003). Political trouble in Northern Ireland during 1969-1994 affected public libraries in Belfast. They were affected due to bombing and fire attacks, Topping & Evans, (2005). Recently on 17 December 2011, the Egyptian Institute and its historic library caught fire due to a clash between Egyptian security forces and pro-democracy protestors. Egyptian history written by French scholars and published from 1809 to 1829 was lost. Eberhart, (2012) In Sri Lanka, Jaffna Public Library with the collection of nearly 97,000 books was consigned to flames post elections in 1981 destroyed. Maheswaran, (2008). In 1998 the Taliban set the library at the Iranian Cultural Centre in Mazar-e-Sharif on fire. Hakim Nasser Khosrow Balkhi Cultural Centre Library with 55,000 volumes at Pole Khomri in North Afghanistan was also burned down, Amirkhani, (2001); Loving, (2002). Many items from the Kabul University Library, especially Persian language books were burnt because the Taliban had decided to destroy Afghanistan’s Persian heritage and restrict books to the Pashtu language. Amirkhani, (2002).

**Natural Disasters:**

- Drought or Limited water conditions
- Tornados, typhoons, Monsoons, or hurricanes
- Very High speed winds, Whirlwind
- High water level
• Wide range or forest fire, or high warning level for them
• Wide range insect or rodent infestation
• Smoke or other extreme pollution
• Volcanic activity
• Dust storms

Technological hazards:

• Loss of equipment
• Loss of emergency response services
• Loss of driving access of the property
• Building/ Structural collapse
• Explosion
• Arranged/ Structural fire
• Chemical contamination
• Leak or spill of fuel or chemical

All above hazards are cause to destroy of library within short time or period. It cannot be stopped by human being but precaution and safety can be taken if activated it.

2.12. Conclusion:

The studies and literature stress the need to educate the academic community by discussing at faculty convocations the security of library stock, the mounting of simple publicity campaigns on the subject of library stock security on each campus. In all above these studies, problems that affect efficient security systems are highlighted, and suggestions on how to tackle them are easily. Indian literature on the topic is rare and most of the information is available in books, journals, newspapers as reports of the incidents held in libraries. These studies helped the researcher to realize security issues, loss, damage human and natural aspects affected can cause and how libraries have handled with the situation


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