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ENHANCING STUDENTS' CREATIVITY THROUGH INTEGRATING EXPERIENTIAL LEARNING IN HIGHER EDUCATION INSTITUTIONS

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Abstract

Student's creativity to a great extent is influenced by the learning environment they go through. The interventions of learning environment in facilitating better experience are in turn related to the learning styles. Colleges/Universities across the world has moved away from traditional teaching styles and incorporated innovations in teaching and learning process, to better equip the students to meet the graduate attributes. Such transformation is part of the overall change process that happened in the industry, which demanded expertise workforce who carries hands-on experience, behavioral skills and cognitive skills in addition to the subject knowledge. The industry requirements necessitate the development of skills and experience that cannot be integrated using traditional teaching techniques. This study focuses on intervention strategies that educational institutions must apply to enhance student creativity, particularly the experiential learning strategies. In specific terms, the study progress on the existing model framed by Kolb on experiential learning and highlights the involvements of learners and facilitators in enabling student creativity.

Keywords: Experiential Learning, Student Innovation, Higher Education.

Introduction

Higher education institutions (HEI) are going through a fundamental transformation ever since the industry has opted for graduates with hands-on experience, behavioral and cognitive skills. The scantiness of a teacher centric and textbook centric teaching and learning process to produce skilled graduates prompted HEIs to embed a pedagogical approach, centered on the needs and abilities of the learner. Such interventions also looked upon the inadequacy of a teacher centric approach to enhance student creativity which is of course the major competency required for graduates in this complex business environment. An educational system that does not encourage innovation and creativity have a tendency to stagnate and where individuals down to the point where they lose anything new or different. Rigid systems stymie creativity and innovation because individuals are busy concentrating their efforts on following policies and procedures, which in turn minimizes the amount of time they have for creative thought and action (Wurdinger and Carlson 2010).

Student innovation and creativity are influenced by the way the curriculum is delivered in higher education institutions. Earlier researchers have pointed out that creativity and innovation as 'desirable skills'

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(Meyers 1982) needed for students coming out of higher education institutions. Such an approach perceives that HEI need to impart knowledge from an 'expert' to the 'learners' using structured learning materials and administering examinations several times during the term. Learners are viewed as relatively passive and their learning is influenced by external reinforcement controlled by teachers. Although, this approach is suitable to teach a large group of students, researchers are of the opinion that it results in a 'surface' rather than 'deep' level of understanding and orient students towards performing only at the minimum level required to obtain a good grade in the course (Biggs 1999).

On the other hand, a student centric approach is based on the principle of constructivism which holds that students are actively and individually constructing their own social knowledge, rather than merely copying knowledge (Garfield 1995). This perspective got momentum with the expectations from the industry, where graduates are expected to possess diverse skills to work in a complex set of environment. This change in approach stimulated the implementation of experiential learning as a major pedagogy in student centered learning approach. The experiential teaching practices are highly appreciated by the industry since the learning occurs from student experiences and activities in and outside their classrooms, than the traditional learning style focused on classroom teaching alone. The experiential learning pedagogy involves the learners to accommodate the learning process with his/her learning style and in the process, develop their own knowledge and understanding about what they learned.

This paper revisited the existing literature on student creativity and innovation and also the integration of experiential learning practice to enhance student creativity and innovation in higher education institutions.

Objectives of the study

The specific objectives of this study include:

1. To analyze the importance of student creativity and innovation in higher education institutions.
2. To explore the significance of student creativity in bridging the gap between the academic learning and expectations of stakeholders, mainly industry.
3. To know the pre-requisites for implementing effective experiential strategies to improve student creativity and innovation.
4. To analyze the significance of experiential learning practices in improving student creativity and innovation in higher education.

1. Creativity and Innovation

Sternberg and Lubart (1995) defined creativity as 'producing new and original idea'. Nowadays, Creativity is increasingly represented in higher education aspiration statements as an attribute that graduates require to successfully engage in contemporary and future professional life. Several other generic capabilities seem intrinsic to creative behavior such as independent learning, critical thinking, innovative problem solving and information and digital literacy (Allen and Coleman 2011).

Adams (2005) explained three major components of creativity, namely expertise, creative thinking skills and motivation. In order to foster creativity, these components must be enhanced. Expertise means the skills or

knowledge an individual has. The expertise is a major requirement which can be imparted through a mixture of traditional and non-traditional methods of teaching (Figure 1).

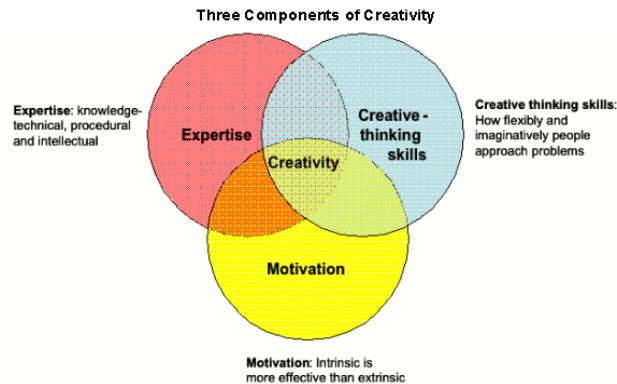


Figure 1. Three Components of Creativity

Source: Adams, K(2005), *The Source of Innovation and Creativity*.

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action (Paul and Elder 2008). Creative thinking requires a clear understanding of the problem or situation, gathering information about it and a critical evaluation in order to find a solution to address the problem. The development of creative thinking skill requires a teaching and learning which involve students to engage in activities and develop their insights into real learning. The role of motivation in encouraging creativity is significant. Literature has outlined the deficiency of a teacher centric system in motivating students to involve in real learning. As rightly observed by Udovic et al., (2002), the traditional teaching approaches generally follow cookbook steps of activities and demonstrations. This approach may not provide students with valuable skills or even with a body of knowledge that lasts much beyond the end of the term.

The need for student creativity and innovation demands for a strategic change in the way higher education institutions offer teaching and learning. The constructivist philosophy of teaching is relevant in this context. In constructivism, learners are involved in the process and the role of a teacher is only to facilitate the learning process. The learners learn from their experiences involving an activity and its reflection.

Along with this, the increased demand for graduates with both academic knowledge and soft skills and the increased competition among higher education institutions prompted the administrators to develop innovative ways of learning experience and resulted in the development of experiential and other student centered teaching and learning practices in higher education institutions. The developments in information and communication technology (ICT) significantly supported the change in approach towards teaching and learning. This has promoted debates on the use of more non-traditional or modern teaching techniques in higher education. Many researches that include Branford et al., (2000), Boyatzis et al., (1995) etc., have focused on

improving the learning process in education through integrating experiential learning in higher education.

Creativity and innovation are major prerequisite to develop graduates with key attributes required by the stakeholders. What the industry today require from the graduates coming out of higher education institutions is not the academic excellence alone, but a range of skills that include communication skills, decision making skills, problem solving skills, analytical skills to name a few. This requirement can be met only if both the teachers and learners to respectively modify their thinking and actions towards education. Thus, it necessitates an education system that is learner centric and provides a chance for student innovation and creativity. The pedagogy should focus on how students learn instead of how teachers teach (Figure 2).

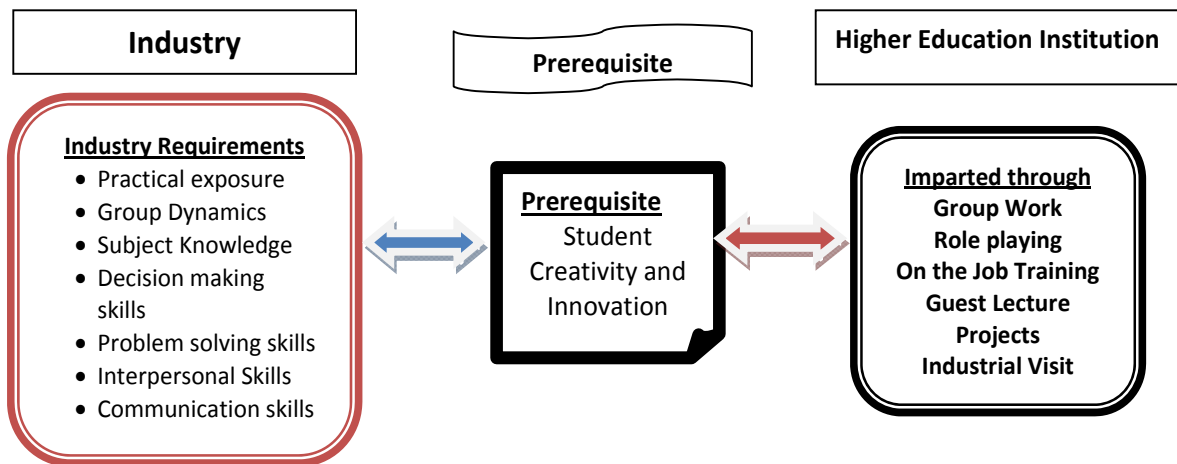


Figure 2. Linkage between HEI s and Industry

2. Experiential learning

“Experiential learning is a philosophy and methodology in which educators purposefully engage with students in direct experience and focused reflection in order to increase knowledge, develop skills, and clarify values” (Association for Experiential Education, para. 2). It is also known as learning through action, learning by doing, learning through experience. Experiential learning refers to (a) the involvement of learners in concrete activities that enable them to ‘experience’ what they are learning about, and (b) the opportunity to reflect on those activities (Silberman 2007). Experiential learning can be described as ‘the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience’ (Kolb 1984). Kolb has contributed mostly in the developments of experiential learning and adopted a learning cycle that best explains the process of experiential learning. The participation of learners in the learning process makes them active learners and allows them to learn by doing things.

In experiential learning, learning is facilitated by engaging students in a range of activities. The activities include cooperative education placements, practical experiences, project works, on the job training, classroom-based hands-on laboratory activities, etc. College educators find experiential learning a valuable adjunct to traditional instruction in various disciplines. Experiences outside the classrooms provide the increasingly

growing numbers of non-traditional learners with valuable opportunities to apply theory to practice (Rolls 1992).

The experiential learning model developed by Kolb and further revised by others is basically focused on learning from five stages (1) Experience, (2) Share, (3) Process, (4) Generalize, and (5) Apply (Figure 3).

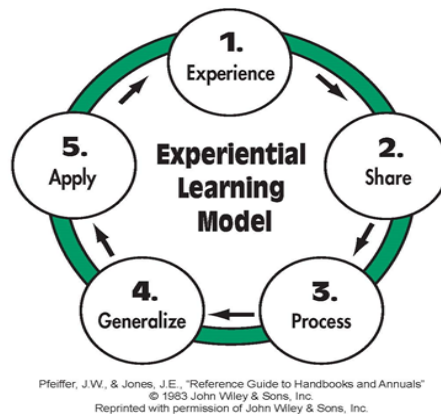


Figure 3. The experiential learning model

3. Prerequisites for Experiential Learning

To enhance student creativity and to inculcate experiential learning, HEIs shall offer an environment conducive to real learning. There are certain prerequisites that HEIs must consider while implementing experiential learning practices. In specific terms, it needs a shift in focus from HEIs, facilitators and learners towards teaching and learning.

The HEIs should play a key role in this transformation process by providing the basis requirements for effective implementation of experiential learning. It includes the incorporation of a curriculum that best fits the industry requirements. Academia-industry interaction is relevant in this context. HEIs should involve industry bodies while designing and developing programs and curriculum. The graduate attributes should be set for each program and adequate measures shall be employed in training and assess the learners and themselves. HEIs should also offer faculty development programs to improve the exposure of facilitators, student development programs, administrative development programs and finally resources that are necessary to impart experiential learning pedagogy. Absence of these basic requirements will affect the way experiential learning is implemented. For example, if the resources are limited, the experiential learning activities cannot be implemented in a proper manner. Similarly, if the staff members are not trained, it will also affect the implementation of experiential learning practices.

A change in HEI alone is not sufficient to incorporate experiential learning, but require a change in the approach of both teachers and learners towards education. The teacher should play the role of a facilitator and should engage the learners in a wide range of activities that are required for real learning to happen. To do so, the facilitator should plan the session; plan the activity that is appropriate, etc. If the facilitator hasn't planned session properly, the implementation of the activity will not be successful in the classroom. Further,

the learners also need to be involved in the process by involving in the activity. Learners should be motivated involve. The activities should be planned in such a way that should arouse the interests of the learners in the learning process.

4. Experiential Learning and Student Creativity

Progressive educationalists have revived calls to embrace a holistic education that develops all aspects of human personality and potential, including creativity (Jackson 2006). The experiential learning considers learning as a continuous process whereby concepts are derived from and continually modified by experience. Creativity is embedded in experiential learning activities. The activity used in experiential learning requires the participants to think critically, analyze a situation and come out with valid conclusions. The reflections on the activities lead to understanding about the course contents and learning objectives in a particular session. The critical thinking which is a major part of creativity, can take place before, during and/or after an activity. In experiential learning, the facilitator through various techniques involves the learners in activities that arouse his/her interest in the subject. Thus, experiential learning facilitates (1) developing knowledge and skills, (2) critical thinking, and (3) motivate the learners to involve in the learning process.

Researches highlighted the importance of experiential learning to improve student creativity. Ayob et al., (2012) in their study explained that the students' creativity dimensions have been developed and enhanced as a result of the problem solving process involved in the experiential learning activities. The above view is supported by Maudsley and Strivens (2000) in their study by emphasizing that experiential learning can improve critical thinking abilities of students with particular emphasis to the medical education. The study also observed that experiential learning values prior knowledge and experience; promote learner responsibility through facilitating rather than directing learning; encourages learners to test out and apply new knowledge, and using small-group work to foster explicitly the elusive skills of critical thinking and reflection. Corbett (2005) remarked that experiential learning develops the connection between knowledge, cognition, and creativity and results in the development of real learning. The view is supported by Moon (2013) and remarked that experiential learning results in making connections between theory and practice. Geest (2012) investigated whether the pedagogical approaches of experiential learning and the use of pedagogical constructs lead to creativity seen as 'possibility thinking' and found that pedagogical approaches can indeed contribute to developing possibility thinking.

The above discussions have highlighted the significance of experiential learning in improving student creativity and innovation. The creative experiences that students involves require supervision. The facilitator role is to inspire the students to work harder and explore new ideas, even at the risk of making mistakes.

Discussion

The key findings that emerged from this study include the following.

1. Creativity requires knowledge or experience, critical thinking abilities and motivation to involve in the learning process. Students' creativity cannot be effectively enhanced through the traditional teaching which is mostly lecturing in nature. It is therefore suggested for the integration of experiential learning to improve student creativity and innovation.
2. Effective learning happens when students are involved in activities that improve their creativity.

Creativity is enhanced when they obtain knowledge along with critical thinking abilities in an environment that motivate them to involve in various activities.

3. The traditional teaching techniques are more teachers centered and don't promote student creativity as it is focused only on academic knowledge. Students are not involved in the learning process, rather becomes the passive listeners. It affects their motivation and creative thinking abilities.
4. Experiential learning is one of the best ways to improve student learning by doing. Because of its inherent nature of involving students in various activities, it facilitates critical thinking and learning by doing things. It develop a broader understanding of the environment and results in real learning which further enhances the soft skills of the learners.
5. The integration of innovative methods of teaching and learning requires certain prerequisites. The HEI should provide an environment conducive to the real learning. The facilitator has to develop strategies that include necessary preparations to involve the students or learners in the experiential learning activities. The learner also needs to prepare for the session. Thus, experiential learning happens with a collaborative effort of all stakeholders that include the HEIs, the facilitator and the learner.
6. The learners need to be involved in the learning process. The effectiveness experiential learning depends on the extent to which the learner is involved in the whole process. The learners should be motivated to involve in the learning process. The activities should be planned in such a way that should arouse the interests of the learners in the learning process.

Conclusion

The focus of experiential learning is on the assumption that ideas are not fixed and immutable elements of thought but are formed and reformed through experience. The contribution of this paper is towards developing a broader outlook on the need to integrate experiential learning activities in higher education. Higher education institutions are undergoing a change process that demands more student centered teaching and learning practices. The competitive pressure within the sector and increased expectations of the corporate world necessitated changes in the way the HEIs deliver the various programs. To meet the challenges faced, HEIs need to equip itself and provide an environment where the learners will learn things by doing it. The study has stressed the need for integrating experiential learning to improve student creativity and innovations.

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CHECKLIST OF DUNG BEETLES (COLEOPTERA: SCARABAEIDAE: SCARABAEINAE) IN A WET EVERGREEN FOREST OF WESTERN GHATS

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Abstract

Dung beetles are Coleopterans and are found in the Scarabaeidae and Geotrupidae families. They play important ecological roles related to nutrient cycling. Very little is known about the forest dung beetles in South Asian region especially from the Western Ghats which is a recognized global hot spot of biodiversity with distinct regional variation in topography, rainfall patterns and vegetation types. In this paper a preliminary catalogue of dung beetles based on our 2 year collections using bait surface grid pitfall traps exclusively from one of the best-preserved wet evergreen forest, Periya in the Wayanad region of Nilgiri biosphere in Southern Western Ghats is provided. 29 species of Scarabaeinae, including the 9 endemic species were collected during the study period.

Key words: Dung beetles, Wet evergreen forest, Western Ghats, Checklist

Introduction

Structure of the vegetation, soil type and physical structure of the forest appear to be an important factor in the structure and local distribution of dung beetle communities (Doube 1983; Nealis 1977; Jansen 1983; Davis 1993; Davis 1998; Davis and Sutton 1998; Davis et al., 2000). Our knowledge about the composition and dynamics of forest dung beetle communities and their responses to destruction, fragmentation and isolation of rain forests are based on the records from Central and South America (Durães et al., 2005; Horgan 2002; Halffter et al., 1992; Peck and Forsyth 1982; Klein 1989; Scheffler 2005) and Malaysia in South east Asia (Davis 2000; Davis et al., 2001). Whereas, very little is known about the forest dung beetles in South Asian region especially from the Western Ghats which is a recognized global hot spot of biodiversity (Bossyut et al., 2004; Myers et al., 2000) with distinct regional variation in topography, rainfall patterns and vegetation types.

Though, in his classic work Arrow (1931) has reported 48 species of dung beetles from the western slopes of South Western Ghats we are unable to decipher how many are from the forests, as habitat details are not provided along with site descriptions. Our analysis of the sites indicated that his collections from the western slopes had been confined to lower elevations and gaps in the Western Ghats.

No records of dung beetles from the midlands and highlands in Western Ghats, which were densely forested and remained inaccessible till Second World War. Timber requirements by the British army during Second World War and state sponsored developmental activities such as hydroelectric projects and human settlements during the late 1970s and 1980s wiped out most part of the natural vegetation in the region (Nair 1991) and only a few fragments of the old mature wet evergreen forests remains.

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Cataloguing the dung beetle fauna from the remaining forest fragments and understanding the peculiarities of their phylogenetic structure would serve to recognize the regional variation in the dung beetle community structure across different forest vegetations of Western Ghats and will add to the general efforts towards the conservation of biodiversity in Western Ghats. As per the records (Biswas and Chatterjee 1986; Biswas and Mulay 2001), only 19 species are known from the moist evergreen forests of Western Ghats against the 89 species recorded from the evergreen forests in Malaysia (Davis 1993) and 59 from the Amazon region (Andresen 2002).

Materials and Methods

In the current study we provide a catalogue of dung beetles based on our 2 year collections using bait surface grid pitfall traps exclusively from one of the best-preserved wet evergreen forest, Periya in the Wayanad region of Nilgiri biosphere in Kerala state, in Southern Western Ghats (figure.1) ($11^{\circ} 45' N$ latitude and $11^{\circ} 58' N$ latitude and $75^{\circ} 50'$ and $76^{\circ} 51' E$ latitude, 800m a msl, annual rainfall between 3500-6000 mm) occupying an area of 85.12 m². Biogeographically Wayanad region of Western Ghats is a transitional zone between the moist forests of south Western Ghats and dry forests of the northern region, harbouring habitat restricted, endemic species as well as disjunct populations of species that are found in both regions (Rawat et al., 2001).

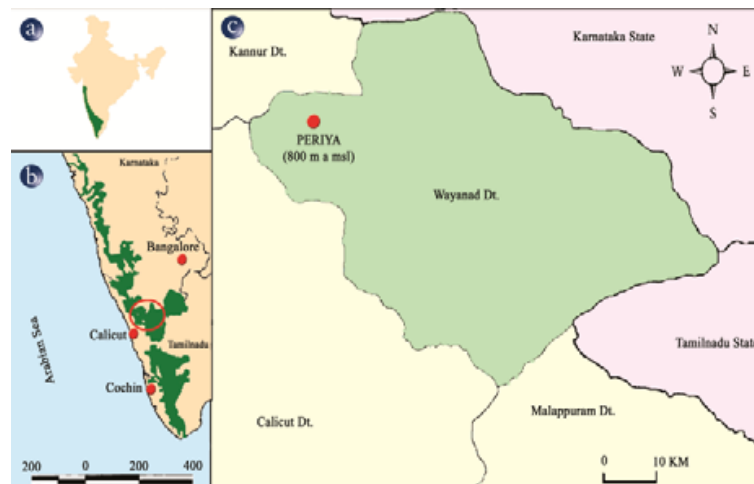


Figure 1. (a) Map of India showing the location of the Western Ghats (b) Western Ghats
(c) Study site (Periya) in the Wayanad region of Western Ghats

Most coprophagous beetles do not disperse long distances to find food as they are very sensitive to environmental changes and have a stenotopic distribution in relation to vegetation types (Cambefort and Hanski 1991, Klein 1989, Favila and Halffter 1997). Bait-surface-grid pitfall trap is the widely accepted standard method for the random collection of dung beetles (Lobo et al., 1988, Veiga et al., 1989) (figure 2).



Figure 2. Dung baited pitfall trap

The collections were done during one-year period from November 2003 – 2004. 30 bait-surface-grid pitfall traps, made up of plastic basins (210 mm in diameter) were set in the ground in the study site at randomly selected spots separated by about 100 m using hand trowels. Traps were baited with fresh cow dung and the contents were collected at an interval of one week. The collected dung beetles were preserved in 70% ethanol prior to processing and were sorted from each sample. Species identification was done with the help of taxonomic keys available in the books of Arrow (1931) and Balthasar (1963 a and b) and confirmed with the assistance of specialists. After identification specimens were dried, pinned, labeled and temporarily kept in the insect collections of St. Joseph’s College, Devagiri.

Results

Current checklist on beetle fauna of evergreen forests of Wayanad region of Western Ghats reveals the existence of 29 species, all belonging to subfamily Coprinae comprising four tribes- Coprini, Onthophagini, Onitini and Oniticellini. Of the 29 species reported, four are first record from South India; six species are endemic to South India of which three are endemic to Western Ghats including the two, which are specific to Nilgiri Biosphere Reserve (table 1, figure 3). This checklist may serve as baseline information on the dung beetle fauna in the western slopes of South Western Ghats and will be useful in future comparisons with faunal lists from other regions of Western Ghats.



Figure 3. Dung beetles endemic to Western Ghats collected from the evergreen forest study habitat

- (a) *Onthophagus amphinus* (b) *Liatongus indicus* (c) *Onthophagus nilgrensis*
 (d) *Onthophagus madoqua* (e) *Onthophagus vividus* (f) *Onthophagus andrewesi*

Table1. Dung beetles collected from the evergreen forest at Periya in the South Western Ghats

Sl.No.	Family	Subfamily	Tribe	Genus	Species
1.	Scarabaeidae	Scarabaeinae	Copriini	<i>Copris</i>	<i>davisoni</i>
2.				<i>Copris</i>	<i>furciceps</i> *
3.				<i>Copris</i>	<i>repertus</i>
4.				<i>Copris</i>	<i>signatus</i>
5.				<i>Catharsius</i>	<i>sagax</i>
6.				<i>Heliocopris</i>	<i>bucephalus</i>
7.			Onthophagini	<i>Onthophagus</i>	<i>amphinasus</i>
8.				<i>Onthophagus</i>	<i>andrewesi</i> +
9.				<i>Onthophagus</i>	<i>bifasciatus</i>
10.				<i>Onthophagus</i>	<i>bronzeus</i>
11.				<i>Onthophagus</i>	<i>dama</i>
12.				<i>Onthophagus</i>	<i>diabolicus</i>
13.				<i>Onthophagus</i>	<i>ensifer</i> +
14.				<i>Onthophagus</i>	<i>falsus</i> *
15.				<i>Onthophagus</i>	<i>fasciatus</i>
16.				<i>Onthophagus</i>	<i>furcillifer</i>
17.				<i>Onthophagus</i>	<i>insignicollis</i> *
18.				<i>Onthophagus</i>	<i>laevis</i> *
19.				<i>Onthophagus</i>	<i>madoqua</i> #
20.				<i>Onthophagus</i>	<i>pacificus</i>
21.				<i>Onthophagus</i>	<i>rectecornutus</i>
22.				<i>Onthophagus</i>	<i>vividus</i> +
23.				<i>Caccobius</i>	<i>meridionalis</i>
24.			Oniticellini	<i>Liatongus</i>	<i>indicus</i> §
25.				<i>Drepanocerus</i>	<i>setosus</i>
26.				<i>Tiniocellus</i>	<i>spinipes</i>
27.			Onitini	<i>Onitis</i>	<i>falcatus</i>
28.				<i>Onitis</i>	<i>virens</i>
29.				<i>Onitis</i>	<i>subopacus</i>

* first report from South India

endemic to Nilgiri Biosphere reserve

+ endemic to South India

§ endemic to Western Ghats.

Discussion

First report of *Copris furciceps*, *O. insignicollis*, *O. falsus* and *O. laevis* from South India and the presence of 6 endemic species of South India highlight the chance of revealing several endemic species from Wayanad regional forests, which is a localized center of many endemic species in the Western Ghats (Nair 1991; Pascal 1991).

Conclusion

The present checklist of species of dung beetle fauna cannot be considered as a final picture and it seems that many species still remain to be described for which more surveys are needed. Whatever is the explanation for these observations, the new reports of species in an area where they were previously not recorded highlight the necessity for long-term studies in forest interiors. Vegetation type analysis of dung beetles as done here would be helpful in analyzing the influence of physical structure of forest in determining the composition and distribution of dung beetle assemblages.

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‘KATTIYAN,’ THE LONG-LOST CLOWN OF COASTAL KERALA

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Abstract

A type of folk theatre called *chavittunatakam* is arguably the only Christian folk theatre form still extant among the people of coastal Kerala. Instituted by European missionaries for the purposes of faith in the seventeenth century, this brand of folk theatre has weathered the passage of time. However, *chavittunatakam* has lost its life-force in its contemporary form. The figure who used to enliven this theatre in the past was a vibrant Falstaff-like comedian referred to as the *kattiyān* or *kattikkaran*. The typical *kattiyān* was a highly humorous and vigorous character, whose style was interactive. While the storyboard of *chavittunatakam* is generally a straight European import, the *kattiyān* was very much *desi*, with his repartees and clownery engaging the full attention of the rustic folk. *Kattiyān*’s comic discourse often deviates from the main theme and broaches on diverse topics such as local pilgrimages and regional issues. In addition to the comic relief that he provides, he also performs additional mundane jobs of the emperor’s court, such as summoning the prime minister and other worthies. He goes about his act stomping and prancing about rhythmically in typical *chavittunatakam* style. The paper brings to focus the death of *kattiyān* in the *chavittunatakam* currently in circulation in the churchyards of coastal Kerala. It also attempts to analyse the reasons of the *kattiyān*’s extinction from this ethnic Christian folk theatre form of Kerala, while probing for possible remedies.

Key words: *chavittunatakam*, *kattiyān*, Christian folk theatre, *kutiyattam*.

Introduction

To achieve growth, any art form must essentially be rooted in its indigenous soil. Just as Shakespearean drama could not have flourished anywhere else except in Elizabethan and Jacobean England, the *chavittunatakam* could not have originated anywhere else but in central coastal Kerala in the era of Portuguese colonialism. Ever since Vasco Da Gama landed in Calicut in 1498 and his subsequent shifting of base to Cochin, large numbers of European missionaries accompanied the Portuguese merchants to Kerala. For instance, there were eight Franciscan monks in the ship that reached Cochin under the captaincy of Cabral in 1500. Monks belonging to other orders such as Dominicans, Augustinians and Jesuits followed suit, many of them being highly educated missionaries with refined artistic tastes from Italy (Raphy 42).

The colonial conquest of the Indian mind and spirit had to be achieved through these committed individuals of the Renaissance, which was raging in Europe like wildfire at the time. The easiest route was through the performing arts: a form of Christian theatre had to be invented for the purpose. Among the coastal Catholics of Kerala, a kind of Christian theatre replete with spectacle, thrilling drama, sentiment, buffoonery and martial

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arts was the solution: *chavittunatakam* was born. This paper places its focus on the clown of *chavittunatakam* and his demise or disappearance from the contemporary form of this native Christian theatre.

It must be admitted that some of these elements existed in the social milieu of Kerala at that time. Sabeena Raphy, a pioneer in the field of *chavittunatakam* studies cites Gouvea, the secretary of the Portuguese viceroy Menezes, regarding the existence of a martial arts culture among the Christians of Kerala at the time of Portuguese colonization and before (16). Gouvea says that the early Christians of Kerala had to practice the indigenous *kalaripayattu* martial arts form right from the age of eight to twenty-five.

For the European missionaries, tales were at hand, readymade, from Medieval European history. The exploits of Charlemagne glorified and exaggerated [almost to the level of the absurd] could easily be transformed into pliable story material. Songs had to be composed, hardly a problem, in the land of *sopanasangeetham*. European measures and beats were put to good use: the six-eighth for scenes featuring women, and a sprightly two-by-fourths for men and martial scenes. Duels and impassioned songs came from the opera. Stories and the lives of saints were introduced for good measure. Costumes were bright, gaudy and colourful. Like the Shakespearean theatre, roles of women were performed by young boys or men. The highlight of them all was the buffoon - the *kattiyān* or *kattikaran* of *chavittunatakam*: a merry and popular figure bubbling with mirth, whose impromptu improvising made any fixed script impossible.

In this context, a few comparisons with *kutiyattam* will be worth pondering. Sudha Gopalakrishnan attributes to this theatre form of Kerala a tradition that extends back to over two thousand years (17). Inevitably, while the *chavittunatakam* stands little chance in comparison with *kutiyattam* in its systematic institutionalization of training and performance, a few aspects of similarities cannot be entirely glossed over. It may be conceded that the noted similitudes can have originated out of a deliberate imitation of a traditional art form well established and recognized in Kerala. Even though *kutiyattam* is a form of Sanskrit theatre with the main characters reciting verses in Sanskrit, the limitations of persevering with a dead language being apparent, a new character, the *vidushaka*, may have been introduced in due course of time. The *vidushaka* spoke in Prakrit and was even allowed to converse in the regional language, Malayalam (31). As time wore on, the *vidushaka* became a popular comic figure of *kutiyattam*, his forte being his immense capacity to improvise. In a similar manner, the *kattiyān* of *chavittunatakam* was also a much loved comic figure.

Early *chavittunatakam* would last several days (three days during the childhood of this researcher), and the role of a creative *kattiyān* in keeping the play alive can hardly be underestimated. Indeed the *kattiyān* was like a present-day rock star, interacting with the audience, sometimes even wading through the crowd lounging on their bamboo mats, amusing them with his repartees and clowning. The *kattiyān* would make references to pilgrimages to holy places, the shrine of St. Sebastian in Arthungal being a hot favourite, in early times. In between, the *kattiyān* also performed various mundane duties like doing errands, summoning people, and so forth, at the emperor's behest.

The above circumstances have interesting parallels in *kutiyattam*. Sudha Gopalakrishnan says that the actor playing the role of the *vidushaka* in the play *Mantrakam* must essentially have the ability to hold the attention of the audience for about thirty-eight days: the customary length of that particular play.

The adaptation to *kutiyaattam* of Bodhayana's farcical play *Bhagavadajjukiya* takes several days to perform on stage, the *vidushaka* enlivening the stage for a major part of the play (113). According to Raphy, the primitive form of *kathakali*, *Krishnageethi*, produced by Manaveda, the raja of Calicut in the latter half of the seventeenth century, had a duration of eight days (28).

The early scripts and literature of *chavittunatakam* should, ideally, have been put to analysis and scrutiny by scholars and linguists engaged in the field of language study. But unfortunately, that has not been the case. The early *chavittunatakam* plays were composed chiefly by a Shakespeare-like, hazy figure called Chinnathambi Annavi. We know less about Annavi than we do about Shakespeare. There are even theories in circulation about Annavi being a European missionary who had mastered the indigenous language of the time: *Chentamil*, the proto-language of both Malayalam and Tamil. It would be worthwhile to note that *Chentamil* was the elite form of the vernacular spoken by the plebeian sections of society, *Kodumtamil* (Gopalakrishnan 36).

That Chinnathambi Annavi, the supposed author of the early *chavittunatakam* plays can have been a European missionary seems plausible on an examination of the subject matter of those initial compositions. For instance, *Karalmancharitam*, an early *chavittunatakam* play said to have been penned in the late sixteenth century is striking for its choice of subject. It is based on an old French epic poem *The Song of Roland*, which happens to be the first of the immortal French heroic poems known as *chansons de geste*, whose author also happens to be a hazy figure, probably a Norman poet Turolodus, whose name is mentioned in the last line. It is highly improbable that a South Indian poet could have chosen the French poem and its subject matter of Charlemagne for the theme of that specific *chavittunatakam* play.

We do not know when the figure of the *kattiyani* was introduced into *chavittunatakam*. Was the character itself a later-day insertion, like the interesting parallel provided by the character of the *vidushaka* in *kutiyaattam*? This is because Sabeena Raphy says that, conventionally, the *kattiyani* was called upon occasionally to comment and translate dialogues into contemporary Malayalam for the audience to understand [and not in *Chentamil* or *Kodumtamil* perhaps] (79). So it is easy to see that the *kattiyani* also used to perform the role of a make-shift chorus.

Raphy describes the *kattiyani* as an important 'extra actor' of *chavittunatakam* (78). Borrowing terms from Bharatha's *Natyasastram*, Raphy is of the view that it was bold of Annavi and others to take this genre away from the *sringara rasa* dominant in art and literature of the period and introduce the *vira rasa* into *chavittunatakam* (118). But it is through the figure of the *kattiyani* that this genre attains the *hasya rasa* (78).

From time immemorial, *Chavittunatakam* has been a plebeian art form in vogue among the Latin Catholics living along the coastal and riverine belts of Kerala. In course of time the church banned the staging of *chavittunatakam* during the night, citing reasons of immorality and lawlessness. This was resented by the lovers of this art form, who argued that the costumes would look lifeless if staged during the day. Raphy cites the instance of the parish of St Sebastian's Church of Gothuruthu, an island in the suburbs of Kochi, banning *chavittunatakam*, and stipulating stringent punishment for the violators (155).

In post-independent India, with the advent of the cinema, the fortunes of *chavittunatakam* took a downward slide. Even in churchyards, audiences were hard to get or satisfy. The demise of *chavittunatakam*

was near. Fortunately, the Latin Church of Kerala started to encourage this art form once again. With church support, sponsorship became much easier. But expenses were considered exorbitant still; and cutting down on expenditure became a priority. The number of actors and scenes were slashed; the duration reduced to that of a full-length feature film. Still opportunities were hard to come by. However, *chavittunatakam* ‘capsules’ came to be staged by and by, sometimes even as short as half an hour. In place of the stage-breaking stomping of the players, steps became gentler, even delicate. Women were now available to do female roles. This brought grace to *chavittunatakam*, but its life-force was lost: the *kattiyani*, the clown, was now a thing of the past. Now *chavittunatakam* plays without the *kattikaran* has become the norm. Consequently, we have a *chavittunatakam* without light moments.

Further, to cut down on expenses, and with a view to render a ‘clinical’ perfection to plays, the actors started the practice of merely lip-synching to audio clips recorded and edited before-hand in digital studios. In present-day *chavittunatakam*, the tinny kettle drum has been replaced by the civilized tones of the rhythm-machine. In lieu of the clarinet of yore, the audience now listens to the sophisticated tones of a state-of-the-art keyboard. The rustic element has been lost; only the skeleton that used to be *chavittunatakam* remained.

As a researcher of *chavittunatakam*, I had the good fortune to renew my acquaintance with a *kattiyani*, I knew right from childhood. Antony K.X. is perhaps the last surviving *kattiyani* still alive. The others are either dead or too old to talk sense. Fortunately Antony, popularly known as Kalakki Anty, was chosen as the *kattiyani* by a *chavittunatakam* group in the coastal island of Vypin, at a very early age: hardly a usual practice, the role of *kattiyani* requiring a fair degree of flab and a modest paunch. Kalakki Anty had none of these; but he had a flair for humour, and a highly popular folk phrasing. He claims that witty rhyme comes to him naturally, without any forethought or planning. But the good thing about him is that he has an abundance of ‘folk’ humour.

In an interview, Anty spoke to me about the inevitability of having a *kattiyani* in *chavittunatakam*. Once he had to intervene with his comical skills when a main actor lost his clothes while in action on the stage. Anty claimed to have pacified the turbulent booing audience. He also spoke of being garlanded in the course of various *chavittunadam* performances with currency notes and rustic goodies. Now, as then, he works as a mason to earn a living. The *kattiyani* was make-believe after all, a part-time job in reality.

A *chavittunatakam* play without a *kattiyani* is like a classroom without a teacher. A classroom without a teacher is possible; but so much is lost. What we see these days in the name of *chavittunatakam* is hardly that; for a *chavittunatakam* play without a *kattiyani* certainly lacks the throb of life - the enlivening folk element is lost. The local coastal Malayalam dialect that the *kattiyani* employs is rustic and unpolished, but full of enlivening mirth. It is not meant for sophisticated audiences who expect chaste upland Malayalam. Expecting a *kattiyani* to speak and chant in ‘standard’ Malayalam would be like expecting Robert Burns to speak RP.

The *kattiyani* is as good as dead, so *chavittunatakam* cannot be alive; it is only a fossil of the dead, forgotten but delved up from the colonial past of coastal Kerala. For a true revival of *chavittunatakam*, the only Christian theatre form of Kerala, the *kattiyani* needs to be reborn.

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STOMATOGRAPHIC STUDIES IN SOME SELECTED FAMILIES OF GAMOPETALAE

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Abstract

The study reports variation in the structure of stomata in families of Gamopetalae. The length, breadth and stomatal type were studied in 31 species of Angiosperms. The study reports great variation in the size and type of stomata and correlation with the arrangement of families of Gamopetalae. The anomocytic stomata, considered primitive, is observed in Rubiaceae, Sapotaceae, Apocynaceae, Asclepiadaceae, Loganiaceae and Convolvulaceae of Gamopetalae while diacytic stomata considered as evolved is found in Acanthaceae and Lamiaceae. The study also emphasizes the taxonomic utility of stomata as a conserved utility.

Keywords: Gamopetalae, stomata, phylogeny.

Introduction

The stomates or stomata (singular stoma) are minute more or less elongated openings between two specialized epidermal cells called guard cells. They occur on all aerial parts of the plant but they are most abundant on leaves. Roots usually lack stomata, but rhizomes have such structures (de Barry 1884). Stomatal frequency varies greatly on different parts of the same leaf and on the same plant and it is influenced by environmental conditions. The leaves may be amphistomatic (stomata on both the side) or hypostomatic (stomata only on the lower surface) or epistomatic (stomata only on upper surface). Stomata also vary in the level of their position in the epidermis.

Vesque (1889) assigned great importance to the form of stomates, both in cross section and in surface view, and especially to the ontogeny of the stomatal apparatus, which he considered to be an absolutely constant character in most families and which served as the basis for his classification of dicotyledons. The four basic stomatotypes of Vesque (1889) are ranunculaceous, cruciferous, rubiaceous and caryophyllaceous. The names given to these types were taken from the names of families for which in Vesque's opinion, they were the most characteristic.

However the occurrence of same type of stomata on different species raises the question of ontogeny of stomata. Metcalfe and Chalk (1950) proposed classification based on topography of the mature subsidiary cells not much different from Vesque. They replaced Vesque's terms as ranunculaceous-anomocytic; cruciferous-anisocytic; caryophyllaceous-diacytic and rubiaceous-paracytic.

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Stace (1965) added three more types of stomata-actinocytic, cyclocytic and tetracytic. Besides seven other types of stomata are now recognized. i.e. pericytic, desmocytic, polocytic, staurocytic, hemiparacytic, laterocytic and stephanocytic. There are other types seen in literature are subtypes of these. The paracytic type is regarded as primitive. Other types have been derived from the paracytic type.

Instability in the organization of the stomatal apparatus on the leaves of a single plant has been noted by many authors. (Metcalf and Chalk 1950; Pant and Kidwai 1967; Paliwal 1965; Inamdar 1969a, 1969b; Inamdar & Patel, 1969; den Hartog and Bass 1975; Bessis and Guyot 1979; Bass et al., 1982; Baranova 1972). Most often as pointed out by den Hartog and Bass (1978) a few stomata's of one type occur along with the predominating stomates of another type.

Many present day authors note the variation in organization of the subsidiary cells on a single leaf (Metcalf and Chalk 1950; Inamdar, 1969a, 1969b; Inamdar and Patel, 1969, den Hartog and Bass 1978; Bessis and Guyot 1979; Bass et al., 1982; Bass and Kool 1983).

In this work, the stomatal types of Gamopetalae members were identified with special reference to the intrafamilial and intrageneric variations in stomatal types and their taxonomic significance were studied. The extent of evolution of stomatal diversity in different types of stomata in Gamopetalae are also discussed.

Materials and Methods

Leaves of different plants belonging to different families of Gamopetalae were collected from field. Identification of species were done using flora (Gamble1924). The families and the members are shown in table

The fresh leaves were immersed in water to prevent desiccation to procure epidermal cells. As a classical technique in stomatal research, epidermal peels or strips were employed for the observation and measurement of the stomatal apparatus. An oblique cut was made on the leaf blade so that the epidermis strips off easily. The strips were separated from the leaf and stained in very dilute safranin solution. This peel was then transferred into a clean dry glass slide or a microscopic slide. To keep the material from drying during examination the peeling were mounted on a drop of glycerine and covered carefully with a glass cover slip. Care should be taken to avoid any air bubbles.

Other technique employed is, making replicas of the leaf surface by using nail polish. In this technique nail polish was applied to the leaf surface and allowed to dry for some time. This coating forms a thin transparent film which was peeled off carefully and then placed on a slide. This transparent peel gave structural details of the leaf surface including stomata. This was relatively permanent.

Stomatal diameter was calculated by using ocular and stage micrometer. The pattern of stomatal apparatus as seen in the epidermal peel is drawn using Camera Lucida. Camera Lucida Prism was attached to compound microscope and the drawings were made at table level. The length and breadth of stomata is taken by using the ocular and stage micrometer.

Results and Discussion

Different types of stomata were observed in 31 species of plants belonging to 15 families of Gamopetalae. Most commonly observed stomata are anomocytic. In about half of the total leaves studied anomocytic stomata were observed, either only anomocytic or a combination of anomocytic and anisocytic,

or anomocytic and paracytic. Anisocytic and paracytic stomata were not as frequent as anomocytic. Diacytic stomata was found rarely i.e. 5 plants out of 31 species (Table1).

Table 1. List of taxa under study

Family	Species
Rubiaceae	<i>Mussanda glabrata</i> , Linn., <i>Chasalia curviflora</i> , Linn.
Asteraceae	<i>Eupatorium odoratum</i> , Linn., <i>Tridax procumbens</i> , Linn.
Campanulaceae	<i>Sphenoclea zeylanica</i> , Linn.
Sapotaceae	<i>Chrysophyllum cainito</i> , Linn., <i>Achras sapota</i> , Linn.
Oleaceae	<i>Jaminum malabaricum</i> , Linn., <i>Nyctanthes arbor-tristis</i> ,
Apocynaceae	<i>Ervatamia coronaria</i> , Stapf., <i>Allamanda cathartica</i>
Asclepiadaceae	<i>Calotropis gigantea</i> , R. Br., <i>Cynanchum tunicatum</i> , Linn.
Loganiaceae	<i>Strychnos nux-vomica</i> , Linn., <i>Nicodamia longifolia</i> , Linn.
Boraginaceae	<i>Cordia cylindrostachia</i> , Linn., <i>Heliotropium indicum</i> , Linn.
Convolvulaceae	<i>Ipomaea paniculata</i> , Linn., <i>Quamoclit phoenicea</i> , Moench
Solanaceae	<i>Solanum torvum</i> , Linn., <i>Solanum frutescence</i> , Linn.
Scrophulariaceae	<i>Torenia bicolor</i> , Linn., <i>Scoparia dulcis</i> , Linn.
Acanthaceae	<i>Ruellia prostrata</i> , Linn., <i>Andrographispaniculata</i> , Wall.
Verbenaceae	<i>Gmelina hystrix</i> , Linn., <i>Clerodendron infortunatum</i> , Linn.
Lamiaceae	<i>Anisomeles indica</i> , R. Br., <i>Leucas aspera</i> , R.Br.

Anomocytic stomata were observed in families Oleacea, Boraginaceae, Asteraceae, Apocynaceae, Asclepiadaceae, Solanaceae, Scrophulariaceae, Verbenaceae and Campanulaceae. In Asteraceae, Solanaceae and Scrophulariaceae along with anomocytic, anisocytic stomata were present. In Apocynaceae and Asclepiadaceae along with anomocytic, paracytic stoma was also observed. Paracytic stomata were also observed in families Rubiaceae, Convolvulaceae, Sapotaceae, and Loganiaceae. In Loganiaceae and Sapotaceae anisocytic stomata was also observed. Diacytic stomata was observed only in Lamiaceae and Acanthaceae. In Lamiaceae along with diacytic, anisocytic stomata were observed.

Anomocytic stomata had the most frequent occurrence. It was observed in 9 families out of 15. Anomocytic - anisocytic and anomocytic - paracytic combinations were observed whereas anomocytic - diacytic combination was not observed.

Paracytic stomata were considered as primitive. All other stomata are derived from paracytic stomata. Diacytic stomata were considered as the most evolved stomata. Gamopetalae division begins with Rubiaceae or paracytic stomata (primitive). Lamiaceae had diacytic stomata (evolved). This work supports the order of families in Gamopetalae of Benthem and Hooker classification considering the character of stomata.

Van Cotthen (1970) pointed out that the morphological stomatal type provides us with not only a diagnostic character but also a very valuable taxonomic clue. Rehfoos (1917) considered that the structures of stomatal apparatus are so constant with a group of plants that they are of first importance in indicating phylogeny and relationship. In dicotyledons the use of mature pattern formed by the stomata and neighbouring cells is

suggested for the establishment of the typology (Metcalfé and Chalk 1950). But this work contrasts the finding by Metcalfe and Chalk (1950). Combining with literature it was found that only two families had specific stomata, all others had more than one type of stomata (Figure 1).

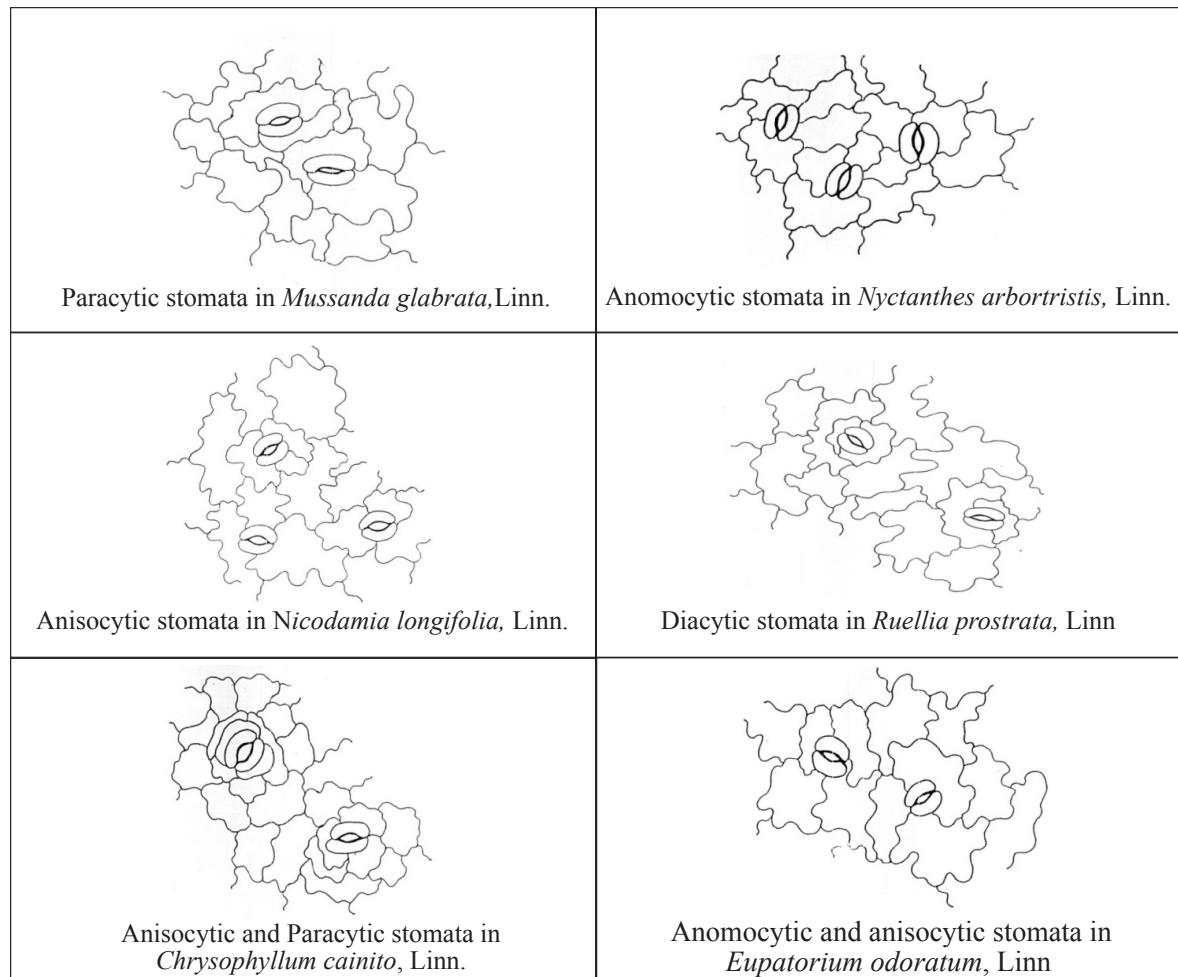


Figure 1. Stomatal types of selected taxa

The occurrence of different type stomata in the leaf raise doubts of its taxonomic value. Though there are some families which had constant stomatal organization, in Rubiaceae and in Acanthaceae diacytic stomata were only observed. But its size varies. It is different in each plant. It ranges from 62.5 μ -125 μ . Smallest stomata in length was observed in *Achras sapota* (Sapotaceae) whereas largest one in *Tridax procumbens* (Asteraceae) and *Myxopyrum smilacifolium* (Oleaceae). Breadth considerably varies based on stomatal opening and closing.

Relatively large stomata i.e. from 100 μ - 125 μ are observed in *Chesalia curviflora*, *Mussaenda glaberata*, *Tridax procumbens*, *Sphenoclea zeylanica*, *Chrysophyllum cainito*, *Ruellia prostrata*, *Nicodamia longifolia*, *Strychnos nux-vomica*, *Quamoclit phoenicea*, *Nicodamia coronaria*, *Calotropis gigantea*, *Cynanchum tunicatum*, *Heliotropium indicum*, *Solanum frutescence*, *Ipomaea paniculata*, *Scoparia dulsis* and *Citheroxylon tuberatum*. Small stomata were observed i.e. from 62.5 μ - 80 μ in *Eupatorium odoratum*,

Achras sapota, *Jasminum malabaricum*, *Torenia bicolor* and *Clerodendron infortunatum*. Stomata with 80 μ -100 μ length was observed in *Andrographis paniculata*, *Nictanthes arbor-tritis*, *Calotropis gigantea*, *Cordia cylindrostachya*, *Solanum torvum*, *Gmelina hystrix* and *Anisomeles indica*.

In members of Loganiaceae and Convolvulaceae stomatal length were same as that of 100 μ . In each family member's shows variation in length of stomata. In Lamiaceae both members had the stomata of same length. A detailed description of type of stomata, its length and breadth is given in Table 2.

Table 2. Data on the stomata of the taxa under study.

Family	Species	Type of stomata	Length (μ)	Breadth (μ)
Rubiaceae	<i>Chesalia curviflora</i>	Paracytic	112.5	87.5
	<i>Mussaenda glabrata</i>	Paracytic	100	62.5
Asteraceae	<i>Tridax procumbens</i>	Anomocytic	125	100
	<i>Eupatorium odoratum</i> .	Anisocytic Anomocytic Anisocytic	75	62.5
Companulaceae	<i>Sphenoclea zeylanica</i>	Anomocytic	112.5	75
Sapotaceae	<i>Achras sapota</i>	Anisocytic Paracytic	62.5	50
	<i>Chrysophyllum cainito</i>	Anisocytic Paracytic	50	75
Oleaceae	<i>Jasminum malabaricum</i>	Anomocytic	75	62.5
	<i>Myxopyrum smilacifolium</i>	Anomocytic	125	75
	<i>Nyctanthes arbor-tritis</i>	Anomocytic	87.5	75
Apocynaceae	<i>Allamanda cathartica</i>	Anomocytic	87.5	62.5
	<i>Ervatamia coronaria</i>	Anomocytic Paracytic	112.5	87.5
Asclepiadaceae	<i>Cynanchum tunicatum</i>	Paracytic	112.5	75
	<i>Calotropis gigantea</i>	Anomocytic	112.5	87.5
		paracytic	87.5	75
Loganiaceae	<i>Nicodamia longifolia</i>	Anisocytic	100	87.5
	<i>Strychnos nux-vomica</i>	Paracytic	100	75
Boraginaceae	<i>Cordia cylindrostachia</i>	Anomocytic	87.5	75
	<i>Heliotropium indicum</i>	Anomocytic	100	62.5
Convolvulaceae	<i>Quamoclit phoenicea</i>	Paracytic	100	75
	<i>Ipomea panuculata</i>	Paracytic	100	87.5
Solanaceae	<i>Solanum torvum</i>	Anomocytic Anisocytic	87.5	62.5
	<i>Solanum frutescence</i>	Anomocytic	112.5	87.5
Scrophulariaceae	<i>Scoparia dulcis</i>	Anomocytic	100	75
	<i>Torenia bicolor</i>	Anisocytic	75	50
		Anomocytic		
Acanthaceae	<i>Andrographis paniculata</i>	Diacytic	87.5	62.5
	<i>Ruellia prostrata</i>	Diacytic	100	75
Verbenaceae	<i>Gmelina hystrix</i>	Anisocytic	87.5	62.5
	<i>Clerodendron infortunatum</i>	Anomocytic	75	62.5
	<i>Citheroxylon subseratum</i>	Anomocytic	112.5	100
Lamiaceae	<i>Leucas aspera</i>	Anisocytic Diacytic	87.5	62.5
	<i>Anisomeles indica</i>	Anisocytic Diacytic	87.5	62.5

Conclusion

This work indicates that stomatal type has not only good diagnostic value but also it can be used as indicator for natural taxonomical similarity. The occurrence of primitive paracytic stomata in Rubiaceae (1st family in Gamopetalae) and the most evolved diacytic stomata in Lamiaceae (last family in Gamopetalae) supports the evolutionary arrangement of families of Gamopetalae.

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RESISTING SUBALTERNITY: AN ANALYSIS OF *SANGATI AND ALAHAYUDE PENMAKKAL*

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Abstract

The paper deals with the issue of subalternity as reflected in literature. The analysis is based on Bama's *Sangati* (2001) and Sarah Joseph's *Alahayude Penmakkal* (1999). The paper analyses how the two women authors in their diverse socio-political scenario take up the cause of the subaltern. The term 'subaltern' refers to marginalized groups that have suffered oppression in the mainstream society. Subaltern studies focus on the issues of marginalization and oppression and outlines the bitter experiences, consciousness and the anguish. Both the texts try to carve a niche for the subaltern, Bama as an insider and Joseph as an outsider speaking for the otherwise silenced members of the society. It looks at how the women characters question the dichotomies of caste and gender. The oppression of women in the novels are doubled when caste/class and gender are together operational in their lives. The manner in which the women celebrate and make meaning out of their lives itself is a note of resistance to the high culture that marginalise them. The use of colloquial language instead of the mainstream language in both the texts highlights the resistance strategy.

Keywords: Subaltern, resistance, dalit literature.

Introduction

Literary expressions are products of language and culture, so they act as mirror to the society. The intensity of works are dependent mainly on experiences of the writers, be it a man or a woman. When the socio-economic positioning of the writers impede their freedom, such communications becomes difficult but at the same time, more intense. Dalit writers who are part of the marginalized group of the society without doubt carry such vigour in their works, for they write about what life has offered them. They do not have to create fictional worlds in their works because what they actually experience is intensely emotional. In the case of women writers, the struggle is more intense because they fight against the twin powers of patriarchy and caste system. As Ammu Joseph et al. comment, "Women write to survive. They write to break the silence, they write in anger, they write to avenge themselves and they write to tell their stories" (15).

Women writers use their writings as modes of resistance against their representation in limiting terms. The present paper compares Bama's *Sangati* and Sarah Joseph's *Alahayude Penmakkal*, both trying to re-write the histories of two communities that are sidelined by the mainstream society. The essentialist views of histories of two communities are challenged through these narratives.

The word 'subaltern' is used by Antonio Gramsci refers to "those groups in society who are subject to the hegemony of the ruling classes" (*Key Concepts in Post-Colonial Studies* 215). The subaltern studies group

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further expanded the meaning of the term to include all sorts of unprivileged groups who are victims of unequal treatment “to speak as India’s subaltern voice” (“*Reading Subaltern Studies* 19). Dalits belong to subaltern groups who require the agency of an external force to retrieve them from the pages of unwritten histories. Dalit writings are rewritings of the histories of people due to lack of inclusion in historical documents. The histories have always taken the sides of the powerful, marginalizing the less privileged making them invisible to the world. It is a very much disturbing situation that in the 21st century people are judged based on caste/class divisions even in elite educated societies. It is not a surprise when Sharankumar Limbale, the Marathi Dalit writer says about dalit literature as literature not for entertainment but, a branch of literature that has to be read with a greater understanding. He says,

We have to understand caste system of India, and then we can understand dalit literature in true sense. But it is impossible for every reader. Literature is a mirror of society. One can understand the social structure of Indian society which is based on discrimination and inequality through dalit literature. No one can read dalit literature for the entertainment. It is a literature of social cause and for social change. Reader can know social reality about Indian dalits thorough dalit literature. One can take inspiration to struggle against injustice in his life. Dalit literature is a noble message to live and let live as human. (N.Pag)

What the dalits want is what they have been denied for ages, the dignity and the constitutional promises of equality. The emergence of Dalit literature in India therefore is an inevitable gesture towards the age-long exploitation and oppression that certain groups of people have been subjected to. G.N Dewy notes in his “Introduction” to *Akkarmashi (The Outcaste)* by Sharan Kumar Limbale, that Dalit literature in India emerged in its early form as poems and later on in the form of autobiographies. The autobiographies, he says “spoke of poverty as a social issue, a result of caste exclusion and in need of major social reforms” (xv). Dalit literature exhorts the readers for a close introspection into the ethics of caste divisions and highlights the injustices suffered by certain groups of people. In any form of expression, Dalit writings are voices of dissent, and they call for a change in the attitudes of people.

Arjun Dangle in his *Poisoned Bread: Translations from Modern Marathi Literature* (1992) categorises writings that form part of Dalit literature into two types. The first category is writings with a dalit viewpoint and the second category of writings with a dalit vision. He explains that the difference between dalit viewpoint and dalit vision can be noticed in the desired outcome. A person with a dalit viewpoint asks for limited transformation while a person with dalit vision demands a total revolution or transformation. From this one can conclude that a non-dalit writer belongs to the first category and a dalit writer to the second. If such a categorisation is applied to the writers selected here, Sarah Joseph writes with a dalit viewpoint and Bama writes with a dalit vision. Bama, the Tamil dalit writer is a prominent figure in dalit feminist literature. Through her autobiographical work *Karukku* (1999) she unleashes her protest towards the exploitation of Dalits and also the dichotomy that exists in the attitude towards dalit members of the Roman Catholic Church. In *Sangati* (2003), Bama highlights the dalit women’s experiences and how the community survives amidst the trials and tribulations of everyday life. Sarah Joseph, the Malayalam writer, though not a member of dalit community has always stood by the cause of the marginalized. In her work *Alahayude Penmakal* (1999), she writes about the marginalized in Kokkanchira, a group of people who are exploited based on their job as scavengers. She tries

to give a voice to the subaltern. Both Bama and Joseph take different routes but have the same aim of speaking for the subaltern, Bama as an insider having firsthand experience of the exploitation whereas Joseph, though not a member of Dalit community tries to stand by the subaltern. The two novels share a common platform in the sense of community that they emphasise. Lakshmi Holmstrom underlines the idea when she says, "Sangati moves from the story of individual struggle to the perception of a community of *paraiya* women, a neighbourhood group of friends and relations and their joint struggle. In this sense *Sangati* is the autobiography of a community (xv)" whereas *Alahayude Penmakkal* is the biography of a community which shows how a group of people strive amidst the forces of urbanization, the pangs of poverty and marginalization.

The grandmothers in *Sangati* and *Alahayude Penmakkal* provide wisdom and strength to the women around them. The events in *Sangati* unfold mainly through the conversations between Bama and her grandmother, Vellaiamma Kizhavi or Patti as she fondly addresses her. The struggle of Dalit women is elaborated by Patti who knows the history of community. Through the detailed descriptions the lives of women in her community Bama explains why only the dalit women are possessed of 'peys' or evil spirits. She tells,

From the moment they wake up, they set to work both in their homes and fields. At home they are pestered by their husbands and children; in the fields there is back-breaking work besides harassment of the landlord. . . . Women are overwhelmed and crushed by their own disgust, boredom and exhaustion because of this. The ones who don't have mental strength are totally oppressed. . . and act as if they are possessed by peys. (S 59)

The multilayered oppression that the dalit women undergo need not require much of an explanation. It shows that the women are toughened in mind and spirit by the raw life that offers trials one after the other. Bama exhorts herself, "We must be strong. We must show by our own resolute lives that we believe ardently in our independence" (S 59). Throughout the work Bama projects a positive image of her community which gives ample freedom to women in issues such as widow remarriage, divorce and the non-existent dowry system available to women in her community when compared to the other communities.

Through the protagonist Annie's grandmother Amamma in *Alahayude Penmakkal* who knows much about the history of their place Kokkanchira the history of their community is unraveled. Alaha's prayer, a prominent symbol in *Alahayude Penamakkal* though not accepted by the mainstream Christian religion has the power to drive away evil forces. Annie's grandmother performs exorcism with the help of 'Alaha's prayer' on children who cry incessantly due to the attack of evil spirits and they are cured. Annie's mother and her uncle are against her grandmother's idea of chanting the prayer for such purposes. Annie believes in it and wants to be the inheritor of the prayer after Amamma's death. The prayer orally transmitted from one generation to the next, only to women, shows the resistance towards the institutionalized religions that deny religious powers to women. She describes to Annie how her family had to relocate to Kokkanchira. Annie believes in the history of the place as told by Amamma as a place "full of the dead, decayed and desecrated" (AP 26). They were driven out of the town Thrissur by the Army during the Second World War and only Kokkanchira was the stronghold. It is a story of the victory of women against the oppressive forces. Mustering courage it was her Amamma who embarked on the journey to Kokkanchira and they survived.

Both the novels highlight women's potency to endure hardships and move forward. The men in both the novels are not at all supportive to the women in their struggle for sustenance. In *Sangati*, the men are so inconsiderate that they do not support the families, but waste their hard earned money in drinking and later on they beat their wives for silly reasons. According to Bama, the oppression dalit women have to suffer in the families are linked to the caste discrimination suffered by dalit men in the society. As a repercussion of the insults they suffer, the men take solace in dominating over their wives. She reflects upon the men's character, "Even though they are male, because they are Dalits, they have to be like dogs with their tails rolled up when they are in the fields, and dealing with landlords. There is no way they can show their strength in those circumstances. So they show it at home on their wives and children" (S 65). In *Alahayude Penmakal*, the men are so inactive or either absent from the scene of action. Annie's grandfather and father have deserted the family. Symbolic of the inactive male figure is her uncle who is an invalid. The women struggle hard to support the family by doing all sorts of jobs. Both the novels portray women as economically independent though they earn less compared to men who do the same jobs. The novels depict how the women without any socio-economic support of men live on.

The oral folk tradition is highlighted in both the novels, Sarah Joseph through the oral transmission of Alaha's prayer and also through the parallel histories of their place of inhabitation, Kokkanchira while Bama through the use of "*kodun* –Tamil (the colloquial)" (Holmstrom: xiii). Joseph uses an extraordinary de-standardized form of Malayalam, which is locality, gender and community specific. It draws attention to the subculture that exists in the margins though unrecognized. The use of such language makes the prose more poetic and at the same time very powerful, lashing against the oppressive forces. Bama uses the Dalit Tamil dialect, openly expressing everyday life incidents where women use sexually explicit, provocative language in their quarrels. The obscene words used are strategies of resistance for the women to gain dominion over men. Bama notes, "If he shows his strength of muscle, she reveals the sharpness of her tongue. Because she can't hit him back, she curses him roundly"(S 67). Bama also emphasizes on the diverse songs which are inseparable from the lives of dalit women. The language is so closely associated with songs that she says, "From birth to death, there are special songs and dances. And it is only women who perform them" (xx). The oral traditions are parallel to the mainstream culture and history which willfully neglects the women subculture due to gender discrimination. It is true when Paramitha Banerjee observes, "A number of women deliberately use dialects and colloquialisms in their writings not only to enhance authority, but to counter homogenization of language and assert the value and validity of linguistic diversity" (Joseph et al. 31). Language is a means of expressing reality and it is the cultural need of every community to reinvent the language that carries the rhythm and sensibilities of it. The subtle use of the language of subcultures in both the novels point to the invisible gendered communities of women that exist inside the society. What Bama and Joseph do is inventing a cultural poetics that highlight the nuances of the community life as against the mainstream culture that tries to negate the existence of such subcultures.

There is a striking similarity in the narrative strategies employed by Bama and Sarah Joseph. The novels unfold through non-linear narratives. Bama begins the novel by describing her childhood in detail. Most of the incidents described are from the perspective of child Bama, and how she questions the atrocities

committed to the women by patriarchy as well as the exploiting landlords. “*Sangati* flouts the received notions of what a novel should be . . . It has no plot in the normal sense, only powerful stories of a series of protagonists. *Sangati* means news, events, happenings and the book is one of interconnected anecdotes” (Holmstrom: xvi). Joseph also unravels the story of Annie and her community through the eight-year old Annie’s eyes and she symbolizes the entire women who are partakers of the destiny that she embraces towards the end of the novel. Many of the questionable traditions and practices are foregrounded through Annie’s observations and witty remarks.

Both Bama and Joseph try to re-write the histories of the locality, beliefs and community through their narratives. Both of them underline the fact that it is the inner strength that the women gain from a wide range of experiences that make them courageous amidst gender discrimination and caste oppression. By stringing together various incidents from the life of marginalized the novelists reveal the unrecognized but indomitable courage that women possess. The novelists from their different milieus address the problems of the subaltern in an authoritative and potent language. The caste and gender relations within the societies are thoroughly interrogated with the hope of making a progressive change in the attitudes and the approaches.

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SEED GERMINATION STUDIES OF *TRICHOSANTHES CUCUMERINA* L. (CUCURBITACEAE) - A COMMERCIALY IMPORTANT MEDICINAL PLANT FOR CONSERVATION

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Abstract

Medicinal plants are living resource, exhaustible if overused and sustainable if used with care and wisdom. Their sustainability is essential to sustain one of world's oldest medical traditions, a priceless legacy of the Indians. *Trichosanthes cucumerina* L. is considered as rare and threatened and they show very low percentage of seed germination because of dormancy, their conservation in sustainable environment is urgently needed, keeping in view the demand of their drugs in the global market. This plant is endemic to Southern Western Ghats and distributed in a few limited localities of evergreen to semi-evergreen forests, locally called as Kattupadavalam in Malayalam, and is used to treat leprosy, hyper acidity, stomach disorders, skin diseases, Jaundice, cough, asthma, bronchitis, cardiac debility, wounds, ulcers, inflammations. The study is mainly to improve the seed germination percentage/ enhance speed of germination and conservation. The design used for the experiment is Completely Randomized Design (CRD). Fifteen different types of pre seed treatments are used for the study such as Sulphuric acid treatments, Kinetin, Thiourea, Mechanical scarification etc. In *Trichosanthes cucumerina* L., highest germination was observed in seeds treated with Potassium Nitrate (45%) against 25% in untreated. Seeds treated with the kinetin also showed good germination percentage (35%). So the best pre-treatment method for the *T. cucumerina* L. is soaking in potassium nitrate and kinetin treatment for 18 hours.

Keywords: *Trichosanthes cucumerina*, Medicinal plants, Western Ghats

Introduction

Medicinal plants are living resource, exhaustible if overused and sustainable if used with care and wisdom. Their sustainability is essential to sustain one of world's oldest medical traditions, a priceless legacy of the Indians. Millions of rural households still use medicinal plants in a self-help mode. Over one and a half million practitioners of the Indian systems of medicine, in the oral and codified streams, use medicinal plants in preventive, promotive and curative applications.

Over the years, the traditional Indian medicines have become rather well codified in a holistically oriented practice or system of health care known as Ayurvedic medicine. Ayurveda means 'knowledge of

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life'. Susruta and Charaka- Samhita, the two most ancient and important divisions of Ayurveda written about 1000 B.C., contain therapeutics, medicine and material medica. During the Buddhist period, medical science progressed considerably and cultivation of medicinal plants was in practice. During Islamic rule in India, the "Unani System" of medicine was patronized and the use of medicinal plants was popularized (Sen et al., 1985). Studies on medicinal plants continued and many life- saving drugs were extracted. Use of these in the most advanced allopathic systems of medicines have resulted in the over exploitation of some medicinal plants without giving due consideration to the protection of their natural habitat (Subramanian and Sasidharan 1997).

The health assembly of World Health Organisation passed a number of resolutions in response to a resurgence of interest in the study and use of traditional medicine in health care and in recognition of the importance of medicinal plants to the health systems of many developing countries. As a follow-up-action, the health authorities and administrators in developing countries have decided to take traditional forms of medicine more seriously and to explore the possibility of utilizing them in primary health care (Subramanian and Sasidharan 1997).

In nature, many medicinal plants are propagated through seed. All the viable seeds have capacity to germinate if placed under suitable conditions necessary for germination. In certain plants, seeds will immediately germinate after harvest. Some others fail to germinate even if placed under such condition that are ordinarily favorable for germination, either due to some internal factors or due to specific requirement for some environmental factors. During this period the growth of the seeds remains suspended and they are said to be in rest stage or dormant stage and this phenomenon is called dormancy of seeds.

The objective of the study is to improve the seed germination percentage/ enhance speed of germination and conservation of *Trichosanthes cucumerina*.

Trichosanthes cucumerina L., Sp. Pl. 1008. 1753. (Cucurbitaceae)

English name: Wild Snake gourd, Malabar Patola.

Hindi name: Chachinda, Paraval

Malayalam name: Janglichachinda, Kattupadavalam, Kayappanpadavalam, Patolam, Padavalam.

Sanskrit name: Patolah

Tamil name: Kattuppeyppudal, Peyppudal, Pudal.

Distribution: Indo-Malaysia. Throughout India, in plains and in lower hills.

Habitat: Forest margins in semi-evergreen and moist deciduous forests, also in the plains.

Description

A slender annual monoecious climber with furrowed stem. Stem 3.6- 4.5cm long, slightly hairy, tendrils 3- fid. Leaves simple, broader than long, 8-11 x 8-10 cm, palmately 3-5-lobed, broadly ovate or sub-orbicular, base truncate-cordate, margin distantly denticulate, apex acute, lower surface glandular-pubescent, chartaceous; petiole to 3.2 cm. Flowers monoecious: Male flowers in axillary racemes, ebracteate; pedicel to

2 cm long. Calyx-tube turbinate, glandular-pubescent, lobes linear. Petals oblong-lanceolate, long-fimbriate, white. Stamens 3; pistillodes 3, slender. Female flowers solitary; pedicel to 1.5 cm. Ovary ribbed, pubescent; style to 1.6 cm. Fruits ovoid-fusiform, beaked, white-striped when young, yellow when ripe. Seeds semi-ellipsoid when ripe, compressed, surrounded with red pulp (Gewall, 2000).

Medicinal Properties

The plant is bitter, acrid, thermogenic, laxative, caramative, digestive, stomachic, expectorant, cardiotoxic, anti-inflammatory, antipyretic and tonic. It is also used to treat leprosy, hyper acidity, stomach disorders, skin diseases, Jaundice, cough, asthma, bronchitis, cardiac debility, wounds, ulcers, inflammations. In higher doses it is emetic and purgative. Roots are used in bronchitis. Leaves are prescribed in biliousness; leaf juice is applied to bald patches of alopecia. Fruits are used in burning sensation, anorexia, dyspepsia, constipation and helminthiasis. Seeds are used in syphilis and verminosis. (Warrier et al., 1995, Udayan and Balachandran, 2009).

Chemical constituents

The fruit is rich in Cucurbitacins, the tetra cyclic triterpenes. Cucurbitacin B is the main constituent. Beta-trichosanthin is also isolated from the fruit (Thakur et al., 2002).

Materials and Methods

Seeds were hand extracted from the ripe fruits immediately after harvest and air dried. The seeds were sown in germination trays filled with soilless media consisting of coco peat, vermiculate and perlite in 3: 1: 1 ratio. Design of experiment is Completely Randomized Design (CRD). Two replication is attempted each replication consists of 30 seeds. Parameters like germination percent shoot length, root length, height of plant, number of leaves and vigour index were recorded.

The mean number of normal seedlings produced was recorded and expressed as germination percentage. Vigour Index was computed by adopting the formula (Abdul – Baki and Anderson, 1970).

$$\text{Germination \%} = \frac{\text{Number of seeds germinated}}{\text{Total Number of seeds}} \times 100$$

$$\text{Vigour Index} = \text{Germination \%} \times \text{Mean length of Root and Shoot.}$$

15 different types of seed treatment were carried out with duration are shown below:

T₁ Fresh seeds (Control); **T₂** Cold water treatment (C.W.T) 18 hours; **T₃** Hot water treatment (H.W.T) 18 hours; **T₄** Boiling water treatment (B.W.T) instant dip; **T₅** 20% Sulphuric acid (20% H₂SO₄) 1 hour; **T₆** Concentrated Sulphuric acid (Con. H₂SO₄) instant dip; **T₇** Mechanical Scarification (M.S) 3 - 5 minutes; **T₈** Mechanical Scarification + Gibberlic acid 100ppm (M.S + G.A 100 ppm) 18 hours; **T₉** Mechanical Scarification + Gibberlic acid 500ppm (M.S + G.A 500 ppm) 18 hours; **T₁₀** Potassium nitrate - 0.2 % (KNO₃) 18 hours; **T₁₁** Thiourea -2 % 18 hours; **T₁₂** Hydrogen peroxide - 30 % (H₂O₂) 30 minutes; **T₁₃** Cow milk (C.M) 18 hours; **T₁₄** Cow urine (C.U) 18 hours; **T₁₅** Kinetin 500ppm 18 hours.

Results

In *Trichosanthes cucumerina*, highest germination was observed in seeds treated with potassium nitrate (45%) against 25% in untreated. Seeds treated with the kinetin also showed good germination percentage (35%). So the best pre-treatment method for the *T. cucumerina* is soaking in potassium nitrate and kinetin treatment for 18 hours (Table 1&2; Figure 1&2).

Table 1. Effect of Pre-treatments on Germination percentage of *Trichosanthes cucumerina* L.

TREATMENTS		(14 DAS*)			(28 DAS)			(56 DAS)		
				MEAN			MEAN			MEAN
T ₁	Control	10	0	5	20	30	25	20	30	25
T ₂	C. W. T.	10	0	5	10	10	10	20	10	15
T ₃	H. W. T.	0	0	0	0	0	0	0	10	5
T ₄	B. W. T.	0	0	0	0	0	0	20	0	10
T ₅	20 % H ₂ SO ₄	0	0	0	0	0	0	0	0	0
T ₆	Con. H ₂ SO ₄	10	0	5	20	20	20	20	30	25
T ₇	M. S.	0	10	5	10	20	15	10	20	15
T ₈	M. S. + 100	0	0	0	0	0	0	0	0	0
T ₉	M. S. +	0	0	0	0	0	0	0	0	0
T ₁₀	KNO ₃	20	0	10	40	10	25	50	40	45
T ₁₁	Thiourea	10	0	5	20	10	15	30	20	25
T ₁₂	H ₂ O ₂	0	0	0	20	0	10	30	10	20
T ₁₃	C. M.	0	0	0	0	0	0	0	0	0
T ₁₄	C. U.	0	0	0	0	0	0	0	0	0
T ₁₅	Kinetin	30	0	15	40	10	25	60	10	35

*DAS Days after sowing

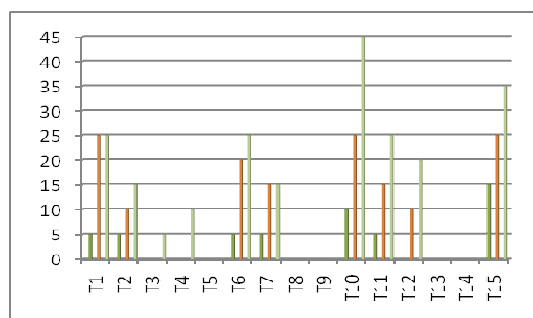
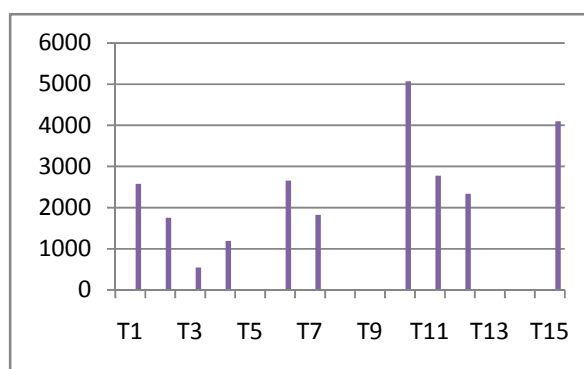


Figure 1. Germination of *T. cucumerina* L. after various seed treatment in percentage

Table 2. Effect of Pre-treatments on vigour index of *Trichosanthes cucumerina* L.

TREATMENTS		R1	R2	Mean
T ₁	Control	1962	3192	2577
T ₂	C. W. T.	2306	1200	1753
T ₃	H. W. T.	0	1092	546
T ₄	B. W. T.	2380	0	1190
T ₅	20 % H ₂ SO ₄	0	0	0
T ₆	Con. H ₂ SO ₄	2082	3228	2655
T ₇	M. S.	1204	2440	1822
T ₈	M. S. + 100 ppm	0	0	0
T ₉	M. S. + 500ppm	0	0	0
T ₁₀	KNO ₃	5575	4568	5071.5
T ₁₁	Thiourea	3273	2280	2776.5
T ₁₂	H ₂ O ₂	3519	1153	2336
T ₁₃	C. M.	0	0	0
T ₁₄	C. U.	0	0	0
T ₁₅	Kinetin	7050	1149	4099.5

Figure 2. Vigour index of *T. cucumerina* L. seeds after various seed treatment in percentage

Discussion

Trichosanthes cucumerina is an important Ayurvedic medicine and the availability of this species from wild is arbitrarily reduced. The primary factors contributing to the extinction of this species are the habitat loss, over exploitation, introduced (especially weedy) species and population pressure. Such factors reduce population sizes of species, making them unsustainable. Factors such as environmental catastrophes, genetic erosion, deleterious mutation etc. affect the population. Majority of the raw drugs (about 80%) used in Ayurvedic and herbal medicines come from forests, and they are often collected destructively. Exploding population, urbanization, shrinking forests, over harvesting and related factors have brought many medicinal plant species to the very brink of extinction. This situation is further aggravated by the bioprospection by trans-

national pharmaceutical companies. In the present scenario most of the plants are propagated through tissue culture or vegetatively. Though *in vitro* culture is available in the case of this species, the best and cheapest propagation method is through seeds.

Conclusion

At present, people get back to nature for treatment because of the side effects of chemical drugs. So the study gets great importance. The main objective of the study is to standardize the pre-treatment method to break dormancy and to reduce wastage of seeds. From the present study it is understood that the best pre-treatment methods for *Trichosanthes cucumerina* L., it is potassium nitrate and kinetin treatment. The finding will help to reduce seed requirement by enhancing germination percentage.

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A LITERARY INTERPRETATION OF MUHYI-UL-DIN MALA

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Abstract

Muslims of Kerala have been maintaining their own religious and creative identity. For centuries, their text language was Arabi malayalam. Both in prose and poetry several works have come out in this hybrid language. Muhyi-ul-Din Mala is the first literary work of this kind. Renowned Sufi saint Abd ul Kadir Jilani has showered praises on the poem written by Muhammed Ibn Abdul Azeez. This study makes an earnest attempt to reveal the influence of Muhyi-ul-Din Mala on Kerala Muslims.

Keywords: Muhyi-ul-Din Mala, Muhammed Ibn Abdul Azeez, Arabi-Malayalam

Introduction

The life of a literary work shows its lasting value. The greatest creations are often both entertaining and inspiring for generations. There are a number of such creations in Malayalam literature. Arabi-Malayalam developed as a hybrid language and became popular in Kerala. The Arabs formed Arabic scripts based on the regional languages. It happened in Malayalam also. A fusion of Arabic with Malayalam is known as Arabi-Malayalam. Many works in prose and verse have been produced in Arabi-Malayalam which was also the language of composition of Kerala Muslims. Muhyi-ul-din mala is a notable work among them. Muhyi-ul-din mala is the first literary work in Arabi-Malayalam literature. It was also the first poem, religious text and psalm in the language. It is also the only work of the author in Arabi-Malayalam (Abu 1971: 6).

Muhyi-ul-din mala was written in A.D 1607 by the Arabi-Malayalam poet and linguist Muhammed Ibn Abdul Azeez who was also the Qazi of Calicut. Though he wrote about six works before his death in 1616, none of them became as popular as Muhyi-ul-din mala. The author claims that the work was composed fusing Arabi and Malayalam languages like the lacing of gems. The crux of the work is the heroic deeds of the renowned Sufi mystic Abd ul Kadir Jilani. Jilani was given the name Muhyi-ul-din which means one who enlivens religion, amiability, truth, knowledge and spiritual power.

Jilani, whose full name is Al Sayyid-Muhi-ul-din Abu Muhammed Abdul Qadir Amoli- Al- Jilani Al- Hasani-Val- Hussein, was born in HE 1077 at Jilani in Iran. He reached Bagdad when he was 18 and died in HE 1166. Abdul Kadir Jilani had many disciples and followers. The tomb of Jilani near the Tigres River is a shrine. Jilani's spiritual activities spread all over the world through junaid Bagdani. Sufis celebrate Jilani's birthday as Gausul Aa'lam day.

As a devotional poem, Muhyi-ul-din mala has its own characteristics. It begins by thanking Allah, the Almighty. According to general Muslim belief sheik Jilani is the sultan (leader) of all geniuses (Auliya) and has

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extraordinary abilities. It is believed that sheikh Jilani has seen the seven heavens and that he has the authority in everything except God. The poet says that though it is tedious to tell completely about the capabilities of Jilani, he would attempt that in a verse as clearly as the butter in the milk . (Faizi 2010:20,21).

As per the order of Allah, Jilani's leg rests on the shoulders of all spiritual leaders. Even the angels do service for him. The sheik is one who punishes bad people and saves good ones. Beside human beings, Sheik has at his command the fire, the sea, Angels and many other things. He is capable of taking the world in his hands and measuring the entire circumference of the earth with a single step. But he won't do such wonders without the permission of Allah. To circle a Sheik is equal to circumambulation of the holy Ka'ba (Mecca). Allah has opened seventy doors of knowledge in front of him. He has imbibed the holy books Quran, Injeel, Zaboor and Thaurat. To write down his great words were 400 ink- pots in front of the Sheik. One can see a spiritual aura around Jilani all the time. He used to speak to the followers and spirits. People visited him in hordes like bees and ants. No man in this universe can be compared to him. Those who denounce the Sheik will be ruined. He gave 40 gold coins to some gangsters as a gift for their honesty. This is evidence of his generosity. Nothing happens without his consent. He could control the rain and the river. He incinerated those who opposed him with a glance. His bravery and heroic activities go on like this. (Faizi 2010: 35,36).

It is Sunnah (the practice of the prophet) in Islam to commemorate and praise great men. Muhi-ul-din mala is an example of that. The work tells us about the sacredness that his followers and relatives are going to attain. The relatives of other sheiks may not get this opportunity. So, it is a good luck to learn Muhyi-ul-din mala and to be one of his followers (Faizi 2010: 40,45).

Many features of classic and middle age literary works can be found in Muhyi-ul-din mala. The poet was aware of the limitations and ignorance of the readers of his time. So, Mala was written in a simple language (rustic). The heroic actions of great men are beyond words. Mala narrates them only briefly. Throughout Muhyi-ul-din mala, which is composed in 155 couplets, the poet refers to Jilani as 'thou' and 'thee' respectfully. The descriptions and styles make Mala a great artistic work. The prestige of all great men on earth may end one day but Mohiyudheen Sheiks is eternal. Mala also makes use of the narrative style of other classic Malayalam poems for its embellishment. The mixing of Malayalam as well as Arabi-Malayalam words is an example for that. This style can also be found in Ezhuthachan's *Ramayanam*, *Kilipatu* and *Bharatam Kilipattu*. The language Arabi-Malayalam was created as a parallel to Manipravalam which is a fusion of Sanskrit and Malayalam (Moulavi and Kareem 1978:43).

The most important element which makes Mala beautiful is its diction. So many Malayalam words have been welded in Muhyi-ul-din mala. The popular words in written and spoken languages like Disha, Keli, Bhoomi, Swpnam, Thura, Maranam, Kuppi, Pakal, Narakam can be seen in this work. Words denoting numbers in the poem are very close to Tamil language. Elupath, nalpath and irupathayyand are some instances. The words like Eravu, Chakal, Thuthi, Udayavan, Poru, Kalvi are also closer to Tamil. The biographies of (converted) pulavans which became popular in Kerala as the result of the activities of Sufis in Tamil Nadu resulted in the intrusion of Tamil words in Mappilappattu. The words from other languages like Tulu, Telugu, Kannada and Urdu also appear in Mala. Besides this, there is a procession of Arabic words in Muhyi-ul-din mala. They can be classified into two groups: religious and independent. The words like Uroob (sunset), Walliuh

(Custodian), Mureed (Follower), Hayyath (Life), Willayath (Nation) are some examples for independent words and the words such as Aouliyakkal (leaders), kuthuba (speech), Karahat (Anti-religious), Du-Awa (Prayer), Rahmath (Mercy) are related to religion. There are certain classic words in Mala which are not in use at present (Faizi 2010: 1958).

Historicity is another major element of Mala. Mala is mainly related to the history of religion. It also depicts the age of the poet and the Sheik. There are some references about Bagdad and other places near to it in Mala. The poet has taken ideas from other books like Bahja and Takmila. Bahja is a historical document in Islamic world, and Takmila is a book that describes the Sheik's heredity. Bahja has different parts to which the poet is indebted. They are: Bahjathul-Abrar, Bahjathul-Azrar, From different Bahjas it is clear that sheik Jilani's parents belong to the line of Prophet Muhammad and their tradition has a close relationship with four Caliphs. It also tells about the ancestry of other sheiks (Faizi 2010:63).

It can be seen in the text that sheik Jilani has included converted Christian's among his saints. Even people from the other side of Quaff Mountain came to his class to understand his glory directly. Quaff Mountain was the capital of the saints. It is strongly believed that Quaff Mountain was a "Kakkassa" Mountain. It is situated in the eastern part of the red sea. There are references about 'Bahr Muheet' and the nation of Yaa' jooj' Mala. Scholars opined that Bahr Muheet stands for the great Indian sea. Ya' jooj and Ma' juj belong to the ancestry of Yafis, son of Noah. Turks, Barbarians and Civilians are also part of this tradition. We can see the history of Sufi tradition also in Muhyi-ul-din mala. The sheikh had said once that he would have saved 'Hallaj', if he was alive then sheik Hallaj was a scholar and Sufi who lived in Bagdad in the 3rd and the 4th century HE. He was the symbol of spiritual thoughts and divine love. But Hallaj was considered to be a mentally disordered man of the scholarly world (Faizi 2010:70-72).

Muhyi-ul-din mala was also a text which has influenced the social life of Muslims. Mala got a higher status among Muslim community in Kerala similar to that of Adhyadma Ramayana, Krishna Ghadha and Njanappana among Hindus. Mala was always recited in most of the Muslim houses. There was no one without knowing at least some lines from Mala. Mala was recited following certain decorum and with devotion. It has to begin either with the name of god or praising the prophet. Then the devotee has to dedicate the verses that he/she is going to recite to Sheik Mohiyudheen. Then the first chapter (Surathul Fathiha) and the last 3 chapters of Quran have to be recited respectively. A short prayer also comes before the recitation of Mala (Faizi 2010:76).

Muslims were very as devoted to Muhyi-ul-din mala as they were to the Quran. Parents used to teach it to their children and prospective brides who could recite Quran and Mala got special consideration and status. There was a belief among Muslim women that those who recite Muhyi-ul-din mala during their pregnancy will have a comfortable delivery. The survival of this text was made possible even when there was no printing technology by the devotion and admiration in the minds of believers. Muslim society recited Mala for getting nirvana. Muhyi-ul-din mala is so great that Allah will give an edifice in the paradise for those who clearly imbibed it.

But the Mala has been criticized too. Most of the skills of Sheik were possible only for the prophet many were beyond common sense. Sheik Jilani was considered to be "the greatest assistant" of God by some people. Countering these beliefs some scholars ask-When did Allah call him? Were there any witnesses? But saints are the helpers of Islam. And those who stood for him argued that Jilani was called "the greatest assistant"

because he was the best among the saints. But there are certain critics who disagree with the book Bahjathul Asrar and criticize Jilani and his Mala. Such critics point out that the poet has given Sheik the status of god. Bahja was a historical text. It need not be fully true. It is said that sheik has brought dead people back to life. But that ability is unique to Alaah. At the same time the other group contends that Allah gives certain extraordinary abilities and power to his beloved servants (Faizi 2010: 93).

The base of Islam is in the belief of Quran and monotheism. Certain criticisms assert that the Mala contains ideas contrary to the fundamental beliefs of Islam. It has a background in which people engaged in learning the interpretations of religious scholars by putting away the Quran and religious norms. Those people who were bored with these started to do a self –refinement. And as a result Sufi movements were formed. Though hermits opposed the Quran, it was believed that disagreeing with the Quran no one can become a Muslim. Gradually the followers began to praise their spiritual leaders. Muhyi-ul-din mala was also an outcome of such practice. The followers lifted their leader to the position of God by Praising and deifying them. Quran has reminded in many places that if a person asks help from the dead ones, he/she may go astray. Even then this practice continued in the community. Muhyi-ul-din mala is also part of such a blasphemous practice. Mala was criticized mainly related to belief. But such criticisms made it more and more valuable (Faizi 2010:125).

Conclusion

Muhyi-ul-din mala is an unparalleled text in Mappila literature. Mala's influence on the people in Kerala began before 407 years ago. In 2007 Mala's 400th anniversary was celebrated. Men of letters opined that Mala was written five years before Ramayanam Kilippattu. Qasi muhammed and Moyinkutty Vaidyar was model to other Mappila poets just like Kannashans were to Ezhuthachan. Mala gives information and entertainment to the generations even today. Mala is to be honored as both a literary text and as a religious poem. Our ancient writings shouldn't be considered as belonging to any one community. They represent a culture. We can say undoubtedly that the knowledge that Muhyi-ul-din mala gave us in the past was not negligible.

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സ്ത്രീപക്ഷസാഹിത്യചരിത്രവിജ്ഞാനീയം: സിദ്ധാന്തവും സാധ്യതകളും

മേരി റീമ*

ഗവേഷക, മലയാളവിഭാഗം ശ്രീ ശങ്കരാചാര്യ സംസ്കൃതസർവ്വകലാശാല,കാലടി

രൂപരേഖ

ഒരു സവിശേഷ രീതിശാസ്ത്രപദ്ധതിയായി രൂപപ്പെട്ട ചരിത്രവിജ്ഞാനീയത്തിന്റെ ആശയങ്ങളും സങ്കല്പനങ്ങളുമാണ് സാഹിത്യത്തിന്റെ ചരിത്രപഠനത്തിനുപയോഗിക്കുന്നത്. ആഖ്യാതാവിന്റെ യുക്തിയും പ്രത്യയശാസ്ത്രവും ചരിത്രത്തിലേതുപോലെ സാഹിത്യചരിത്രത്തിലും ഉള്ളടങ്ങിയിരിക്കും. സാഹിത്യ ചരിത്രങ്ങളിലൂടെ ആഖ്യാതാവ് നിർമ്മിച്ചെടുക്കുന്നതായിരിക്കും സാഹിത്യമായി സ്ഥാപിക്കപ്പെടുക. അതുകൊണ്ടുതന്നെ സാഹിത്യചരിത്രങ്ങളുടെ നിരീക്ഷണങ്ങളും വിലയിരുത്തലുകളും സാഹിത്യമെന്ന വ്യവഹാരത്തിന്റെ വിവിധ തരത്തിലുള്ള പൊതുധാരണകളെ രൂപപ്പെടുത്തുന്നു. തമസ്കരണങ്ങളും ബലപ്പെടുത്തലുകളും പ്രസക്തമാകുന്നത് ഈ പശ്ചാത്തലത്തിലാണ്. സാഹിത്യചരിത്രങ്ങൾ തിരസ്കരിച്ച സ്ത്രീ, ദളിത് ഇടങ്ങളെ വീണ്ടെടുക്കാനുള്ള ഉത്തരാധുനിക ശ്രമങ്ങൾ വരുന്നതും ഇങ്ങനെയാണ്. സ്ത്രീപക്ഷസാഹിത്യചരിത്രവിജ്ഞാനീയം എന്ന രീതിശാസ്ത്രത്തിലൂടെ സാഹിത്യചരിത്രങ്ങളിലെ സ്ത്രീചരിത്രത്തെ പ്രശ്നവൽക്കരിക്കാനും വീണ്ടെടുക്കാനും പല നിലക്കും ഇന്ന് ശ്രമങ്ങളുണ്ട്. ഫെമിനിസ്റ്റ് ഹിസ്റ്റോറിയോ ഗ്രാഫി എന്ന വൈജ്ഞാനിക ശാഖയെ സാഹിത്യചരിത്രവിജ്ഞാനീയത്തിന്റെ ആശയങ്ങളുമായി സമന്വയിപ്പിച്ചാണ് സ്ത്രീപക്ഷസാഹിത്യചരിത്രവിജ്ഞാനീയം എന്ന രീതിശാസ്ത്രത്തിലേക്ക് എത്തുന്നത്. മലയാളസാഹിത്യചരിത്രങ്ങൾക്ക് ഈ മട്ടിൽ പഠനങ്ങളുണ്ടായിട്ടില്ല. സൂചകപദങ്ങൾ: സ്ത്രീചരിത്രം, ഫെമിനിസ്റ്റ് ഹിസ്റ്റോറിയോഗ്രാഫി, ലിംഗാധിപത്യം, പ്രത്യയശാസ്ത്രധാരണകൾ, സ്ത്രീപക്ഷസാഹിത്യചരിത്ര വിജ്ഞാനീയം

ആമുഖം

ചരിത്രം ഒരു സാംസ്കാരികനിർമ്മിതിയാണെന്ന തിരിച്ചറിവിന്റെ ഭൂമിക അതിന്റെ വിജ്ഞാനത്തെത്തന്നെ പ്രശ്നവൽക്കരിക്കുന്നതിന് സാധ്യതകളൊരുക്കി. ചരിത്രം യാഥാർത്ഥ്യങ്ങളുടെ പൂർണ്ണമായ വീണ്ടെടുക്കലല്ല എന്ന അറിവിൽനിന്നു ചരിത്രവിജ്ഞാനീയം രൂപപ്പെട്ടപ്പോൾ മുതൽ അതിലെ വിടവുകളെ നികത്താനും നിഷ്കാസിതരുടെ ചരിത്രം കണ്ടെത്താനും ശ്രമങ്ങളാരംഭിച്ചു. സമീപകാലംവരെയും ഉന്നത വിഭാഗങ്ങളുടെ കണ്ണിലൂടെയുള്ള കാഴ്ചയായിരുന്നു ചരിത്രം. അതുകൊണ്ടുതന്നെ സ്ത്രീ, ദളിത് ജീവിതങ്ങൾ ചരിത്രത്തിൽ ഇടം നേടിയില്ല. ചരിത്രത്തിലെ സ്ത്രീമുന്നേറ്റങ്ങളെല്ലാം പുരുഷകേന്ദ്രീകൃത സമൂഹം അദ്യശ്യവൽക്കരിക്കുകയാണ് ചെയ്തത്. സ്ത്രീപക്ഷസാഹിത്യചരിത്രവിജ്ഞാനീയമെന്ന രീതിശാസ്ത്രത്തെ ഉപയോഗിച്ചുകൊണ്ട് സ്ത്രീചരിത്രത്തിന്റെ തമസ്കരണങ്ങളുടെ പശ്ചാത്തല കാരണങ്ങൾ കണ്ടെത്താനും സാധ്യമായ വിധത്തിൽ സ്ത്രീചരിത്രത്തെ വീണ്ടെടുക്കാനും ഉള്ള ശ്രമങ്ങൾ ഇന്ന് നടന്നുവരുന്നു. ഈ പ്രബന്ധം സാഹിത്യചരിത്രവിജ്ഞാനീയമെന്ന സിദ്ധാന്തത്തെ വിശകനം ചെയ്യുകയും അതിന്റെ സാധ്യതകളെ അവതരിപ്പിക്കുകയും ചെയ്യുന്നു. ചരിത്രവിജ്ഞാനീയം,

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സാഹിത്യചരിത്രവിജ്ഞാനീയം, സ്ത്രീവാദ ചരിത്ര വിജ്ഞാനീയം, സ്ത്രീപക്ഷസാഹിത്യചരിത്ര വിജ്ഞാനീയത്തിന്റെ കേരളീയ സാധ്യതകൾ തുടങ്ങിയവയാണ് പ്രബന്ധത്തിൽ ചർച്ച ചെയ്യുന്നത്.

1. ചരിത്രവിജ്ഞാനീയവും സ്ത്രീവാദവും

'ഭൂതകാലത്തോടുള്ള വർത്തമാനത്തിന്റെ നിലയ്ക്കാത്ത സംഭാഷണം' എന്നാണ് ചരിത്രത്തിന് ഇ.എച്ച്. കാർ നൽകുന്ന നിർവ്വചനം (1990:30). ചരിത്രം വർത്തമാനത്തിൽ നിന്നുകൊണ്ടുള്ള ചരിത്രരചയിതാവിന്റെ പ്രത്യയശാസ്ത്ര താൽപര്യങ്ങളുടെയും യുക്തികളുടെയും അടിസ്ഥാനത്തിലുള്ള ഭൂതകാല നിർമ്മിതിയാണെന്നത് അംഗീകരിക്കപ്പെട്ട വസ്തുതയാണ്. ആഖ്യാനരചനയുടെ കാലഘട്ടത്തിന്റെ പ്രതിനിധിയായ ചരിത്രരചയിതാവ് ആ കാലഘട്ടത്തിന്റെയും ചുറ്റുപാടുകളുടെയും ധാരണകളെയെല്ലാം ഉൾക്കൊണ്ടിരിക്കും. ഇവിടെയാണ് ചരിത്രനിർമ്മിതിയുടെ രചനാശാസ്ത്രത്തിന്റെ പ്രസക്തി. ചരിത്രമെന്ന ജ്ഞാനവിഷയം രൂപംകൊണ്ടശേഷം ചരിത്രമെഴുത്തിന്റെതന്നെ ചരിത്രവും അതിന്റെ നിർമ്മിതിക്കു പിന്നിലെ ഘടകങ്ങളും വിശകലനവിധേയമാക്കി പഠിക്കുന്ന ചരിത്രവിജ്ഞാനീയം ചിട്ടപ്പെടുമ്പോൾ ഇത്തരത്തിലുള്ള ആശയങ്ങളുടെ ചട്ടക്കൂട്ടിലാണ്.

മറ്റേതൊരു ജ്ഞാനവിഷയത്തെയുംപോലെ കാലത്തിലൂടെ പരിണമിച്ചാണ് പതിനെട്ടാം ശതകത്തിൽ ചരിത്രവും സവിശേഷമായ ഒരു ജ്ഞാനവിഷയമായി മാറുന്നത്. സാമൂഹ്യവും രാഷ്ട്രീയവും സാംസ്കാരികവുമായ മണ്ഡലങ്ങളിലെ മാറ്റങ്ങൾ ചരിത്രരചനയുടെ രീതികളെയും ആശയങ്ങളെയും സ്വാധീനിക്കുന്നു എന്ന അവബോധം ചരിത്രവിജ്ഞാനീയത്തിന്റെ ഒരു അടിസ്ഥാന സങ്കല്പമായി നിലനിൽക്കുന്നുണ്ട്. അതുകൊണ്ടാണ് കോളിൻവുഡിനെപ്പോലുള്ള ചരിത്രകാരന്മാർ സമകാലിക സമൂഹത്തിന്റെ പ്രതിനിധിയായും കാലഘട്ടത്തിന്റെയും ചുറ്റുപാടുകളുടെയും ഉല്പന്നമായും ചരിത്ര രചയിതാക്കളെ സ്ഥാനപ്പെടുത്തുന്നത്.¹ "ചരിത്രകാരന്റെ കാലഘട്ടത്തിന്റെ കാഴ്ചപ്പാടും ആദർശങ്ങളും രൂപപ്പെടുത്തിയ വീക്ഷണവും വിശദീകരണവുമായിരിക്കും ഭൂതകാലത്തെ സംബന്ധിച്ച് അദ്ദേഹം അവതരിപ്പിക്കുക. വർത്തമാനാവശ്യങ്ങളെ തൃപ്തിപ്പെടുത്തുക അല്ലെങ്കിൽ പുരിപ്പിക്കുക എന്നതായിരിക്കും ആ ചരിത്രരചനയുടെ പിന്നിലെ ഏക ഉദ്ദേശ്യം" (Collingwood R.G 2009:7) ചരിത്രരചനയെ സ്വാധീനിച്ച ഘടകങ്ങൾ, കാലഘട്ടത്തിന്റെ സ്വാധീനങ്ങൾ തുടങ്ങി വിവിധ ചരിത്രരചനാതത്വങ്ങളെ ഇത്തരത്തിൽ വിശകലനം ചെയ്യാൻ തുടങ്ങി.

'വസ്തുതകളല്ല, അവയുടെ വ്യാഖ്യാനമാണ് ചരിത്രം' എന്ന് ഇ.എച്ച്. കാർ അവതരിപ്പിച്ച നിരീക്ഷണം (1990:22) ചരിത്രരചയിതാവിനു ചരിത്രനിർമ്മിതിയിലുള്ള പങ്കാളിത്തത്തിന്റെ വ്യാപ്തിയെ വെളിപ്പെടുത്തുന്നു. സംഭവങ്ങളെ അപഗ്രഥിക്കാനും കൂട്ടിയിണക്കാനും ശ്രമിക്കുമ്പോൾ അതൊപ്പം വ്യാഖ്യാനം നിർവ്വഹിക്കപ്പെടുന്നു. ചരിത്രകാരനാണ് ചരിത്രം നിർമ്മിക്കുന്നത് എന്നു പറയുന്നതിനുകൊണ്ടാണ്. "ചരിത്രകാരന്റെ അനുഭവമാണ് ചരിത്രം. ചരിത്രകാരനല്ലാതെ മറ്റാരുമല്ല അത് സൃഷ്ടിക്കുന്നത്. ചരിത്രം രചിക്കുകയാണ് അത് സൃഷ്ടിക്കാനുള്ള ഒരേ ഒരു മാർഗ്ഗം" എന്ന ഓക്ഷോട്ടന്റെ അഭിപ്രായം 'എന്താണ് ചരിത്രം' എന്ന കൃതിയിൽ ഇ.എച്ച്. കാർ ഉദ്ധരിക്കുന്നുണ്ട് (2008:108). ചരിത്രാഖ്യാനത്തിലുള്ള ചരിത്ര രചയിതാവിന്റെ ഇത്തരം ഇടപെടലുകളാണ് ചരിത്രവിജ്ഞാനീയത്തെ സാധ്യമാക്കുന്നത്. ചരിത്രരചനയെക്കുറിച്ചുള്ള ആശയങ്ങളെയും ചരിത്രപഠനരീതികളെയും സാമൂഹ്യ-രാഷ്ട്രീയ- സാംസ്കാരിക മണ്ഡലങ്ങളിലെ മാറ്റങ്ങൾ സ്വാധീനിക്കുന്നുണ്ട്. ഇത്തരം സ്വാധീനങ്ങളെക്കുറിച്ചുള്ള അറിവാണു ചരിത്രവിജ്ഞാനീയം.

മനുഷ്യന്റെ സർവ്വമണ്ഡലങ്ങളിലെയും പ്രവർത്തനങ്ങൾ ഇന്ന് ചരിത്രപഠനത്തിന്റെ പരിധിയിൽ ഉൾപ്പെടുന്നുണ്ട്. രാഷ്ട്രീയ സംഭവവികാസങ്ങളെ മാത്രം ചരിത്രമായി കണ്ടിരുന്ന മുൻകാലചരിത്രങ്ങളിൽ നിന്നും വ്യത്യസ്തമായി ഇന്ന് നൂതന സിദ്ധാന്തങ്ങളുടെയും രീതിശാസ്ത്ര

തപശ്ചതീകളുടെയും വെളിച്ചത്തിൽ മനുഷ്യന്റെ എല്ലാ മണ്ഡലങ്ങളെയും പഠനവിധേയമാക്കുന്നുണ്ട്. സമൂഹത്തിൽ നടക്കുന്ന ഉല്പാദന വിതരണ പ്രവർത്തനങ്ങൾ, വാണിജ്യം, ജ്ഞാനോൽപാദനം, നിയമം, ആചാരങ്ങൾ, കലാരൂപങ്ങൾ, സാഹിത്യം, മാധ്യമങ്ങൾ ഇവയെല്ലാം ചരിത്രപഠനത്തിന്റെ പരിധിയിലെത്തി. സാഹിത്യത്തിന്റെ ചരിത്രപഠനത്തിനും ചരിത്രവിജ്ഞാനീയത്തിന്റെ സങ്കല്പനങ്ങളും ആശയങ്ങളും ഉപയോഗിക്കുന്നു. ആഖ്യാതാവിന്റെ യുക്തിയും പ്രത്യയശാസ്ത്രവും ചരിത്രത്തിലും സാഹിത്യചരിത്രത്തിലും ഉള്ളടങ്ങിയിരിക്കും. ചരിത്രസംഭവങ്ങളോളം ഭൗതികലോകത്തെ ബാധിക്കാത്തവയാണ് സാഹിത്യസംഭവങ്ങൾ. എങ്കിലും ഭൂതകാലത്തെ മാത്രം കൈകാര്യം ചെയ്യുന്ന ചരിത്രത്തെക്കാൾ ഒരേസമയം ഭൂതകാലത്തെയും വർത്തമാനകാലത്തെയും ഉൾക്കൊള്ളുന്ന സാഹിത്യചരിത്രങ്ങളുടെ വിശകലനത്തിനു പ്രസക്തി ഏറെയാണ്.

2. സാഹിത്യചരിത്രവിജ്ഞാനീയം

ഭൂതകാലത്തെ ക്രമബദ്ധമാക്കി പുരോഗതിയുടെ ഒരു കഥയാക്കി ആഖ്യാനം ചെയ്യുകയാണ് ഔദ്യോഗിക ചരിത്രത്തെപ്പോലെ സാഹിത്യചരിത്രങ്ങളും ചെയ്യുന്നത്. സാഹിത്യ സംഭവങ്ങളെയും രചനകളെയും സാഹിത്യചരിത്ര രചയിതാവ് കാലക്രമത്തിൽ നൈരന്തര്യത്തോടെ രേഖപ്പെടുത്തുന്നു. വർത്തമാനത്തിന്റെ കാലദേശ സന്ദർഭത്തിൽ നിന്നുകൊണ്ടാണ് ആഖ്യാതാവ് ഇത്തരത്തിലൊരു പൊതുചരിത്രം നിർമ്മിച്ചെടുക്കുന്നത്. ചരിത്രരചയിതാവിന്റെ യുക്തി സാംസ്കാരികമാണെന്നു പറയുന്നത് ഈ അർത്ഥത്തിലാണ്.

"സാഹിത്യചരിത്രം ഒരു ജ്ഞാനവിഷയമായി ആവിർഭവിക്കുന്നത് സാമൂഹ്യമേൽക്കോയ്മയുടെ ഉപാധികളിലാണ് എന്ന നിലയിൽ സാഹിത്യം ഉയർന്നു വന്നതോടെയാണ്"2 (Devy G.N 1998:5). സാഹിത്യചരിത്രത്തെക്കുറിച്ചുള്ള ആശയങ്ങളും ഉദാഹരണങ്ങളും അരിസ്റ്റോട്ടിൽ മുതൽക്കുള്ള വിമർശകചിന്തകരുടെ കൃതികളിൽ കാണാം. ഏതായാലും പത്തൊൻപതാം നൂറ്റാണ്ടിൽ ഒരു ജ്ഞാനവിഷയമായി ഇത് മാറിയപ്പോൾ അതിന്റെ തന്നെ ചരിത്രം പറയാൻ ഒരു ആരംഭഘട്ടം ആവശ്യമായി വന്നു. പതിനെട്ടാം നൂറ്റാണ്ടിലെ പുരാവസ്തുപഠന (Antiquarian Works) വുമായി ബന്ധപ്പെട്ടാണ് ഇത് രൂപംകൊണ്ടതെന്ന് പറയപ്പെടുന്നു (Perkins Devid 1992:1).3ഹെർഡർ, ഷെലഗൽസ് തുടങ്ങിയവരുടെ ആശയങ്ങൾ ചേർന്നതോടെ ജ്ഞാനോദ്യമഘട്ടത്തിൽ ഈ വിജ്ഞാനവ്യവസ്ഥ കൂടുതൽ ബൗദ്ധികമായി മാറി. നിരവധി സൈദ്ധാന്തികാശയങ്ങളും വ്യത്യസ്ത വിഷയങ്ങളും സാഹിത്യചരിത്രങ്ങളുടെ പരിണാമങ്ങൾക്കിടയാക്കി.

ചരിത്രപരമായ ആഖ്യാനത്തിൽ സംഭവങ്ങളുടെ കൃത്യമായ ക്രമീകരണം മാത്രമല്ല തെരഞ്ഞെടുപ്പുകളും പ്രതിനിധാനങ്ങളും പ്രകടമാണ്. ചരിത്രാഖ്യാനങ്ങളിലെ സംഭവങ്ങളുടെയും സന്ദർഭങ്ങളുടെയും സ്വീകാര്യതയ്ക്കും അസ്വീകാര്യതയ്ക്കും പിന്നിൽ നിശബ്ദമായി ആഖ്യാന നിർമ്മിതിയുടെ സാമാന്യനിയമങ്ങൾ പ്രവർത്തിക്കുന്നു. സമൂഹത്തിന്റെ സ്വത്വബോധമായി നിലനിൽക്കുന്ന ഈ സാമാന്യ നിയമങ്ങൾ പാഠങ്ങളുടെ തിരഞ്ഞെടുപ്പുകളിലും പ്രതിനിധാനങ്ങളിലും ഇടപെടുന്നു. വായനക്കാരുൾപ്പെട്ട ഒരു സമൂഹത്തിൽ പ്രവർത്തിക്കുന്ന ഈ സാമാന്യനിയമങ്ങൾ സാഹിത്യകൃതികളുടെ തെരഞ്ഞെടുപ്പുകളെ സ്വാധീനിക്കുന്നു. ഇവിടെയെല്ലാം ആഖ്യാതാവിന്റെ യുക്തി ഇടപെടുന്നതും കാണാം. ഇങ്ങനെ ചരിത്രാഖ്യാനങ്ങൾ എഴുതപ്പെടുന്നത് ചരിത്രരചയിതാവിന്റെ ബോധമണ്ഡലത്തിലും പ്രത്യയശാസ്ത്ര പരിസരത്തും നിന്നുകൊണ്ടായതിനാൽ വർഗം, ജാതി, ലിംഗം തുടങ്ങിയവയുമായി ബന്ധപ്പെട്ട വിഭജനങ്ങൾ ചരിത്രാഖ്യാനത്തിൽ പ്രതിഫലിക്കുന്നു.

സാഹിത്യചരിത്രവിജ്ഞാനീയം സാഹിത്യചരിത്രങ്ങളുടെ അടിസ്ഥാനസ്വഭാവങ്ങളെ വിമർശനാത്മകമായി അപഗ്രഥിക്കാൻ ശ്രമിക്കുന്നുണ്ട്. അതിൽ സുപ്രധാനമായ ഒന്ന് കാനോനീകരണമാണ്.4

സാഹിത്യചരിത്രങ്ങൾ പലപ്പോഴും കാനോനീകരണത്തിനു ഇടയാക്കുന്നുണ്ട്. സാമൂഹ്യപരമായ സ്വീകാര്യതയെയും അസ്വീകാര്യതയെയും നിർണ്ണയിച്ചുകൊണ്ട് സാഹിത്യ ഉല്പാദനത്തിന്റെ അതിരുകളെ നിർമ്മിക്കുകയും പുനർനിർമ്മിക്കുകയും ചെയ്യുന്ന പ്രക്രിയയാണിത്. സാഹിത്യ ചരിത്രത്തിൽ വിധിനിർണ്ണയങ്ങളും മൂല്യവിചാരങ്ങളും ഉള്ളടങ്ങിയിരിക്കും. ചരിത്രരചയിതാവ് ജീവിക്കുന്ന കാല-ദേശ-രാഷ്ട്ര സംബന്ധിയായ സാമൂഹ്യ മൂല്യങ്ങളായിരിക്കും ഇവയ്ക്കെല്ലാം അടിസ്ഥാനമായി നിൽക്കുക. ആഖ്യാതാവിന്റെ കാലദേശത്തോട് ബന്ധപ്പെടുത്തി കൃതികളെ അവഗണിക്കുന്നതും മഹത്വവൽക്കരിക്കുന്നതും സ്വാഭാവികമായി മാറുന്നത് ഇങ്ങനെയാണ്. പല കൃതികളും സാഹിത്യത്തിനു മുതൽക്കൂട്ടാണെന്നു സ്ഥാപിച്ചെടുക്കാനുള്ള ബാധ്യതകളും ചരിത്രരചയിതാക്കൾ പേറേണ്ടിവരുന്നു. ഈ മട്ടിൽ കൃതികളെ ഒന്ന് മറ്റൊന്നിനേക്കാൾ മെച്ചം/മോശം എന്നു തരംതിരിക്കാനും മികവനുസരിച്ച് വർഗീകരിക്കാനും ശ്രേണീകരിക്കാനും സാഹിത്യചരിത്രങ്ങൾക്കു ബാധ്യതയുണ്ടാകുന്നു. ഇതിന്റെ സ്വാഭാവികമായ അനന്തരഫലമാണ് 'സാഹിത്യനായക നിർമ്മിതി'.

ആഖ്യാനാത്മക സാഹിത്യചരിത്രത്തിന്റെ സാധ്യമായ മൂന്നു പ്ലോട്ടുകളെക്കുറിച്ച് ഡേവിഡ് പെർക്കിൻസ് പറയുന്നതിപ്രകാരമാണ്.

1. Rise (ഉന്നതി)
2. Decline (പതനം)
3. Rise and Decline (ഉന്നതിയും പതനവും) (1992:39)

'കേന്ദ്രനായകത്വം' സാഹിത്യചരിത്രനിർമ്മാണ പ്രക്രിയയിൽ ഉള്ളടങ്ങിയിരിക്കുന്നു എന്നാണ് ഈ വർഗീകരണം തെളിയിക്കുന്നത്. ഈ കേന്ദ്രനായകത്വത്തിന്റെ പ്രവർത്തനങ്ങളെ ആശ്രയിച്ച് ജനുസ്സ്, ശൈലി എന്നിവ ക്രമീകരിക്കുന്നു. സാഹിത്യനായകത്വത്തെ കേന്ദ്രസ്ഥാനത്തു നിർത്തി ഇതര സാഹിത്യകർതൃത്വങ്ങളെ ശ്രേണീബദ്ധമായി അവതരിപ്പിക്കുന്ന രീതി ചരിത്രരചയിതാവ് സ്വീകരിക്കുന്നു. ഇത്തരത്തിൽ ദേശ-കാലപരമായി നിലനിൽക്കുന്ന സൗന്ദര്യാത്മക യുക്തികൾക്കു കീഴടങ്ങി ചരിത്രരചയിതാവ് കാനോനീകരണം നടത്തുന്നു.

സാഹിത്യചരിത്രങ്ങളുടെ മറ്റൊരു സ്വഭാവം ഘട്ടവിഭജനമാണ്. നിയതമായ ക്രമത്തിൽ വികാസ പരിണാമങ്ങളുടെ ചരിത്രം രേഖപ്പെടുത്താൻ ചരിത്രരചയിതാവ് ആശ്രയിക്കുന്നത് ഘട്ടവിഭജന യുക്തിയാണ്.⁵ ഘട്ടവിഭജനം, സാഹിത്യത്തിന് അതുവരെയില്ലാത്ത ഒരു ആഭ്യന്തരപ്പൊരുത്തവും തുടർച്ചയും നൽകുന്നു. സാഹിത്യചരിത്രത്തിലെ ഘട്ടവിഭജനത്തെ ചരിത്രരചയിതാവ് സ്വീകരിക്കുന്നത് ആഖ്യാനസന്ദർഭത്തോട് ബന്ധപ്പെട്ടായിരിക്കും. സാഹിത്യീയമായ വർഗീകരണങ്ങൾ നടത്താൻ ഒരു പ്രാരംഭസ്ഥാനം നിർണ്ണയിച്ച് സവിശേഷമായ ആരംഭഘട്ടം കണ്ടെടുക്കാൻ ചരിത്രരചയിതാവ് ശ്രമിക്കുന്നു.

സാഹിത്യചരിത്രങ്ങൾ കേവലമായ സാഹിത്യചരിത്ര വിവരണമല്ല. ദേശ-ഭാഷാ ചരിത്രങ്ങളും സാഹിത്യചരിത്രങ്ങളിൽ ഉള്ളടങ്ങിയിരിക്കും. ഭാഷയുടെ വികാസപരിണാമ ഘട്ടങ്ങളും സാഹിത്യത്തോടും ഭാഷയോടും ബന്ധപ്പെട്ടു കിടക്കുന്ന ദേശചരിത്രവും സാഹിത്യചരിത്രങ്ങളുടെ ഭാഗമാണ്. പല സാഹിത്യചരിത്രങ്ങളും അവയുടെ ലക്ഷ്യമായി സ്വീകരിക്കുന്നത് സംഭവവിവരണമാണ്. എന്നാൽ എന്ത് സംഭവിച്ചു എന്നതിനപ്പുറം എങ്ങനെ സംഭവിച്ചു എന്നുകൂടി പറയുന്നിടത്താണ് ചരിത്രരചന പൂർത്തിയാവുക. എങ്ങനെ സംഭവിച്ചു എന്ന ചരിത്രപരമായ അന്വേഷണമാണ് ദേശ-ഭാഷാ ചരിത്രങ്ങളുടെ ആഖ്യാനത്തിലേക്ക് ചരിത്രരചയിതാവിനെ നയിക്കുന്നത്.

ഇത്തരത്തിൽ ഭൂതകാലത്തെ മനസിലാക്കാനോ പുനർനിർമ്മിക്കാനോ ശ്രമിക്കുന്ന സാഹിത്യചരിത്രങ്ങളിൽ ചിത്രകാരൻ ഒരു ന്യായാധിപന്റെ ദൗത്യംകൂടി നിർവ്വഹിക്കേണ്ടതുണ്ട്. വർത്തമാനത്തിന്റെ ധാരണകളിൽ നിന്നുകൊണ്ടുള്ള വിശകലനവും വിമർശനവും സാഹിത്യചരിത്രങ്ങളുടെ കർത്തവ്യമാണ്. അങ്ങനെ വരുമ്പോൾ സാഹിത്യമണ്ഡലത്തിലെ പല ചർച്ചാവിഷയങ്ങളെയും വിലയിരുത്താനും തെളിവുകളുടെ അടിസ്ഥാനത്തിൽ യഥാതഥമായവയെ സ്ഥാപിച്ചെടുക്കാനും ആഖ്യാതാവ് ശ്രമിക്കുന്നു. നിലവിലുള്ള വിശദീകരണങ്ങളെക്കാൾ പ്രബലമായ മറ്റൊന്നവതരിപ്പിച്ചുകൊണ്ട് വാദഗതികൾ നിരത്തി വിശ്വാസയോഗ്യമാക്കി വസ്തുതകൾ അവതരിപ്പിക്കുന്നു. സാഹിത്യചരിത്രങ്ങൾ സാഹിത്യവിമർശനംകൂടി ഉൾക്കൊള്ളുന്നതിന്റെ പശ്ചാത്തലം ഇതാണ്. വിമർശനാത്മക അപഗ്രഥനം സാഹിത്യ കൃതികളുടെ മൂല്യപരതയുടെ വിലയിരുത്തൽ കൂടിയാകുന്നു.

ചരിത്രരചനകളെ അവയുടെ രീതിയും ലക്ഷ്യവും കണക്കാക്കി മൂന്നു വിധത്തിൽ വർഗീകരിക്കാറുണ്ട്.

1. വിവരണാത്മകം
2. അപഗ്രഥനാത്മകം
3. ആഖ്യാനാത്മകം (Eiton G.R 2002:108)

വിവരണാത്മക ചരിത്രങ്ങൾ കാലത്തിലുണ്ടാക്കിയ പരിണാമങ്ങളൊന്നും സൂചിപ്പിക്കാതെ ഭൂതകാലത്തെ പ്രതിഫലിപ്പിക്കുന്ന ആഖ്യാനങ്ങളാണ്. ഭൂതകാലത്തെ അപഗ്രഥിച്ചുകൊണ്ട് ശാസ്ത്രീയമായി രേഖപ്പെടുത്തുന്ന ചരിത്രമാണ് അപഗ്രഥനാത്മകം. കഥപറയുന്ന രീതിയിൽ ഭൂതകാലത്തെ ആവിഷ്കരിക്കുന്നവയാണ് ആഖ്യാനാത്മക ചരിത്രങ്ങൾ.⁶

സാഹിത്യചരിത്രങ്ങളുടെ പ്രധാന ദൗത്യങ്ങളെക്കുറിച്ച് ഡേവിഡ് പെർക്കിൻസ് സുദ്ദീർഘമായി പ്രതിപാദിക്കുന്നുണ്ട്. "സാഹിത്യചരിത്രം സാഹിത്യവിമർശനം കൂടിയാണ്. ഭൂതകാലത്തെ മനസിലാക്കുകയോ പുനർനിർമ്മിക്കുകയോ മാത്രമല്ല അതിന്റെ ലക്ഷ്യം. സാഹിത്യജീവിതത്തിനു അസ്തിത്വം നൽകുക, രചയിതാക്കളെയും കൃതികളെയും സമാനതകളും വൈവിധ്യങ്ങളും അടിസ്ഥാനമാക്കിക്കൊണ്ട് ചരിത്രവൽക്കരിക്കുക, കൃതികളുടെ പ്രാധാന്യം എന്ത്?, വായിക്കപ്പെട്ടത് എങ്ങനെ? എഴുത്തിനു പിന്നിലെ കാരണങ്ങൾ എന്ത്? എത്ര സാധീനം ചെലുത്തി? തുടങ്ങിയ ചോദ്യങ്ങൾക്കുത്തരം കണ്ടെത്തുക തുടങ്ങി നിരവധി ദൗത്യങ്ങൾ സാഹിത്യചരിത്രങ്ങൾ നിർവ്വഹിക്കേണ്ടതായുണ്ട്" (1999:177).

ഇങ്ങനെയുള്ള ദൗത്യങ്ങൾ നിറവേറ്റുമ്പോൾ പോലും സാഹിത്യചരിത്രങ്ങൾ ഒരു പൂർണ്ണതയിലെത്തില്ല. സാഹിത്യചരിത്രങ്ങളെ സംബന്ധിച്ച് ഈ അപൂർണ്ണത സാർവ്വലൗകികമായി അംഗീകരിക്കപ്പെട്ടതാണ്. "സാഹിത്യചരിത്രരചയിതാക്കളും സൈദ്ധാന്തികരും തിരിച്ചറിഞ്ഞിട്ടുള്ളതുപോലെ പ്രതിനിധാനവും വിശകലനവും ഒരിക്കലും പൂർണ്ണമാകില്ല. പ്രസക്തമായ എല്ലാ വിവരങ്ങളും ഉത്തരങ്ങളും അറിയാമെങ്കിലും അതെല്ലാം ഒരൊറ്റ ഗ്രന്ഥത്തിലേക്കൊതുക്കാൻ ചരിത്രരചയിതാവിനു സാധിക്കില്ല" (Devid Perkins 1992: 13).⁷

3. സ്ത്രീചരിത്രങ്ങളും സ്ത്രീവാദ ചരിത്രവിജ്ഞാനീയവും

ചരിത്രം യാഥാർത്ഥ്യങ്ങളുടെ പൂർണ്ണമായ വീണ്ടെടുക്കലല്ല എന്ന അറിവിൽനിന്നു ചരിത്രവിജ്ഞാനീയം രൂപപ്പെട്ടപ്പോൾ മുതൽ ചരിത്രത്തിലെ വിടവുകളെ നികത്താനും

നിഷ്കാസിതരുടെ ചരിത്രം കണ്ടെത്താനും ശ്രമങ്ങളാരംഭിച്ചു.ചരിത്രാഖ്യാതാവ് ഏതാനും പ്രത്യയശാസ്ത്ര ധാരണകളോടെ രചിക്കുന്ന ഇത്തരം ചരിത്രത്തിൽ തിരസ്കരിക്കപ്പെട്ട സ്ത്രീചരിത്രത്തെ കണ്ടെത്താനുള്ള ശ്രമങ്ങളുടെ ഭാഗമായാണ് ഫെമിനിസ്റ്റ് ഹിസ്റ്റോറിയോഗ്രഫി രൂപം കൊണ്ടത്.* ഭൂതകാല ചരിത്രത്തെ ലഭ്യമായ തെളിവുകളുടെ അടിസ്ഥാനത്തിൽ പുനർനിർമ്മിച്ചെടുക്കേണ്ട ബാധ്യത മാത്രമേ തങ്ങൾക്കുള്ളൂ എന്നായിരുന്നു സാമ്പ്രദായിക ചരിത്രരചയിതാക്കളുടെ പക്ഷം. എന്നാൽ സ്ത്രീവാദചിന്തകളുടെ ഒരു വർത്തമാന സാഹചര്യം രൂപപ്പെട്ടപ്പോൾ സ്ത്രീകളുടെ ചരിത്രങ്ങളും അതേക്കുറിച്ചുള്ള പഠനങ്ങളും ഉണ്ടായി. അതുകൊണ്ടാണ് ലൊറൈൻ കോഡ് ഇങ്ങനെ നിരീക്ഷിക്കുന്നത്: "ചരിത്രമെഴുത്തിൽ ഒരു രാഷ്ട്രീയതയുണ്ട്. ഭൂതകാലത്തെ നിർമ്മിച്ചെടുക്കാൻ ചരിത്രരചയിതാക്കൾ സ്വീകരിച്ചിരിക്കുന്ന വിഷയത്തെ സംബന്ധിച്ചുള്ള തെരഞ്ഞെടുപ്പിൽനിന്നും തെളിവുകളെ വിശകലനം ചെയ്യുന്നതിൽ നിന്നും വർത്തമാനസാഹചര്യത്തിൽ പ്രസക്തമെന്ന് അവർ മനസ്സിലാക്കിയിരിക്കുന്നത് എന്തെന്ന് കാണാം. ഭൂതമെന്ന് ചരിത്രരചയിതാക്കൾ പരിഗണിച്ചതിൽ തെരഞ്ഞെടുപ്പുകൾ ഉള്ളടങ്ങിയിരിക്കും" (2000:249).

ചരിത്രപരമായ ഈ തിരിച്ചറിവിൽ നിന്നാണ് ചരിത്രരചയിതാക്കൾ തമസ്കരിച്ച വിഭാഗങ്ങളുടെ ചരിത്രാനുഭവങ്ങൾ ആരംഭിക്കുന്നത്. "ചരിത്രത്തിൽ പുരുഷന്മാരേയുള്ളൂ, പുരുഷന്മാർ" എന്നു ഇരുപതാം നൂറ്റാണ്ടിലും മുറവിളികളു യർനപ്പോൾ ചരിത്രരചകളുടെ സമഗ്രതയിൽ ഒരു സ്ത്രീപോലും ദൃശ്യമല്ലെന്നും ബഹുഭൂരിപക്ഷം സ്ത്രീകളും പുരുഷന്മാരുടെ ജീവിതത്തെക്കുറിച്ചുള്ള സാമാന്യ വിവരണങ്ങൾക്കിടയിൽ നിശബ്ദരും അദൃശ്യരുമാണെന്ന് പെൺബോധം ഉണർന്നു. ചരിത്രത്തിൽ ഇടം നേടിയവർ തന്നെ അവരവരുടെ സ്വത്വബലത്തിൽ അടയാളപ്പെടുത്തി. ഇതിനു തെളിവാണ് ഈ ആമുഖക്കുറിപ്പ്: "പ്രശസ്തരായ ആളുകളുടെ അമ്മ, മകൾ, ഭാര്യ എന്നീ വിശേഷ പദവികളെങ്കിലും ചുരുക്കം ചില സ്ത്രീകൾ ദൃശ്യരാണ്. 16-ാം നൂറ്റാണ്ടിലെ യൂറോപ്പിലെ രാജാക്കന്മാർ അല്ലെങ്കിൽ 19-ാം നൂറ്റാണ്ടിലെ അമേരിക്കൻ സാമൂഹ്യപരിഷ്കർത്താക്കൾ തുടങ്ങിയ അസാധാരണ വ്യക്തിത്വങ്ങൾക്ക് സ്ഥാനം കിട്ടി. പലപ്പോഴും സ്വന്തം വ്യക്തിത്വത്തെക്കാളും പാരമ്പര്യത്തിന്റേയോ പുരുഷസ്വഭാവത്തിന്റേയോ പേരിലാണ് ഇവർ വാഴ്ത്തപ്പെട്ടത്" (Judith P. Zinsser 1993:3).

സ്ത്രീവാദത്തിന്റെ ആരംഭകാലത്താണ് സ്ത്രീകളുടെ ജീവിതത്തെക്കുറിച്ച് ചരിത്രങ്ങൾ ഉണ്ടായിവരുന്നത്. ഇത് ശക്തിമത്തായത് 1960-70 കാലത്താണ്. പിന്നീട് അതുവരെയുണ്ടായിരുന്ന ചരിത്രധാരണകളെ തിരുത്തിക്കുറിക്കുന്ന സ്ത്രീചരിത്രങ്ങൾ രചിക്കപ്പെട്ടു. മാനവികതയുടെ മുഴുവൻ ചരിത്രവും സാർവ്വലൗകിക ചരിത്രവുമെല്ലാം പുരുഷന്റേതു മാത്രമായിരുന്നിടത്ത് സ്ത്രീയുടെ വിവിധ മേഖലകളിലെ ചരിത്രങ്ങൾ രചിക്കപ്പെട്ടു.

പുരുഷാധിപത്യപരമായ ഒരു സാമൂഹ്യക്രമത്തിൽ സ്ത്രീക്ക് നഷ്ടമായ ചരിത്രത്തെ വീണ്ടെടുക്കുകയാണ് ഫെമിനിസ്റ്റ് ഹിസ്റ്റോറിയോഗ്രഫി പ്രധാനമായും ചെയ്യുന്നത്. സ്ത്രീകളെ മുഖ്യധാരയിൽ പ്രതിഷ്ഠിക്കുന്നതിനപ്പുറം പുരുഷനിർമ്മിത ചരിത്രങ്ങളുടെ സ്ത്രീവിരുദ്ധമായ സങ്കല്പങ്ങളെ ചോദ്യം ചെയ്യുക എന്നതും സ്ത്രീവാദചരിത്രവിജ്ഞാനീയത്തിന്റെ പ്രവർത്തനമാണ്. ഡിസ്കവറിങ്ങ് വിമൻസ് ഹിസ്റ്ററി എന്ന ഗ്രന്ഥത്തിന്റെ ആമുഖക്കുറിപ്പിൽ ബിലോ ദെൽദേർ ഈ ആശയം വ്യക്തമാക്കുന്നുണ്ട്. "ഞങ്ങൾ കേവലം സ്ത്രീകളെ മുഖ്യധാരയിലെത്തിക്കുകയല്ല ചെയ്യുന്നത്. പുരുഷന്റെ ചരിത്രത്തിന് അടിസ്ഥാനധാരണകളായി നിൽക്കുന്നവയെ ഏതാനും പ്രശ്നങ്ങളുന്നയിച്ച് പുനഃപരിശോധിക്കുകയും സ്ത്രീകൾ കൂടി ഉൾപ്പെടുന്നവിധം സമ്പൂർണതയിലേക്ക് ചരിത്രത്തെ രൂപാന്തരപ്പെടുത്തുകയുമാണ് ചെയ്യുന്നത്" (1998:5).

പൊതുവും രാഷ്ട്രീയവുമായ ചരിത്രത്തിൽ നിന്നും കുടുംബകേന്ദ്രീകൃതമായ അനുഭവങ്ങളിലേക്ക് ശ്രദ്ധ തിരിക്കുന്ന പുതിയ തരത്തിലുള്ള സാമൂഹ്യചരിത്രമാണ് സ്ത്രീചരിത്രങ്ങൾ കൊണ്ട്

കണ്ടെത്തിയത്. കുടുംബത്തെയും അനുഭവങ്ങളെയും കേന്ദ്രീകരിക്കുന്ന അറുപതുകളിലെ ചരിത്രരചന എഴുപതുകളിലെത്തിയപ്പോൾ പൂർണ്ണമായും സ്ത്രീകേന്ദ്രമായി മാറി. "ചരിത്രത്തിന്റെ മറുപാതി തുറക്കപ്പെട്ടു" എന്നാണ് ഈ പശ്ചാത്തലത്തിൽ ജോൺ കെല്ലി അഭിപ്രായപ്പെട്ടത്(1984:15).

ഫെമിനിസ്റ്റ് ഹിസ്റ്റോറിയോഗ്രഫിയെക്കുറിച്ചുള്ള ഒരു നിർവ്വചനം മൂണാളിനി സിൻഹ ഉദ്ധരിക്കുന്നതിങ്ങനെയാണ്.11 "വിസ്തൃതമായ ഒരുകൂട്ടം സാമൂഹ്യ ബന്ധങ്ങളാലും ചരിത്രസന്ദർഭങ്ങളാലും നിർമ്മിക്കപ്പെട്ടതാണ് ലിംഗഭേദമെന്നും സ്ത്രീയെന്നും ഉള്ള ആശയങ്ങളെ തിരസ്കരിക്കുന്ന ചരിത്രവിജ്ഞാനീയത്തെ പുനർവിചിന്തനത്തിനു വിധേയമാക്കുന്നതാണ് ഫെമിനിസ്റ്റ് ഹിസ്റ്റോറിയോഗ്രഫി" (ദേവിക ജെ 2000:477). കേവലം സ്ത്രീകളെ ചരിത്രത്തിൽ ഉൾക്കൊള്ളിക്കലോ, പ്രത്യേക മുന്നേറ്റങ്ങളിലെ സ്ത്രീപങ്കാളിത്ത പരിശോധനയോ അല്ല ഫെമിനിസ്റ്റ് ചരിത്രവിജ്ഞാനീയം. അതിലുപരി ചരിത്ര പുനർനിർമ്മിതികളോടുള്ള ഒരു സംവാദരീതിയാണ്. ഇവിടെ ലിംഗ, വർണ്ണ, വർഗഭേദങ്ങളെല്ലാം ചോദ്യം ചെയ്യപ്പെടുന്നു. അതുവരെ രേഖപ്പെടാതെയും ദൃശ്യമാകാതെയും മറഞ്ഞിരുന്ന സ്ത്രീസ്വത്വത്തെ കണ്ടെത്തി ആവിഷ്കരിക്കുകയാണ് സ്ത്രീവാദ ചരിത്രവിജ്ഞാനീയം ചെയ്യുന്നത്.

എഴുപതുകളിൽ സ്ത്രീചരിത്രങ്ങളുടെ ആരംഭഘട്ടത്തിൽ ഫെമിനിസ്റ്റ് പ്രവർത്തകർ തന്നെയാണ് സ്ത്രീചരിത്രങ്ങളെഴുതിയത്. ഇതേത്തുടർന്ന് ഫ്രഞ്ച് യൂണിവേഴ്സിറ്റികൾ ഈ മേഖലയിലെ വിവിധ വിഷയങ്ങളിൽ പഠനങ്ങൾ നടത്തി. മുഖ്യമായും രണ്ടു ലക്ഷ്യങ്ങളിലൂന്നിക്കൊണ്ടായിരുന്നു പഠനം.

1. ലിംഗവ്യത്യാസം കൊണ്ട് നിഷ്കാസിതകളായ സ്ത്രീകളെ ചരിത്രത്തിൽ മുഖ്യസ്ഥാനത്തെത്തിക്കുക.
2. പുരുഷമേൽക്കോയ്മയ്ക്ക് വിധേയപ്പെട്ട സ്ത്രീകളനുഭവിച്ച ചൂഷണങ്ങളെയും ദുരിതങ്ങളെയും പ്രകടമാക്കുക (ദേവിക ജെ 2000:567).

പിതൃ ആധിപത്യം, ലിംഗപദവി എന്നിവ കേന്ദ്രീകരിച്ചുള്ള പഠനങ്ങൾ വന്നതോടെ ഫെമിനിസ്റ്റ് ഹിസ്റ്റോറിയോഗ്രഫി വിപുലമായി. ലിംഗഭേദം, ലിംഗപദവി തുടങ്ങിയവ പ്രശ്നവൽക്കരിക്കാനും ഇത്തരം ധാരണകൾ സമൂഹത്തിൽ എങ്ങനെ, എപ്പോൾ ഉണ്ടായി എന്നിങ്ങനെയുള്ള ചോദ്യങ്ങളുണ്ടാകാനും സ്ത്രീചരിത്രങ്ങളും ചരിത്രവിജ്ഞാനീയവും തയ്യാറായി. സമൂഹത്തിൽ നിലനിൽക്കുന്ന സ്ത്രീവിരുദ്ധ സ്ഥാപനങ്ങളെക്കുറിച്ചും അവയുടെ ചരിത്രപരമായ രൂപീകരണത്തെക്കുറിച്ചും ഇത്തരം ഗ്രന്ഥങ്ങൾ ചർച്ചചെയ്തു.

1980-കൾ മുതൽ ഇന്ത്യയിലെ സ്ത്രീചരിത്രപഠനങ്ങൾ നിഷ്പക്ഷചരിത്രത്തിലെ തമസ്കരണങ്ങളെ ചോദ്യം ചെയ്തു തുടങ്ങിയിരുന്നു. ഈ പശ്ചാത്തലത്തിൽ സ്ത്രീചരിത്രപഠനങ്ങൾ ഉന്നയിച്ച പ്രധാന പ്രശ്നങ്ങളെക്കുറിച്ച് ജെ. ദേവിക സൂചിപ്പിക്കുന്നുണ്ട്. ദേവികയുടെ നിരീക്ഷണത്തിൽ നിന്നും സ്ത്രീചരിത്ര ഗവേഷകരുമായിച്ച പ്രശ്നങ്ങളെ ഇങ്ങനെ ക്രോഡീകരിക്കാം.

- ഭാരതത്തിന്റെ പുരാതനകാലം, ഇന്ത്യൻ സ്വാതന്ത്ര്യസമരചരിത്രം മുതലായ വിഷയങ്ങളെക്കുറിച്ച് നിലവിലുള്ള ചരിത്രരചനകൾ സ്ത്രീകളുടെ പങ്കാളിത്തത്തെ എത്രത്തോളം അംഗീകരിക്കുന്നുണ്ട്?
- ഇന്ത്യയുടെ വിവിധ ഭാഗങ്ങളിലെ സമൂഹത്തിന്റെ സംസ്കാരങ്ങളുടെയും രാഷ്ട്രീയരംഗത്തിന്റെയും ചരിത്രങ്ങളിൽ സ്ത്രീകളുടെ നില എന്തായിരുന്നു?
- കുടുംബജീവിതത്തിലും തൊഴിലിടങ്ങളിലും പൊതുരംഗത്തും സാംസ്കാരിക കാര്യങ്ങളിലുമുണ്ടായ മാറ്റങ്ങൾ സമൂഹത്തിന്റെ പല തട്ടുകളിലെ സ്ത്രീകളെ എങ്ങനെ ബാധിച്ചു?
- അവരുടെ സമരങ്ങളും ചെറുത്തുനിൽപ്പും ഏതു വിധത്തിലുള്ളതായിരുന്നു?

- ആണത്തം മുതലായ സങ്കല്പങ്ങൾ ഇന്നത്തെപ്പോലെ ആയിരുന്നോ? അവ മാറിയിട്ടുണ്ടോ?
- ആൺ-പെൺ ഭേദത്തെക്കുറിച്ചുള്ള ധാരണകൾ എങ്ങനെ രൂപപ്പെട്ടു? സമൂഹത്തിന്റെ വിവിധ മേഖലകളിലേക്ക് ഈ ധാരണകൾ പടർന്നതെങ്ങനെ? (ദേവിക ജെ 2010:19).

സാമ്പ്രദായിക ചരിത്രം സ്ത്രീകളുടെ ചരിത്രാനുഭവങ്ങളെ അടയാളപ്പെടുത്താൻ ശ്രമിച്ചില്ല. സാമൂഹിക മാറ്റങ്ങളെക്കുറിച്ച് പറയുമ്പോൾ പോലും അത് സ്ത്രീകളെ എങ്ങനെ ബാധിച്ചു അന്വേഷണം ചരിത്രരചയിതാക്കൾ നടത്തിയില്ല. പുരുഷാധിപത്യമൂല്യങ്ങളെ മാനദണ്ഡമാക്കിക്കൊണ്ട് സ്ത്രീവിരുദ്ധമായ നിഗമനങ്ങളിലേക്കേ അവർക്ക് എത്തിച്ചേരാൻ കഴിഞ്ഞുള്ളൂ. ഇതിനെല്ലാം ബദൽ നിർമ്മിച്ചുകൊണ്ട് ചരിത്രത്തിന്റെ ഇരുളടഞ്ഞ ഭാഗത്തേക്കു വെളിച്ചം വീശുകയാണ് സ്ത്രീചരിത്രങ്ങൾ ചെയ്യുന്നത്.

4. സാഹിത്യചരിത്രവും സ്ത്രീവാദവിമർശനവും-കേരളീയപരിസരം

"അവൾ എല്ലാമാണ് എന്നാൽ ചരിത്രത്തിൽ അദൃശ്യയാണ്" എന്ന വെർജീനിയ വുൾഫിന്റെ പ്രയോഗം ചരിത്രത്തിൽ സ്ത്രീക്കു സംഭവിച്ച തമസ്കരണത്തെയാണ് സൂചിപ്പിക്കുന്നത്¹²(Anne Commire 1999:7) സാഹിത്യചരിത്രങ്ങളെ സംബന്ധിച്ചും ഇത് ശരിയാണെന്നു കാണാം.

ചരിത്രത്തെപ്പോലെ സാഹിത്യചരിത്രങ്ങളും സാഹിത്യത്തിന്റെയോ കലയുടെയോ ഒരു പൂർണ്ണചരിത്രം നൽകുന്നില്ല എന്ന തിരിച്ചറിവാണ് സാഹിത്യചരിത്രവിജ്ഞാനീയത്തിന്റെ അന്തഃസത്ത. ഇവിടെയും ആഖ്യാതാവിന്റെ പ്രത്യയശാസ്ത്ര യുക്തികൾക്കനുസരിച്ച് വർത്തമാന താൽപര്യങ്ങൾക്ക് വിധേയമായി കൊണ്ടുള്ള തെരഞ്ഞെടുപ്പുകളും ഒഴിവാക്കലുകളും പ്രകടമാണ്. "സാഹിത്യചരിത്രരചന തെരഞ്ഞെടുപ്പുകളും സാമാന്യവൽക്കരണങ്ങളും ക്രമീകരണങ്ങളും ഉൾക്കൊള്ളുന്നുണ്ട്. വിവരിക്കാനാവുന്നവിധം ചെറിയ ഭൂതകാലസമയത്തിലെ ഏതാനും ചില കൃതികളും വിശ്വാസയോഗ്യമായ സംഭവങ്ങളുമാണ് ഏതെങ്കിലും പ്രാതിനിധ്യത്തെ അടയാളപ്പെടുത്താൻ സ്വീകരിക്കുക" (David Perkins 1992:19).

സാഹിത്യചരിത്രങ്ങളിലൂടെ ആഖ്യാതാവ് നിർമ്മിച്ചെടുക്കുന്നതായിരിക്കും സാഹിത്യമായി സ്ഥാപിക്കപ്പെടുക. അതുകൊണ്ടുതന്നെ സാഹിത്യചരിത്രങ്ങളുടെ നിരീക്ഷണങ്ങളും വിലയിരുത്തലുകളും സാഹിത്യമെന്ന വ്യവഹാരത്തിന്റെ വിവിധ തരത്തിലുള്ള പൊതുധാരണകളെ രൂപപ്പെടുത്തുന്നു. തമസ്കരണങ്ങളും ബലപ്പെടുത്തലുകളും പ്രസക്തമാകുന്നത് ഈ പശ്ചാത്തലത്തിലാണ്. സാഹിത്യചരിത്രങ്ങൾ തിരസ്കരിച്ച സ്ത്രീ, ദളിത് ഇടങ്ങളെ വീണ്ടെടുക്കാനുള്ള ഉത്തരാധുനിക ശ്രമങ്ങൾ വരുന്നതും ഇങ്ങനെയാണ്.

മലയാളസാഹിത്യചരിത്രങ്ങൾ പരിശോധിച്ചാൽ പുരുഷക്കാഴ്ചയുടെ സ്ത്രീതമസ്കരണങ്ങൾ കാണാൻ കഴിയും. പത്തൊൻപതാം നൂറ്റാണ്ടു മുതൽ സ്ത്രീകളെഴുതിയ സാഹിത്യകൃതികൾ പുറത്തുവന്നെങ്കിലും സാഹിത്യചരിത്രങ്ങളിലെല്ലാം അവ ഇടം നേടിയില്ല. എഴുത്ത്, വായന, അച്ചടി, പ്രസാധനം, പൊതുമണ്ഡലം, വിപണി തുടങ്ങി സാഹിത്യത്തിന്റെയും സമൂഹത്തിന്റെയും സമസ്തമണ്ഡലങ്ങളിലും വ്യാപിച്ചിരുന്ന ലിംഗാധികാരത്തെ പ്രശ്നവൽക്കരിക്കുമ്പോഴാണ് സ്ത്രീരചനകളുടെയും അവയുടെ പ്രതിനിധാനങ്ങളുടെയും തിരസ്കരണത്തിന്റെ കാരണങ്ങൾ വ്യക്തമാവുക. എഴുത്തിനെ മാധ്യമമാക്കി സമൂഹത്തോട് എതിരിടാൻ ആരംഭിക്കുന്ന ആദ്യകാല എഴുത്തുകാരികളെ അവഗണിച്ചതിനെക്കുറിച്ചുള്ള നിരീക്ഷണങ്ങൾ തമസ്കരണത്തിന്റെ ഒരു കാരണത്തിലേക്ക് വിരൽ ചൂണ്ടുന്നുണ്ട്. "അക്ഷരം, അറിവ് തുടങ്ങിയ 'കണ്ണുതുറപ്പിക്കുന്ന' മേഖലകൾ സ്ത്രീകൾക്ക് അന്യമാക്കി വയ്ക്കേണ്ടത് സമൂഹത്തിന്റെ പരമ്പരാഗത മൂല്യസങ്കല്പത്തിനു ഏറ്റവും ആവശ്യമായിരുന്നു. ആദ്യകാല

എഴുത്തുകാരികൾ സാഹിത്യത്തെ സമീപിച്ചത് വൈയക്തികാവിഷ്കാര മാധ്യമം എന്നതിലുപരി നിലനിന്നിരുന്ന സാമൂഹിക-സാമ്പത്തിക-സദാചാര വ്യവസ്ഥകളോടുള്ള കലഹം എന്ന നിലയിൽ കൂടിയിരുന്നു" (രശ്മി ബിനോയ് 2008: 74).

സാഹിത്യചരിത്രാഖ്യാനങ്ങൾക്കു പിന്നിൽ വർഗം, ലിംഗം തുടങ്ങിയ ഘടകങ്ങളുൾപ്പെട്ട പ്രത്യയശാസ്ത്രധാരണകൾ പ്രവർത്തിക്കുന്നതുകൊണ്ട് ദളിത്, സ്ത്രീ വിഭാഗങ്ങളുടെ സാഹിത്യത്തെ നിരസിക്കുന്നത് ലാഘവത്തോടെയാണ്. രാഷ്ട്രീയ പ്രത്യയശാസ്ത്രങ്ങളും സൗന്ദര്യശാസ്ത്ര സങ്കല്പങ്ങളും മൂല്യബോധവുമെല്ലാം സാഹിത്യമെന്ന വ്യവഹാരത്തിലേക്ക് സ്ത്രീ, ദളിത് രചനകളെ സ്ഥാനപ്പെടുത്തുന്നതിൽ നിന്നും ആഖ്യാതാവിനെ തടയുന്നു. ഇവിടെയാണ് ആഖ്യാതാവിന്റെ കർത്യത്വംതന്നെ പ്രശ്നവൽക്കരിക്കേണ്ടി വരുന്നത്. മേരി ഈഗിൾട്ടൺ സാഹിത്യത്തെക്കുറിച്ചുള്ള സ്ത്രീവാദചിന്തകൾ അവതരിപ്പിക്കുമ്പോൾ ഈ പ്രശ്നത്തെ സൂക്ഷ്മമായി അപഗ്രഥിക്കുന്നുണ്ട്. "ഈ പ്രശ്നം കേവലം ആർ പ്രതിനിധാനം ചെയ്യപ്പെട്ടു എന്നതല്ല. മറിച്ച് ആർ പ്രതിനിധാനം ചെയ്തു എന്നതും അത് എങ്ങനെയാണ്, ഏത് വ്യവഹാരത്തിലൂടെയാണ്, അതിലെ അധികാരവിതരണം എങ്ങനെയാണ്, നൽകിയിരിക്കുന്ന പ്രാധാന്യം എത്രത്തോളമാണ് എന്നതെല്ലാം ഉൾപ്പെടും" (Mary Eagleton 2003:170).

പ്രതിനിധാനം ചെയ്യപ്പെട്ടതിലെ വിശകലന യുക്തികളും സ്ത്രീവാദ സൈദ്ധാന്തിക പരിസരത്തുനിന്നുള്ള വീക്ഷണത്തിൽ പുരുഷാധിപത്യപരമാണെന്നു കാണാം. സൗന്ദര്യാനുഭവം ഉൾപ്പെടെയുള്ള സാഹിത്യഘടകങ്ങളിലെല്ലാം പുരുഷതാൽപര്യങ്ങളാണ് പ്രവർത്തിച്ചിരുന്നത്. സ്ത്രീവേദഗുണങ്ങളെ പ്രസരിപ്പിക്കുന്ന സ്ത്രീരചനകളെ മാത്രം സ്ഥാനപ്പെടുത്താനും അങ്ങനെ സദാചാരമൂല്യങ്ങളെ ഊട്ടിയുറപ്പിക്കാനുമായിരുന്നു സാഹിത്യചരിത്രരചയിതാക്കളുടെ മുഖ്യ പരിശ്രമം. സ്ത്രീകളുടെ എഴുത്തിനെക്കുറിച്ച് ആദ്യകാല വിമർശകരുടെ അഭിപ്രായങ്ങളെല്ലാം ഇത്തരത്തിലുള്ളതായിരുന്നു.¹³

സി.എസ്. ചന്ദ്രിക, ജെ.ദേവിക തുടങ്ങിയവരുടെ സ്ത്രീചരിത്രപഠനത്തിൽ പുരുഷാധിപത്യത്തോട് എഴുത്തിലൂടെ കലഹിച്ച സ്ത്രീകളെക്കുറിച്ച് പറയുന്നുണ്ട്. എന്നാൽ ഇവരാരും സാമ്പ്രദായിക ചരിത്രങ്ങളിൽ ഇടം നേടിയതായി കാണുന്നില്ല.¹⁴ സ്ത്രീപക്ഷത്തുനിന്നു വിലയിരുത്തുമ്പോഴും സ്ത്രീചരിത്രങ്ങളുടെ വീണ്ടെടുപ്പ് സാധ്യമാകുമ്പോഴുമാണ് ഇത്തരത്തിലുള്ള വിവേചനങ്ങൾ തെളിഞ്ഞുവരിക. സ്ത്രീപങ്കാളിത്തം കുറഞ്ഞതുകൊണ്ടാണ് ചരിത്രത്തിലവർ ഇടം നേടാത്തതെന്ന വാദങ്ങൾക്കു ബലമില്ലാതെ വരുന്നതും ഈ സാഹചര്യത്തിലാണ്. സ്ത്രീപങ്കാളിത്തം കുറവിന്റെ പിന്നിൽ പ്രവർത്തിച്ച ഘടകങ്ങൾ കണ്ടെത്തിയാൽത്തന്നെ നിലനിന്നിരുന്ന ലിംഗാധിപത്യ ക്രമങ്ങളുടെ സാമൂഹ്യ ഇടപെടലുകൾ കൂടുതൽ വ്യക്തമാകും. ചുരുക്കത്തിൽ ചരിത്രങ്ങളുടെ പൂരണങ്ങൾക്കും തമസ്കരണങ്ങളുടെ വീണ്ടെടുപ്പിനും സ്ത്രീപക്ഷത്തു നിന്നുകൊണ്ടുള്ള സാഹിത്യചരിത്രപഠനങ്ങൾ അനിവാര്യമാണ്. അതുകൊണ്ടാകാം താൻ കണ്ടിട്ടുള്ളതിൽവെച്ച് ഭൂതകാലത്തെക്കുറിച്ച് കൂടുതൽ വ്യക്തമായ ചിത്രം നൽകുന്നത് മറ്റേതൊരു സാഹിത്യചരിത്രത്തെക്കാളും സ്ത്രീവാദ സാഹിത്യചരിത്രമാണെന്നു ഡേവിഡ് പെർക്കിൻസ് പറയാൻ കാരണം (1992:123).

സ്ത്രീവാദവും ചരിത്രവിജ്ഞാനീയവും സമന്വയിപ്പിച്ചുകൊണ്ട് എന്തുകൊണ്ട് സ്ത്രീകളുടെ ചരിത്രം ഇല്ലാതായി എന്ന അന്വേഷണം ഈ കാലഘട്ടത്തിന്റെ ആവശ്യമാണ്. ഇത്തരത്തിൽ സാഹിത്യചരിത്രത്തിൽനിന്നും നിഷ്കാസിതരായ സ്ത്രീ പ്രതിനിധാനങ്ങളെ കണ്ടെത്താനും

അതിനു പിന്നിലെ പ്രത്യയശാസ്ത്ര ഘടകങ്ങളെ ആ മട്ടിൽ പരിശോധിക്കാനും മറഞ്ഞിരിക്കുന്ന സ്ത്രീചരിത്രത്തെ തിരിച്ചെടുത്തു പ്രതിഷ്ഠിക്കാനും സ്ത്രീവാദ പരിപ്രേക്ഷ്യത്തിലൂടെ സാഹിത്യചരിത്ര വിജ്ഞാനീയം സാധ്യതയൊരുക്കുന്നു.

മലയാളത്തിലെ സാഹിത്യചരിത്രങ്ങളിൽ ഇത്തരമൊരു വിശകലനത്തിനിടമുണ്ടെങ്കിലും 'കേരള സാഹിത്യചരിത്ര'ത്തെക്കുറിച്ചുള്ള പി. ഗീതയുടെ 'ഉള്ളൂരിന്റെ സാഹിത്യചരിത്രവും എഴുത്തുകാരികളും' എന്ന ഒരു ലേഖനത്തിൽ മാത്രമേ ഈയൊരു വീക്ഷണം അവതരിപ്പിച്ചു കാണുന്നുള്ളൂ. പ്രധാനമായും രണ്ടു നിഗമനങ്ങൾ ഈയൊരു പഠനത്തിൽ കാണുന്നത് ഇങ്ങനെ ക്രോഡീകരിക്കാം.

1. ഉള്ളൂർ എഴുത്തുകാരികളെ ചരിത്രവൽക്കരിച്ചിരിക്കുന്നത് അവരുടെ കൃതികളുടെ അടിസ്ഥാനത്തിലല്ല. രാജവംശങ്ങളുമായോ സാഹിത്യവാസനയുള്ള ബന്ധുമിത്രാദികളുമായോ ഉള്ള ബന്ധത്തിന്റെ അടിസ്ഥാനത്തിലാണ്.

2. എഴുത്തുകാരികളുടെ വ്യക്തിജീവിതത്തിനു പ്രാധാന്യം കൊടുത്തുകൊണ്ട് മാതൃകാഗുണങ്ങളെക്കുറിച്ച് പ്രസ്താവിക്കുകയാണ് ഉള്ളൂർ ചെയ്തിരിക്കുന്നത് (പി. ഗീത 1999:283-84).

രണ്ടു ഘടകങ്ങളുടെ നിരീക്ഷണമാണ് ഇവിടെ നടന്നതെങ്കിലും സ്ത്രീവാദത്തിന്റെ പിൻബലത്തിൽ സാഹിത്യചരിത്രവിജ്ഞാനീയത്തെ സമീപിച്ചു കൊണ്ട് സാഹിത്യചരിത്രരചയിതാവിന്റെ ആഖ്യാന യുക്തിയെക്കുറിച്ച് വിശദമായ ഒരു വിലയിരുത്തൽ ലേഖനത്തിൽ കാണാം. "സാഹിത്യകാരന്മാരിൽ നിന്നു വ്യത്യസ്തമായി സാഹിത്യകാരികളെ ഇങ്ങനെ വിലയിരുത്താൻ ഒരു സാഹിത്യചരിത്രത്തെ പ്രേരിപ്പിക്കുന്നതിന്റെ കാരണം ചരിത്രബാഹ്യമല്ല. നിലനിന്നുപോന്ന കോയ്മവ്യവസ്ഥ കൾക്കു വഴങ്ങിയാണ് സാഹിത്യചരിത്രം രേഖപ്പെടുന്നത്. വർഗപരവും വർണ്ണപരവും ലിംഗപരവുമായ ആധിപത്യങ്ങളോട് ഉള്ളൂരിന്റെ കേരളസാഹിത്യചരിത്രം ചെറുതായിപ്പോലും ഒന്നു കലഹിച്ചിട്ടില്ലെന്നു വ്യക്തം. സ്ഥാനികളായ സവർണകളും പുരുഷാധിപത്യവ്യവസ്ഥയ്ക്ക് പ്രിയങ്കരമായ സദാചാരനിരതകളും ആയിരുന്ന എഴുത്തുകാരികൾക്കു മാത്രമേ, അവർ എഴുതിയില്ലെങ്കിൽപ്പോലും സാഹിത്യചരിത്രത്തിൽ സ്ഥാനം കിട്ടിയുള്ളൂ" (Ibid: 284).

ഉള്ളൂരിന്റെ കേരളസാഹിത്യചരിത്രത്തിനു മുൻപുവന്ന പി. ഗോവിന്ദപ്പിള്ളയുടെ മലയാളഭാഷാചരിത്രം (1881) മുതൽ മലയാളത്തിലുണ്ടായിട്ടുള്ള ഒട്ടുമിക്ക സാഹിത്യചരിത്രങ്ങളിലും ചരിത്രരചയിതാക്കൾ ബോധ പൂർവ്വമോ അബോധപൂർവ്വമോ ആയി സ്ത്രീരചനകളെ അവഗണിക്കുന്നതും പുരുഷകേന്ദ്രിതമാനദണ്ഡങ്ങൾ വച്ച് വിലയിരുത്തി പാർശ്വവൽക്കരിക്കുന്നതും കാണാം. എന്നാൽ ഇത്തരത്തിലുള്ള അന്വേഷണങ്ങൾ സാഹിത്യചരിത്രങ്ങളെ സംബന്ധിച്ചുണ്ടായിട്ടില്ല.

മലയാളത്തിലെ ആദ്യ സാഹിത്യചരിത്രംതന്നെ സ്ത്രീകൾ മുഖ്യമായും ഏർപ്പെട്ടിരിക്കേണ്ട ഇടങ്ങളെ സ്ഥാപിച്ചെടുത്തുകൊണ്ടുള്ളതായിരുന്നു. കുട്ടിക്കുഞ്ഞിത്തങ്കച്ചിയുടെ സാഹിത്യരചനകളെക്കുറിച്ച് പറയുമ്പോൾ ഗൃഹഭരണാദികളിൽ ചിലവഴിക്കേണ്ട അവരുടെ സമയത്തെ ഗ്രന്ഥരചനയിൽക്കൂടി ഉപയോഗിക്കുന്നതിൽ ഗോവിന്ദപ്പിള്ള ആശ്ചര്യപ്പെടുന്നത് കാണാം.¹⁵ 1955-ൽ പുറത്തിറങ്ങിയ ഉള്ളൂരിന്റെ സാഹിത്യചരിത്രം രേഖപ്പെടുത്തിയ എഴുത്തുകാരികൾ ആകെ പന്ത്രണ്ടു പേർ. എന്നാൽ യഥാർത്ഥ സ്ത്രീചരിത്രം അക്കാലത്തെ സാമൂഹ്യ-സാഹിത്യമണ്ഡലങ്ങളിലെ നിരവധി എഴുത്തുകാരികളെ വെളിപ്പെടുത്തും.

ഉപസംഹാരം

ലഭ്യമായ ചരിത്രപഠനങ്ങളിൽ സ്ത്രീസാന്നിധ്യം വിരളമായിരിക്കുന്നതും സ്ത്രീ പ്രതിനിധാനം പുരുഷകേന്ദ്രിത മൂല്യതാൽപര്യങ്ങളുടെ അതിർത്തികൾക്കുള്ളിലായിരിക്കുന്നതും സ്ത്രീവാദസന്ദർഭത്തിൽ പ്രസക്തമായിത്തീർന്ന വിഷയങ്ങളാണ്. സ്ത്രീയുടെ പങ്കാളിത്തക്കുറവാണ് ചരിത്രത്തിലെ അവളുടെ അസാന്നിധ്യത്തിനു കാരണമായി പൊതുവിൽ അവതരിപ്പിക്കാറുള്ളത്. യഥാർത്ഥത്തിൽ പൊതു-സ്വകാര്യ ഇടങ്ങളെ വേർതിരിച്ചുകൊണ്ട് സ്ത്രീയെ സാംസ്കാരിക-സാഹിത്യ പൊതുമണ്ഡലത്തിൽ നിന്നും മാറ്റിനിർത്തിയ പുരുഷകേന്ദ്രിത അന്തരീക്ഷമാണ് സ്ത്രീയെ രാഷ്ട്രീയ പൊതുമണ്ഡലത്തിൽ നിന്നും അകറ്റിയത്. സ്ത്രീപക്ഷസാഹിത്യചരിത്രവിജ്ഞാനീയം എന്ന രീതി ശാസ്ത്രത്തെ ഫലപ്രദമായി ഉപയോഗപ്പെടുത്തിയാൽ ഇപ്പോൾ അദ്യശ്യമായി നിൽക്കുന്ന ചരിത്രത്തിന്റെ മറുപാതി തുറക്കപ്പെടും.

സ്ത്രീചരിത്രങ്ങളുടെ വീണ്ടെടുപ്പിനു ഒരു പുതിയ സമീപനരീതി ചരിത്രങ്ങൾ സ്വീകരിക്കേണ്ടിയിരിക്കുന്നു. 2010-ൽ പുറത്തിറങ്ങിയ സജിതമാത്തിലിന്റെ 'മലയാള നാടകസ്ത്രീചരിത്രം' ലിംഗപരമായ അധീശരീതിശാസ്ത്രത്തിന് ഒരു ബദൽ രീതിശാസ്ത്രം മുന്നോട്ടു വയ്ക്കുന്നുണ്ട്. സാഹിത്യത്തെയും കലയെയും ചരിത്രത്തെയും സംബന്ധിച്ച പുരുഷസൗന്ദര്യ ശാസ്ത്രധാരണകളെ നിരാകരിക്കുന്നതുകൊണ്ട് സജിതയുടെ നാടകചരിത്രത്തിലെ സ്ത്രീ പ്രതിനിധാനം ഏറെക്കുറെ പൂർണ്ണമാകുന്നു. ചരിത്രത്തിലേക്ക് സ്ത്രീകൾ കടന്നുവരുന്നതിന്റെ സൂചനകളും സ്ത്രീചരിത്ര വീണ്ടെടുപ്പിനു വേണ്ട രീതിശാസ്ത്രപരവും പ്രത്യയശാസ്ത്രപരവുമായ പൊളിച്ച്ച്ചെടുത്തുകളും സാധ്യമാകുന്നതിന്റെ അടയാളങ്ങളും ഇവിടെ കാണാം.

നന്ദി

പ്രബന്ധരചനയ്ക്ക് മാർഗനിർദ്ദേശം നൽകിയ കാലടി ശ്രീ ശങ്കരാചാര്യ സംസ്കൃതസർവ്വകല മലയാളവിഭാഗത്തിലെ ഡോ.ഷാജി ജേക്കബിന് കൃതജ്ഞത രേഖപ്പെടുത്തുന്നു.

കുറിപ്പുകൾ

1. "Like a literature, a historian is also a representative of his/her contemporary society. He is a product of indispensability of time and circumstances. He views and explains the past from the viewpoint of his age and its contemporary values. The only purpose of his scripting history is to fulfill the contemporary needs" (R.G. Collingwood, 2009: vii).
2. "The emergence of literary history as a 'Subject' is intimately linked with the rise of literature as a means of social domination ". 'The Rise of English Literary History' പുസ്തകത്തിലെ Rene Wellek ന്റെ ആശയമാണ് G.N. Devy ഇവിടെ കടംകൊരിക്കുന്നത്.
3. "Hence it was and is usually said that literary history began in antiquarian works of eighteenth century".
4. "Conventionally, the history of a literature is viewed as the history of the formation of canon and its subsequent transformations. The process of canon formation implies acts of inclusion and exclusion of literary texts, trends and traditions. One of the prime factors motivating these acts is the dominant ideological position with in a given culture. When this position changes, there is a corresponding change in the literary canon. Thus formations of literary canons reflect the formation and transformation of ideological positions and power relations" (G.N. Devy, 1998: 84).

5. “Classifications are themselves organising principles with culturally determined, often hidden, agendas. As we shall see, the classifier is not a neutral commentator, but someone entangled in the politics of literary reception” (Keith Green and Jill Lebchan (ed.), 1996: 108).
6. “Description attempts to display a manifestation of the past without giving it the dimension of a change in time” (G.R. Eiton 2002: 108).
“Analysis is still fundamentally static but sets the situation or thing described in a widened context of adjoining situations and things, studied interrelations, and attempts to establish causal connections and motions (Ibid : 109)”. Narrative tells the story and it is not material how long the time span may be (Ibid : 109).
7. “Of course representation and explanation can never be complete, as literary historians and theorists have always recognized. Even if a historian knew all the relevant facts and answers, he could not crowd them into a book” (Perkins David 1992: 13).
8. ‘Feminism & History’ എന്ന പുസ്തകത്തിൽ Joan Wallach Scott പറയുന്നതിങ്ങനെയാണ് : “At the Same time, however, and as part of the aim of recovering women’s past, feminist history analysis the conditions which have or have not produced a shared identity of women by examining the different contexts in which women have lived, the different ways in which they have experienced their lives, the different influences of their acquiescence or resistance to the rules societies have elaborated for their behaviour” (5).
9. ‘ചരിത്രത്തിൽ പുരുഷന്മാർ മാത്രമെയുള്ളൂ’ എന്ന വാക്യം David Hackdt Fischer ന്റെ ‘Historians fallacies : Toward a Logic of Historical Thought’ (Harper and Row Newyork, 1970 : 217) എന്ന പുസ്തകത്തിലാണുള്ളത്.
10. “Open (ed) up the other half ” എന്നാണ് ജോൺ കെല്ലി അഭിപ്രായപ്പെട്ടത്. ‘The social Relations of the sex: Methodological Implications of Women’s History in women’, *History and Theory: The Essays of Joan Kelly* (1984: 15).
11. Kumkum Sangari, Sudesh Vaid എന്നിവരുടെ നിർവ്വചനമാണ് മൂന്നാളിനി സിൻഹ ഉദ്ധരിക്കുന്നത്: “A feminist historiography rethinks historiography as a whole and discards the idea of women as something to be framed by a context, in order to be able to think of gender difference as both structuring and structured by the wide set of social relations”.
12. Writes Verginia Woolf: “Imaginatevely she is of the highest importance practically she is completely insignificant. She prevades poetry from cover to cover, she is all but absent from history” (Anne Comire, 1999: vii).
13. സി.പി. അച്യുതമേനോന്റെ വിമർശനങ്ങൾ ഇത്തരത്തിലുള്ളതാണ്. വിദ്യാവിനോ ദിനിയിൽ 1891-ൽ തോട്ടയ്ക്കാവ് ഇക്കാവമ്മയുടെ ‘സുഭദ്രാർജ്ജുന’ത്തെക്കുറിച്ച് ചുളള നിരൂപണത്തിൽ ഇങ്ങനെയാരു ഭാഗമുണ്ട്. ‘ഗൃഹകൃത്യാനുഷ്ഠാനങ്ങൾ കൊണ്ടും സൗന്ദര്യശീലാദി ഗുണങ്ങൾകൊണ്ടും തൃപ്തിയടയാത്ത സാമർത്ഥ്യക്കാരികളാണ് സാഹിത്യരചനയ്ക്കു തുനിയുന്നതെന്ന് അദ്ദേഹം സൂചിപ്പിച്ചു (ദേവിക ജെ, 2010, ഭാഷാപോഷിണി, 36).

- 14. ജെ. ദേവികയുടെ 'കല്പനയുടെ മാറ്റൊലി' എന്ന പുസ്തകത്തിൽ ഇത്തരം എഴുത്തുകാരികളുടെ ചരിത്രത്തിന്റെ വീണ്ടെടുപ്പുകൾ കാണാം.
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DIELECTRIC PROPERTIES OF DYSPROSIUM DOPED COBALT FERRITE NANOPARTICLES

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Abstract

A series of dysprosium substituted cobalt ferrite nanoparticles $\text{CoFe}_{2-x}\text{Dy}_x\text{O}_4$ (with $x=0.00$ to 0.25 in steps of 0.05) have been prepared through the sol-gel technique. The effect of dysprosium substitution on electrical properties of cobalt ferrite has been investigated. X-Ray diffraction analysis confirmed the formation of spinel structure in all the samples. The lattice parameter is observed to increase with dysprosium ion concentration up to $x=0.20$. The variation of dielectric permittivity with frequency showed normal behaviour for ferrites and is in agreement with Koops phenomenological theory. Dielectric permittivity and loss are found to decrease by dysprosium addition and this is explained in terms of the decrease in hopping rate due to the substitution of Fe^{3+} ions by Dy^{3+} ions on the octahedral sites. The reduced dielectric parameters can make these ferrites useful in high frequency applications.

Keywords: Nanomaterials, Ferrite, rare earth doping, dielectric properties

Introduction

Nanocrystalline ferrites are important magnetic materials and recently attracted a great deal of attention due to wide range of technological applications. Ferrites are extensively used in electronic devices because they reduce energy losses by the induced currents. Among the various ferrite materials, cobalt ferrite is a well known material with high coercivity, moderate saturation magnetization, high chemical stability and mechanical hardness. The substitution of rare-earth ions into the ferrite spinel structure can induce strain and thus significantly modify the electrical properties (Ge et al., 2004). Ferrites substituted with rare earth ions have been reported for applications in high density magnetic recording and enhanced magnetic storage, magnetic fluids and catalysts (Sattar et al., 2002; Rao et al., 2006). There are several reports on the structural and magnetic properties of rare earth doped ferrites (Liping et al., 2010; Jianhong et al., 2011; Tahar et al., 2007). However, electrical properties of rare earth doped ferrites have seldom been reported. Therefore a systematic study on the electrical properties of dysprosium doped cobalt ferrite has significance.

The present report deals with the effect of dysprosium (Dy^{3+}) substitution on the dielectric properties of sol – gel synthesized nanocrystalline cobalt ferrite.

Materials and Methods

Dysprosium doped cobalt ferrite nanoparticles $\text{CoFe}_{2-x}\text{Dy}_x\text{O}_4$ (with $x=0.00$ to 0.25 in steps of 0.05) were synthesized by the sol-gel combustion method. Stoichiometric ratios of AR grade cobalt nitrate ($\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$), dysprosium nitrate ($\text{Dy}(\text{NO}_3)_3 \cdot x\text{H}_2\text{O}$) and ferric nitrate ($\text{Fe}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$) were dissolved in

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minimum amount of ethylene glycol using a magnetic stirrer. The solution was heated at 333 K until a wet gel of the metal nitrate was obtained. Further heating of the gel at 473 K resulted in the self ignition and a highly voluminous and fluffy product is obtained. This powder was ground well using an agate mortar and then sintered for 4 hours in a muffle furnace at 773 K. For dielectric measurements, cylindrical disc shaped pellets of the samples (13mm diameter and 2-3 mm thickness) were made using a hydraulic press by applying a uniform pressure of 5 tons. These pellets were sintered in air at 773 K for 10 hours and were subsequently cooled.

The dysprosium doped cobalt ferrite samples were characterized by using X-ray powder diffractometer (XRD, Bruker AXS D8 Advance) using Cu-K α radiation ($\lambda = 1.5406 \text{ \AA}$) at 40 kV and 35 mA. The average value of lattice parameter 'a' of each sample was calculated using the following equation

$$a = d_{hkl} \sqrt{h^2 + k^2 + l^2} \quad (1)$$

where d_{hkl} is the interplanar spacing for the peak indexed with (hkl). The crystallite size, D can be evaluated from the XRD pattern, by determining the full width at half maximum (*FWHM*) for the main (311) peak.

$$D = \frac{K\lambda}{\beta \cos \theta} \quad (2)$$

where K is the shape factor ($K \approx 1$), λ is the wavelength of the X-radiation and β is the angular width (in radians) which is equal to the *FWHM*. The X-ray density of the samples was calculated using the formula

$$\rho_x = \frac{8M}{Na^3} \quad (3)$$

where M is the molecular weight (Kg) of the sample, N is Avogadro's number and 'a' is the lattice parameter(\AA). Bulk densities of the samples were determined using the formula

$$\rho_b = \frac{m}{\pi r^2 h} \quad (4)$$

where 'm' is the mass (Kg), 'r' is the radius (m) and 'h' is the height of the pellet (m). Percentage of porosity was calculated using the following formula,

$$P = \left(1 - \frac{\rho_b}{\rho_x} \right) 100 \quad (5)$$

Dielectric measurements were carried out using precision impedance analyzer (Wayne Kerr 6500B) in the frequency range 20Hz to 20MHz at different temperatures. Silver coating was done on the faces of cylindrical disc shaped pellets of the samples to make parallel plate capacitor geometry with the ferrite material as the dielectric medium. The relative dielectric permittivity of the samples were calculated using the relation,

$$\epsilon_r = \frac{Cd}{\epsilon_0 A} \quad (6)$$

where C is the measured value of capacitance, d is the thickness of the pellet, A is the surface area and ϵ_0 is the dielectric permittivity of free space.

Results and Discussion

Structural analysis

XRD patterns of $\text{CoFe}_{2-x}\text{Dy}_x\text{O}_4$ (with $x=0.00$ to 0.25 in steps of 0.05) is shown in Figure 1. The patterns were compared with standard data (ICDD File No. 22-1086) and the formation of spinel structure is confirmed in all the samples. Smitha et al., (2013) have reported the formation of secondary phase of rare earth

oxides in samples with higher doping concentrations (for $x > 0.2$). However, in the present study, we observed a negligible presence of DyFeO_3 in samples with dysprosium content above $x = 0.2$. The crystallite size of the samples is observed to increase slightly with dysprosium concentration. The increase in the crystallite size with doping concentration can be considered as a good indication of improved crystallinity and great chemical homogeneity. Similar results have been reported (Pawan et al., 2010; Binu et al., 2010; Tahar et al., 2008). The value of lattice parameter for the doped samples is observed to be larger than that of undoped cobalt ferrite. It is known that the ionic radius of rare earth ions is larger than that of Fe^{3+} . Therefore the replacement of smaller Fe^{3+} ions (0.0645nm) at the octahedral site by larger Dy^{3+} ions (0.0912nm) causes an expansion of unit cell, as a result of an internal stress in the lattice. The increase in lattice parameter with Dy concentration is in agreement with the results reported for rare earth doped ferrites (Ahmed et al., 2005; Ishaque et al., 2010). For higher concentrations of dysprosium doping a slight decrease in the lattice parameter was noticed. This decrease may be due to the transfer of Co^{2+} ions from octahedral sites to tetrahedral sites, when the dysprosium content exceeds $x = 0.20$ (Khan et al., 2009). The lattice parameter, average crystallite size and densities obtained for all the samples are given in Table 1.

Table 1. Effect of Dy^{3+} doping on the lattice parameter, crystallite size and X-ray density of $\text{CoFe}_{2-x}\text{Dy}_x\text{O}_4$ system

Dy Content x	Lattice parameter (Å)	Crystallite size (nm)	X-ray density (gcm^{-3})	Bulk density (gcm^{-3})	Porosity (%)
0.00	8.341	16.55	5.371	3.862	28.08
0.05	8.345	18.62	5.486	3.717	32.24
0.10	8.350	20.04	5.598	3.690	34.08
0.15	8.353	22.70	5.713	3.581	37.31
0.20	8.358	23.63	5.824	3.561	38.84
0.25	8.354	23.80	5.948	3.566	40.05

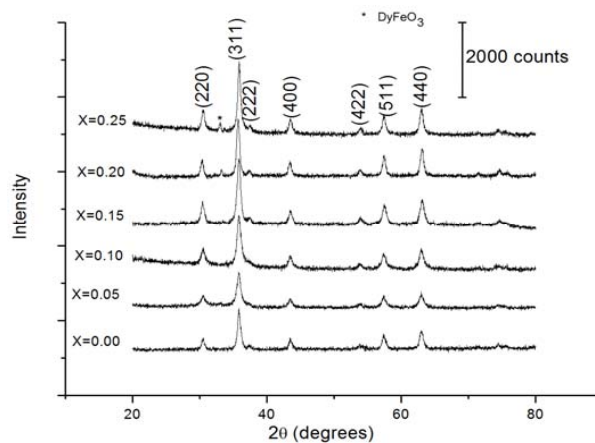


Figure 1. XRD pattern of $\text{CoFe}_{2-x}\text{Dy}_x\text{O}_4$ system

The study of the density and porosity becomes important for probing into the electrical properties of the prepared samples. $P = \left(1 - \frac{\rho_x}{\rho_b}\right) 100$ The X-ray density (ρ_x), bulk density (ρ_b) and percentage porosity of the studied samples are tabulated in Table 1. The X-ray density increases

linearly with dysprosium ion content as it depends mainly on the molecular weight of the sample. It can be observed that the magnitudes of bulk densities are smaller than that of the corresponding X-ray densities. This difference in magnitude may be attributed to the existence of pores in the bulk samples. Porosity is expected to decrease with increase in particle size; however in the present system of doped cobalt ferrites, porosity increases. This may be ascribed to the increase in X-ray density with Dy³⁺ concentration.

Dielectric properties

For most solids, there is no net separation of positive and negative charges; that there is no net dipole moment. The molecules of solids are arranged in such a way that the unit cell of the crystal has no net dipole moment. If such a solid is placed in electric field then the field is induced in the solid which opposes the applied electric field. This field arises from the two sources, a distortion of the electron cloud of the atoms or molecules and a slight movement of the atoms themselves. The average dipole moment per unit volume induced in the solid is the electrical polarization and is proportional to electric field applied. The polarizability (α) of the dielectric is defined by

$$p = \alpha E$$

where p is the dipole moment induced by local electric field, E . Polarizability has four possible contributors and is given by the summation:

$$\alpha = \alpha_e + \alpha_i + \alpha_d + \alpha_s$$

where α_e is electronic polarizability, α_i ionic polarizability, α_d dipolar polarizability and α_s space charge polarizability. The electronic polarizability is caused by a slight displacement of the negatively charged nucleus. The ionic polarizability arises from a slight relative displacement or separation of anions and cations in a solid. It is the principal source of polarization in ionic crystals. Dipolar polarizability is present in materials with permanent electric dipoles which change their orientation with the applied electric field and align themselves along the applied field. Ferrites are dipolar due to the presence of majority Fe³⁺ and minority Fe²⁺ ions. The rotational displacements of the dipoles result in orientational polarization. The rotation of Fe³⁺-Fe²⁺ dipoles may be visualized as the exchange of electrons between the ions so that the dipoles align themselves with the applied field. The existence of inertia to the charge movement would cause relaxation of the polarization.

The variation of real part of dielectric permittivity with frequency at room temperature is depicted in Figure 2. It can be seen that dielectric permittivity exhibits an inverse dependence on frequency as reported for various ferrites. It decreases with frequency and remains a constant at higher frequencies. This is the normal dielectric behaviour of spinel ferrites and is also observed by several investigators (Binu et al., 2013; Gul et al., 2008; Rezlescu et al., 1994). It is also reported that the interfacial and dipolar polarization contribute to the overall dielectric properties of the ferrite. The decrease in permittivity with frequency can be explained on the basis of Koops theory (Koops 1951) which considers the dielectric structure as an inhomogeneous medium of two layers of the Maxwell – Wagner type (Wagner 1913). According to this model, the dielectric material is composed of two layers, in which the good conducting grains are separated by poorly conducting grain boundaries. During the hopping process, electrons have to pass through the grains and grain boundaries of the dielectric medium. It is well known that grain boundaries are more effective at low frequencies, but grains are effective at high frequencies. At low frequencies, electrons accumulate on the grain boundaries and produce space charge polarization which results in high value of dielectric permittivity. As the frequency

increases conducting grains come into action and dielectric permittivity reduces rapidly due to decrease in space charge polarization. According to Rezlescu model (Rezlescu 1974), the polarization can be explained based on conduction process which involves the electron hopping between Fe^{2+} and Fe^{3+} ions and hole hopping between Co^{2+} and Co^{3+} ions in the octahedral sites. At higher frequencies electron/hole exchange will not be able to follow the applied electric field thus resulting in a decrease in polarization. Consequently the dielectric permittivity attains a constant value at higher frequencies. When dysprosium is doped in the system, it occupies the octahedral site in the ferrite system, decreasing the Fe^{3+} ion number responsible for polarization in the ferrite system. As a consequence rate of hopping decreases and hinder the conduction mechanism. Hence the value of dielectric permittivity decreases with increase of Dy^{3+} content in the present system. This can also be attributed to the increased porosity of the dysprosium doped samples. The dielectric permittivity of the sample with $x=0.25$ is observed to be larger than that for $x=0.2$ and this may be attributed to the change in resistivity of the sample. It is reported that dielectric permittivity is inversely proportional to the square root of resistivity in ferrites (Shaikh 1999). Dielectric permittivity and dielectric loss values measured at room temperature at selected frequencies is presented in Table 2.

Table 2. Effect of Dy^{3+} doping on electrical and dielectric parameters of $\text{CoFe}_{2-x}\text{Dy}_x\text{O}_4$ system

Dy Content x	Dielectric permittivity		Dielectric loss	
	10kHz	10MHz	10kHz	10MHz
0.00	22.07	8.13	1.18	0.21
0.05	19.72	7.53	1.14	0.20
0.10	17.99	7.05	0.90	0.15
0.15	12.76	5.61	0.78	0.13
0.20	10.52	4.00	0.63	0.12
0.25	11.47	4.00	0.70	0.12

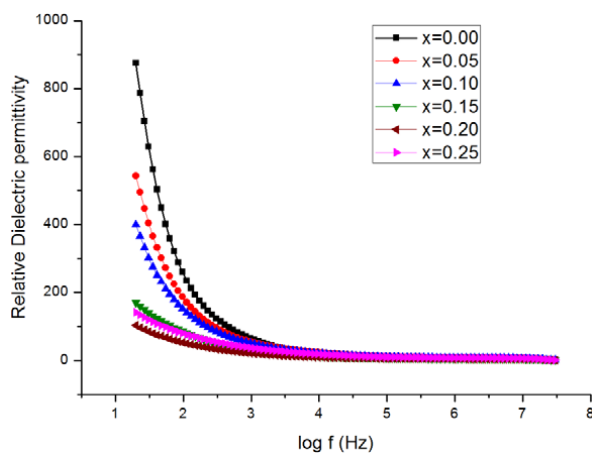


Figure 2. Relative Dielectric permittivity as a function of $\log f$ for $\text{CoFe}_{2-x}\text{Dy}_x\text{O}_4$ samples

Dielectric absorption in a material is characterized by dielectric loss tangent $\tan \delta$. Figure 3 depicts the variation of loss tangent with frequency for various Dy^{3+} concentrations. It is evident from the figure that the dielectric loss decreases rapidly with increase in frequency at lower frequencies and then decreases slowly.

The decrease in dielectric loss with frequency is in accordance with the Koops phenomenological model (Koops 1951). In the low frequency region, the loss is high due to the high resistance of the grain boundaries. In the high frequency region which corresponds to high conductivity of grain, energy required for the electron hopping is less and hence dielectric loss decreases. Shigeki (1971) found that there is a strong correlation between the hopping conduction mechanism and the dielectric behaviour of the ferrites. The conduction mechanism in ferrites is considered to be due to hopping of electrons between divalent and trivalent iron ions situated in octahedral sites. Also, it is reported that a loss peak occurs when the hopping frequency of electrons becomes equal to the frequency of the applied electric field. However, in the present study, none of the samples exhibit loss peak. Thus it may be concluded that, for the investigated samples, resonance may occur outside the measured range of frequency.

The above investigations show that the dielectric permittivity and dielectric loss decreases with dysprosium doping and this may be attributed to the increase in resistivity of the samples. Similar results are reported for neodymium doped zinc ferrite (Shinde et al., 2010) and terbium doped nickel ferrite (Binu et al., 2013). Thus dysprosium doping resulted in the reduction of dielectric permittivity and dielectric loss of nanocrystalline cobalt ferrite.

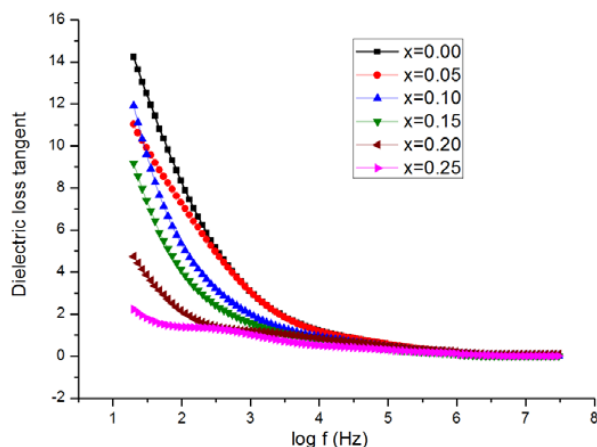


Figure 3. Variation of dielectric loss tangent with frequency for $\text{CoFe}_{2-x}\text{Dy}_x\text{O}_4$ system

Conclusions

A series of dysprosium doped cobalt ferrites, $\text{CoFe}_{2-x}\text{Dy}_x\text{O}_4$ with $x=0.00, 0.05, 0.10, 0.15, 0.20, 0.25$ were synthesized by sol-gel technique. Crystallinity and hence the crystal size is observed to increase with dysprosium concentration. The lattice parameter is found to increase with Dy^{3+} addition, suggesting the expansion of the unit cell. The variation in the dielectric properties as a function of frequency has been explained on the basis of Maxwell Wagner theory of interfacial polarization and also by Rezlescu model. The introduction of dysprosium ions into the cobalt ferrite decreases dielectric constant owing to the decreasing Fe-Fe interaction. Thus dysprosium doping resulted in the reduction of dielectric permittivity, and dielectric loss and this may be due to increase in resistivity of nanocrystalline cobalt ferrite. The low dielectric behavior together with high resistivity makes these ferrites particularly useful in high frequency applications.

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**INTERMEDIARY METABOLIC ENZYMES
AS BIOMARKERS OF ENDOCRINE DISRUPTION
BY ESTROGENIC COMPOUNDS
IN A FRESH WATER TELEOST, *ANABAS TESTUDINEUS***

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Abstract

This study investigates the impact of estrogenic compounds in the sewage effluents on the activity of intermediary metabolic enzymes such as Aspartate aminotransferase (AST), Aspartate aminotransferase (ALT), Malic acid (ME), Isocitrate dehydrogenase (ICDH), Glucose- 6- phosphate dehydrogenase(G6PDH) and Glucose-6-phosphatase (G6Pase). This study was aimed at the evaluation of the effect of estrogenic compounds in the sewage effluents in polluted river, Parvathyputhenar in Trivandrum, Kerala, India where domestic sewage from the city are drained directly into the river without any proper treatment. This site was selected because the bank of Parvathyputhenar is densely populated and so far nothing has been focused on the effect of the sewage effluent on any animal model in Kerala. The study made detailed evaluation of impact of sewage effluents on the enzyme activity. Sewage effluent exposure significantly influenced the activities of gluconeogenic enzymes such as AST, ALT and G6Pase. The activity of AST was significantly decreased in the fish exposed to effluent for 7, 14 and 28 days. Maximum inhibition of AST activity was noticed in the fish collected from study site. When kept in control pond water for 30 and 60 days, the activity of AST gradually increased significantly and after 90 days exposure, the activity of AST was restored to control level. It is suggested that measurement of the activities of the enzymes studied could be used as a surrogate biomarker of exposure to estrogenic chemicals. Alteration in the activity of enzymes like AST and ALT is considered as an early signal to assess the liver malfunctioning. This research work is highly pertinent in the context of increased level and effect of such endocrine disrupting chemicals identified in the aquatic system day by day.

Key words: Endocrine disruptor, Malic enzyme, ICDH, G6PDH, G6 PO4ase

Introduction

Metabolic enzymes are the constitutive elements in the living cells acting as catalysts of basic metabolism. Disturbances in their catalytic properties as a result of interaction with environmental chemicals may lead to impairment in cellular homeostasis, which may ultimately lead to adverse effects at higher levels of biological organization such as effects on tissues, organs, individuals, populations or even ecosystem (Segner and Braunbeck, 1998). Metabolic enzymes are usually regulated by a considerable number of individual and cellular parameters such as hormonal status, health, age, nutrition and environmental chemicals (Cabassi, 2007). Numerous studies have implicated the role of hormones in the regulation of hepatic intermediary metabolism in teleosts (Varghese et al., 2001; Sunny et al., 2003).

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It is well established that there is a diverse array of chemical discharge into the environment that can mimic or antagonize the action of hormones and thus can interfere with physiological system and cause alterations in metabolism and behavior (Graham et al., 2004). Other studies have shown that lipophilic environmental pollutants are often stored in the adipose tissue after exposure. These compounds exert their cell toxicity in organs such as liver, kidney, gill and gonads (Yoshinari et al., 2004).

A variety of chemicals found as contaminants in fresh and marine environments are found as potent endocrine disruptors. These chemicals are wide spread in the environment in connection with human life and seem to have a serious effect on the health and physiological functions of people and wild life (Voset et al., 2000). It has been recently reported that fish from lakes contaminated with heavy metals have lower activities of malic enzyme and glucose-6-phosphate dehydrogenase, the two enzymes involved in lipid metabolism (Kraak et al., 2001). Estrogenic activity was assayed in the bile of rainbow trout exposed to effluents from municipal sewage treatment plants and found that municipal sewage effluents are more estrogenic than industrial effluents (Allard *et al.*, 2004). Fish exposed to different types of paper mill effluents for 56 days significantly increased albumin and hepato somatic index in *Micropterus salmoides floridanus* (Sepulveda et al., 2004).

Metabolism of fish is influenced by different types of environmental chemicals. Ramakritina et al, (2005) reported the impact of distillery effluents on carbohydrate metabolism. Metabolic dysfunction caused by aquatic pollutants could consequently occur due to disruption at many different physiological levels (Noaksson et al., 2003; de Aquiar et al., 2008). Whole organism metabolic disruption has been indicated in a number of different ways, most commonly illustrated by altered resting metabolic rates or lowered swim bladder performance (Rajotte and Couture, 2002). Trace metals, copper and cadmium and organochlorine pesticide dieldrin, have been shown to alter one of these variables (Mc Geer et al., 2000).

Fish have been largely used in the evaluation of quality of aquatic systems as bio- indicators for environmental pollutants (Yu et al., 2006; Zhang and Hu 2007). Since the cell represents the smallest unit integrating all functions of life such as metabolism, growth, movement, sensitivity and reproduction, research in to the interaction between life and xenobiotics should focus on the cell. With the advent of concept of biomarkers, however, a theoretical basis has been provided for the integration of molecular, biochemical, physiological and histological markers of contamination in to the basic concepts of ecotoxicology (Sarkar et al., 2005). During the last decades, most biomarker studies have been focused on the enzymes of biotransformation system (Viagno et al., 2004) In contrast, only few enzymes that reflect basic metabolism have been measured (Barse et al., 2007). Now, it is widely accepted that the metabolic enzymes may provide a functional correlate to structurally observable changes and may thus allow a more-in-depth interpretation of under laying modes of action of a toxicants (Braunbeck, 1998) and are widely accepted as useful biomarkers for endocrine disruption. In the present study, alterations in the enzymes of intermediary metabolism in response to exposure to sewage effluents of the polluted river, Parvathyputhenar are presented. The alterations in the activities of the enzymes of intermediary metabolism may be used as useful biomarkers for estrogenic components in the sewage effluents.

Materials and Methods

To study the direct effect of sewage effluents on intermediary metabolism the fish collected from the exposure area were brought to the laboratory, were anaesthetized immediately with tricaine methane sulfonate (MS-222) (Sigma Chemicals, USA). The fish were sacrificed by spinal concussion and the liver was excised immediately and kept frozen at -80°C until biochemical analysis. Fish already acclimatized in the laboratory having uniform size and weight ($40 \pm 5\text{g}$) were divided into four groups of ten each, kept in separate aquarium tanks and exposed to sewage effluents for a period of 7, 14 and 28 days to study the indirect effect. Fish from the exposure area were brought to the laboratory were divided into three groups of ten each and kept in normal pond water for a period of 30, 60 and 90 days. The fish were fed everyday with 40% protein feed *ad libitum*. After stipulated periods of exposure, the liver was excised and frozen as mentioned earlier for biochemical analysis. Laboratory acclimatized fish kept in normal pond water served as control.

Assay of Enzymes

Chilled tissue was separately homogenized at 4°C in 1 ml of 0.25 M glycyl glycine buffer (pH 7.4) for malic enzyme (ME) assay and same volume of 0.04M glycyl glycine buffer (pH 7.5) for G_6PDH and ICDH and assays. Homogenates were centrifuged $2000 \times g$ at 4°C for 10 minutes in a high-speed refrigerated centrifuge. (Eppendorf, Germany). The supernatant collected was used as enzyme source for ME, ICDH and G_6PDH . All the three lipogenic enzymes were assayed spectrophotometrically at room temperature. The specific activities of ME, G_6PDH and ICDH were expressed as IU/mg protein. One IU is expressed as the amount of enzyme causing an increase in absorbance of 0.01/minutes for ME, G_6PDH and ICDH under standard conditions of the experiment.

Malic enzyme(L -malate: NADP^+ oxido reductase) – EC.1.1.1.40.

The activity of ME was determined by the method of Ochoa (1955 a). The reaction mixture in a quartz cell ($d=1\text{ cm}$) consisted of 0.3 ml glycyl glycine buffer, 0.1 ml of MnCl_2 and 0.2 ml L - malate. The aliquot was made up to 2.8 ml by adding double distilled water. One hundred microlitre of tissue homogenate containing enzyme was added to the reaction mixture. The reaction was started by the addition of 0.1ml of NADP^+ and the change in the absorbance was noted at 340 nm in a UV-visible spectrophotometer (Perkin Elmer, USA) against a blank containing all components except NADP^+ , at intervals of 15 seconds for 2 minutes.

Isocitrate dehydrogenase (ICDH)(Isocitrate dehydrogenase NADP^+) – EC.1.1.1.42.

The enzyme was assayed by the method of Ochoa (1955 b). The reaction mixture in a quartz cell ($d=1\text{cm}$) consisted of 0.3 ml glycyl glycine buffer, 0.1 ml of MnCl_2 and 0.2 ml by adding double distilled water. One hundred microlitre of tissue homogenate containing enzyme was added to the reaction mixture. The reaction was started by the addition of NADP^+ and the change in absorbance was noted at 340 nm as described in the case of ME.

Glucose- 6- phosphate dehydrogenase (G_6PDH)(D-Glucose-6-phosphate: NADP oxidoreductase)- EC.1.1.1.49

The enzyme was assayed by the method of Komberg and Horecker (1955). The reaction mixture in a quartz cell ($d=1\text{cm}$) consisted of 0.3 ml glycyl glycine buffer, 0.2ml of MgCl_2 and 0.2 ml glucose-6 phosphate. The aliquot was made up to 2.8 ml by adding double distilled water. One hundred microlitre of tissue homogenate containing enzyme was added to the reaction mixture. The reaction was started by the addition of NADP^+ and the change in absorbance was noted at 340 nm as described above.

Gluconeogenic enzyme (Glucose-6-phosphatase (G6Pase))*D-glucose -6-phosphatase phosphohydrolase – EC.3.1.3.9*

The chilled liver was homogenized at 4°C with 0.1M citrate buffer pH 6.5, centrifuged at $3000 \times g$ for 10 minutes at 4°C and the supernatant collected was used as the enzyme source. The activity was assayed by the method of Swanson (1955).

An assay mixture containing 0.3 ml of citrate buffer (pH 6.5) and 0.2 ml of glucose-6-phosphate (pH 6.5) were pre incubated in separate test tubes labeled test and control for 5 minutes. Tissue extract (0.1ml) was added to the test after mixing the content, the test and control were incubated for 15 minutes at room temperature. After incubation 1ml of 10% TCA was added to both the tubes to arrest the reaction. Then tissue extract (0.1ml) was added to the control, mixed well and the test and control were centrifuged for 10 minutes at 3000 rpm. The supernatant was collected and analyzed for inorganic phosphate by the method of Fiske and Subbarow (1925) and the absorbance was taken at 640 nm. The specific activity of the enzyme was expressed as nanomoles inorganic phosphate liberated/min/mg protein.

Aminotransferases (AST and ALT)

Aspartate aminotransferase (AST)-EC 2.6.1.1

The specific activity of AST was measured according to the method of Reitman and Frankel (1975). A 10% homogenate of liver was prepared in homogenizing buffer (50 mMImidazole, 1 mMEDTA) and centrifuged at 10000 rpm for 10 minutes at 4°C . The supernatant was used for aminotransferases assay.

A mixture of 200 nM aspartic acid, 2mM α -ketoglutaric acid (pH 7.4) and 0.5ml substrate was preincubated for 5 minutes. The reaction was started by adding 0.1ml of tissue extract. After 30 minutes of incubation at room temperature, 0.5 ml of 2-4 dinitrophenyl hydrazine (DNPH) was added to the reaction mixture to stop the enzyme activity. The pyruvate produced during transamination by aspartate aminotransferase (AST) reacted with DNPH and on addition of 5 ml 0.4N NaOH gave a brown coloured hydrazine. This was measured at 505 nm. Pyruvate liberated was expressed as nanomoles/min/mg protein.

Alanine aminotrasferase (ALT) – EC 2.6.1.2

The specific activity of ALT was assayed employing similar conditions and similar mode of incubation as described for AST (Reitman and Frankel, 1975) except that in the substrate mixture alanine was used instead of aspartic acid.

Statistical Analysis

Data collected from six animals in each group were statistically analyzed (SPSS package). Data were analyzed by one-way analysis of variance, which helps to understand whether or not there were differences

between groups of means. Groups that were not significantly different in Duncan's (1955) multiple range tests were considered homogeneous. Difference was considered significant when $P < 0.05$.

Results

In the present study, fish collected directly from the sewage effluent exposure area showed significantly decreased activity for all the enzymes (ME, ICDH, G₆PDH, G6 Pase, AST and ALT). Fish exposed to sewage effluent for 7, 14, and 28 days significantly inhibited the activity of malic enzyme. Fish collected from the study area also showed similar activity. When the fishes caught from the exposure area were acclimatized in the laboratory for 30, 60 and 90 days, the enzyme activity was significantly increased when compared to the fish exposed to sewage effluents (Figure. 1 – 5).

Activity of malic enzyme was found to be significantly decreased in the fish exposed to sewage effluents for 7, 14 and 28 days. Decreased activity of enzyme was also observed in the fish caught from the study site (Figure 1). Enzyme activity was significantly increased, when the fish caught from the study site were exposed to control pond water for 30 and 60 days. The enzyme activity was restored to the level of control value, when the fish was exposed to normal pond water for 90 days (Figure 1).

Isocitrate dehydrogenase activity was also significantly inhibited in the fish exposed to sewage effluents for 7, 14 and 28 days. Similar activity of ICDH was observed in the fish caught from the study site. When the fish from the study site was kept in the control pond water, from 30 days onwards the enzyme activity was significantly increased and restored to the control value after 60 and 90 days of exposure (Figure 2).

The activity of G₆PDH was decreased significantly, when the fish was exposed to sewage effluents for 7, 14 and 28 days and in the fish collected from the study site (Fig. 3). When, fish collected from study site were kept in the control pond water the activity gradually increased from 30 days of exposure and restored to the control level after 90 days of exposure (Fig. 3).

Sewage effluent exposure significantly influenced the activities of gluconeogenic enzymes such as AST, ALT and G6 Pase. The activity of AST was significantly decreased in the fish exposed to effluent for 7, 14 and 28 days. Maximum inhibition of AST activity was noticed in the fish collected from study site. When kept in control pond water for 30 and 60 days, the activity of AST gradually increased significantly and after 90 days exposure, the activity of AST was restored to control level (Figure 4).

The activity of ALT was significantly inhibited in the fish exposed to effluent for 7, 14 and 28 days with maximum inhibition in the fish caught from the study site. When the fish from the study site were exposed to the control pond water for 30, 60 and 90 days, the activity of ALT found to be significantly increased when compared to the fish exposed to sewage effluents (Figure 5).

G6Pase activity was also significantly decreased in the fish exposed to sewage effluent for 7, 14 and 28 days. Fish caught from the study site also showed same activity for the enzyme. Activity of the enzyme showed increasing trend on exposure to control water for 30, 60 and 90 days when compared to the fish exposed to sewage effluents (Figure 5).

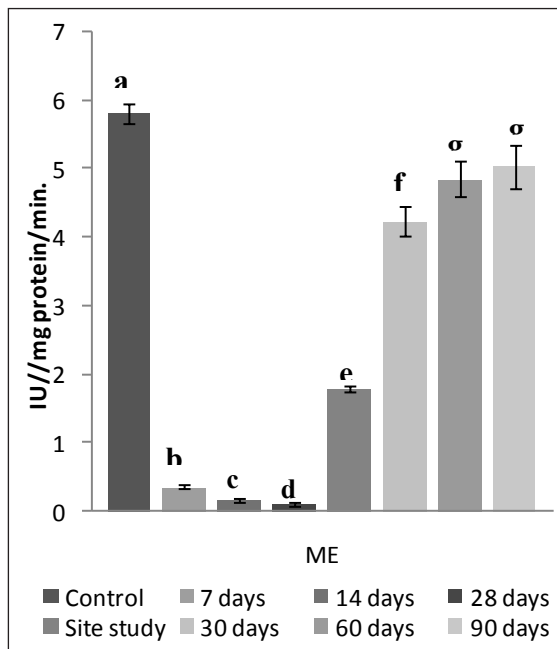


Figure1 Effect of sewage effluents on ME*

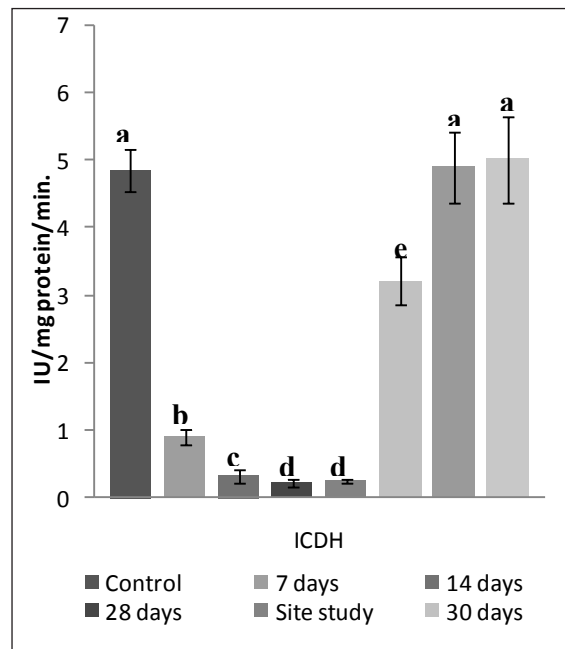


Figure 2 Effect of sewage effluents on ICDH*

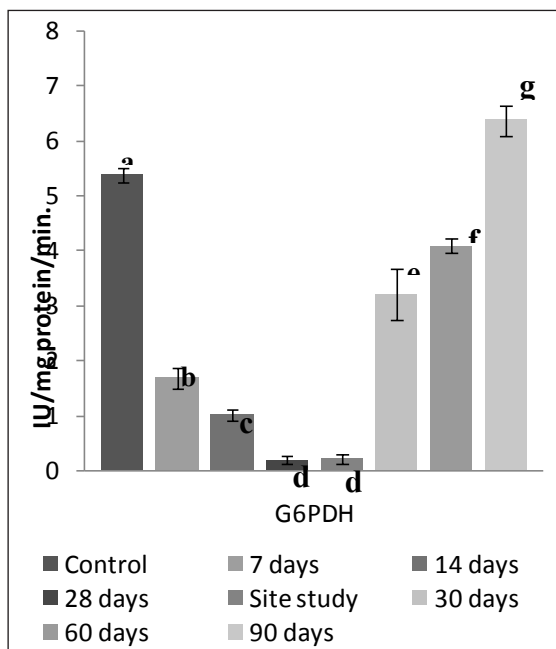


Figure 3 Effect of sewage effluents on G6PDH*

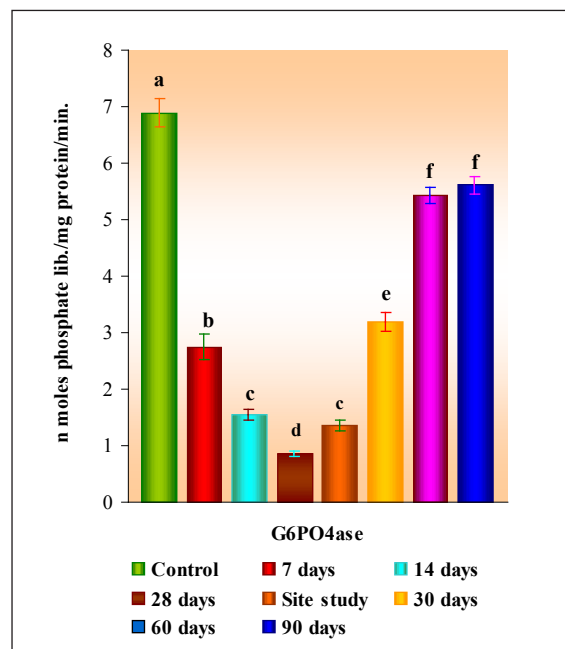


Figure 4 Effect of sewage effluents on G6PO4ase*

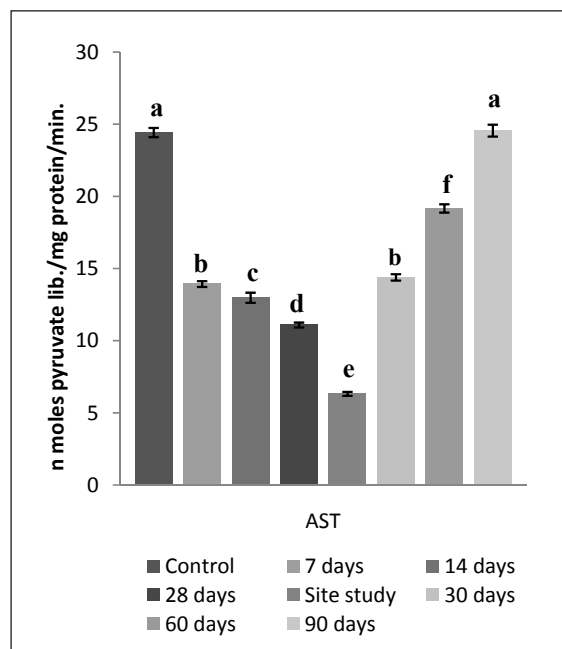


Figure 5 Effect of sewage effluents on AST*

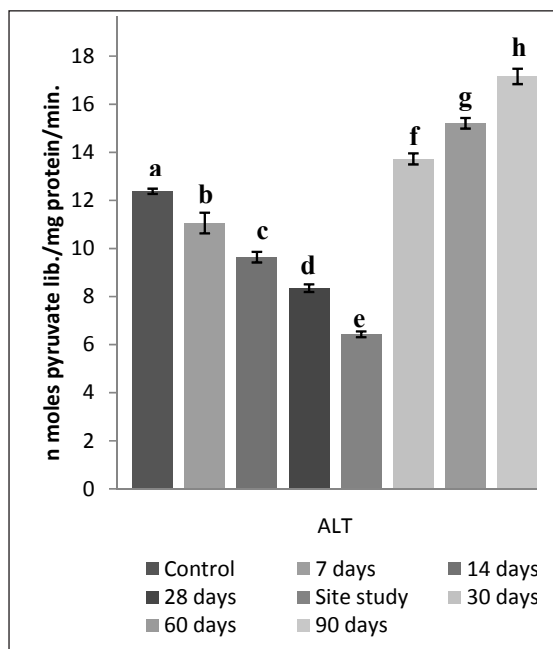


Figure 6 Effect of sewage effluents on ALT*

*7, 14, 28 days – Exposure to sewage effluents

30, 60, 90 days – Exposure to control water

Each histogram represents mean \pm SEM of 6 animals. Groups with different letter headings are significantly different ($P < 0.05$)

Discussion

The estrogenic compounds present in the polluted river, Parvathyputhenar certainly influenced the intermediary metabolism of *A. testudineus* by inhibiting the activities of gluconeogenic enzymes and lipogenic enzymes. In the present study, changes in the activity of the enzymes of intermediary metabolism indicate alteration in the amino acid metabolism and liver glycogenesis.

Metabolic enzymes are the constitutive elements in living cells acting as catalysts of basic metabolism. Disturbances in their catalytic properties as a result of interactions with xenobiotics may lead to impairment in cellular homeostasis, which may lead to biological organization such as effects on tissues, organs, individuals, populations or even ecosystems (Segner and Braunbeck 1998). Because of their value as early warning indicators of stress, there enzymes are important biomarkers of toxic stress in the aquatic medium. Metabolism of fish is influenced by different physiological functions. Metabolic dysfunction caused by aquatic pollutants could consequently occur due to disruption at many different physiological and cellular levels (Navas et al., 2004). Whole organism metabolic disruption can be illustrated by altered metabolic rates or lowered swim bladder performance. Several effluents have been shown to alter levels of metabolic substrates, the storage or mobilization of metabolic substrates such as glycogen, lactate, lipid and protein are disturbed by exposure to several trace metals, including cadmium (Almeida et al., 2001). The specific mechanisms by which the endocrine disruptors alter the metabolic substrate are unclear, but may be the result of their effects on metabolic

enzyme abundance and activity. Recently it was reported that enzymes in the protein metabolism and fat metabolism are usually disturbed by the endocrine disruptors present in the sewage effluents (Ramakritina et al., 2005.) In the present study also exposure to sewage effluents significantly inhibited hepatic AST, ALT and G6 Pase activity. The decreased activities of aminotransferases suggest a shift towards anabolic pathways of protein metabolism possibly indicating synthesis of amino acids for protein repair.

Decrease in the G6 Pase activity proposes a hypoglycemic effect of sewage effluents, since G6 Pase is predominantly found in liver and catalyses the terminal step in both gluconeogenesis and glycogenesis, by converting glucose-6- phosphate to glucose (Madsen et al., 2000). Malic enzyme catalyses the oxidative decarboxylation of α -malate to pyruvate with concomitant reduction of co-factor NAD^+ or NADP to NADH^+ or NADPH^+ (Urabaur et al., 1998). The activity of malic enzyme is positively correlated with the rates of *de novo* fatty acid biosynthesis in different tissues under different hormonal conditions. Glucose -6-phosphate dehydrogenase is a major source of NADPH in the cells and is therefore major importance for NADPH dependent xenobiotic transformation and defense against toxic injury (Winzer et al., 2001). Recent report of Biagiotti et al (2000) demonstrated a major regulatory role of G6PDH in NADPH dependent cellular processes such as xenobiotic transformation and defense against oxidative stress because of its concomitant production of NADPH .

Changes in the protein metabolism caused by the activation of the synthesis or by the protein degradation and the activation or inhibition of certain enzymes such as AST and ALT were reported among the adverse effects caused in the liver by toxic substances (Barse et al., 2007). These two enzymes function as biochemical stress biomarkers (Santos et al., 1996) and their alteration allows identification of damage in different organs such as liver. Our results indicate that the exposure of fish to sewage effluents of Parvathyputhenar caused alterations in the hepatic amino transferases activity in *A. testudineus*. The ALT and AST function as a link between carbohydrate and protein metabolism by catalyzing the interconversion of strategic compounds like α - ketoglutarate and alanine to pyruvic acid and glutamic acid, aspartate and α - ketoglutaric acid to oxalo acetic acid and glutamic acid respectively, decrease in the activity of AST and ALT may indicate decrease in transamination. This may be due to the exposure of fish to the sewage effluents might caused accumulation of estrogenic compounds in the fish liver and affect the metabolic enzyme profile.

In the present study, exposure to sewage effluents significantly inhibited the activities of gluconeogenic enzymes such as AST, ALT and G6 Pase, and lipogenic enzymes such as ME, ICDH and G_6PDH . These results indicate the role of sewage effluents on intermediary metabolism in *Anabas*. It potentially lead to an interruption of steroid-regulated cellular and physiological process in *A. testudineus* considering that steroid hormones are known to produce changes in fish intermediary metabolism (Sunny et al., 2003). It is therefore, suggested that the decrease in the enzyme's activities following sewage exposure in *A. testudineus* may be due to the presence of estrogenic compounds present in sewage effluents.

The toxic effects, together with changes observed in hormone levels, could produce changes in energy metabolism in the liver of fish after sewage exposure. Since gluconeogenic enzymes are important in the metabolic adjustments associated with stress, it is reported that decrease in its activity may impair the animal's ability to elicit a metabolic response to stress. In the present study, it has been observed that decreased

capacity for oxidation of amino acids in liver may be the reason for decreased AST, ALT and G6 Pase activity. Since keto acids obtained from oxidation of amino acids can be used mainly through gluconeogenesis this is also supporting the decreased gluconeogenic capacity reported in this study. These findings in our study are supported by various reports such as, the metabolic path ways in liver of fish are affected by various pollutants, including organic and inorganic chemicals due to the alteration of cellular enzymatic activities (De Aguiar et al., 2008).

It is suggested that fish chronically exposed to sewage effluents appeared to affect the energy requirements by changing anaerobic oxidation. This was indicated by lowered lipogenic enzymes activities in the liver. This can be interpreted as functional and / or physiological adaptation during the intoxication and that these enzymes indicate toxicant stress. These findings could indicate that fish showed a shift towards anaerobic metabolism (utilizing stored metabolites like glycogen) under toxic conditions (Reddy et al., 1984). Thus, it can be inferred that intermediary respiratory mechanism of fish exposed to sewage effluents are greatly affected and this results in a shift or emphasis towards anaerobiosis at tissue level during this exposure.

Conclusion

In the present study the activities of the enzymes of intermediary metabolism found be decreased on exposure to estrogenic effluents. Maximum decreased activity was observed in the fish caught from the study site. The decreased activities of aminotransferases suggest a shift towards anabolic pathways of protein metabolism possibly indicating synthesis of amino acids for protein repair. Decrease in the G_6PO_4 ase activity proposes a hypoglycemic effect of sewage effluents, since G_6PO_4 ase is predominantly found in liver and catalyses the terminal step in both gluconeogenesis and glycogenesis. The activity of ME is positively correlated with fatty acid biosynthesis in different tissues due to alternation in the hormonal conditions. Glucose -6-phosphate dehydrogenase is an important source of NADPH in the cells and is therefore major importance for NADPH dependent xenobiotic transformation and defense against toxic injury. In the present study, it has been observed that decreased capacity for oxidation of amino acids in liver may be the reason for decreased AST, ALT and G_6PO_4 ase activity. Since keto acids obtained from oxidation of amino acids can be used mainly through gluconeogenesis this is also supporting the decreased gluconeogenic capacity reported in this study. The previous reports on the decreased activities of intermediary metabolic enzymes in different animal models treated with estrogen supports the result of the present study. Observations in the present study strongly suggest presence of estrogenic compounds in the sewage effluents, and alternations in the activity of intermediary metabolic enzymes act as bio markers for endocrine disruption by estrogenic compounds.

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THE RELATIONSHIP BETWEEN QUALITY OF WORK LIFE (QWL) AND PSYCHOLOGICAL CONTRACT (PC) CONSTRUCTS

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Abstract

Quality of work life (QWL) is “the degree to which members of a work organization are able to satisfy important personal needs through their experiences in the organization”. The psychological contract refers to implicit ideas about the employee-organisation relationship. Both the quality of work life and psychological contract constructs have evolved in 1960s focusing on the quality of the relationship between the employee and the organization and can be viewed as foundation of employment relationship. The key concepts of QWL captured in existing literature include job security, better reward systems, higher pay, opportunity for growth, participative groups, and increased organizational productivity, among others. Interestingly the same items are widely used in operationalizing the Psychological Contract concept. This paper successfully establishes the construct similarities between psychological contract and quality of work life. Both are subjective in nature, dynamic and multidimensional. Another important finding from this paper is that if an employee’s psychological contract is not violated then he experiences good quality of work life which in turn improves the organizational performances.

Keywords: Quality of work life, Psychological contract, Employment relationship and Organizational performances.

Introduction

The concept of ‘Quality of Work life’ was not relevant prior to large scale industrialisation. In pre-industrial society work was performed in the same community setting where people lived. (Chalofsky 2008) The artisans, weavers, cobblers and the like who were mostly self employed used to work in the same premises where they lived or in a place near to where they stayed. This made social interaction very easy: they entered into conversations with acquaintances who dropped by, they stepped out on to the street to take a quick break from work, they ate their lunch at their homes, they had tea and snacks sent to them from a nearby tea shop and they did the daily shopping even during ‘working hours’ if it was convenient for them. Thus there was nothing much to demarcate their ‘family life’ or ‘social life’ from ‘work life’.

They were their own employers, they worked according to the schedules that they created for themselves and they interacted directly with their customers. Work related stress was something unheard of and they generally didn’t worry about job security (running out of work). They had to face all the problems of being in an unorganised sector, but they never had to worry about the ‘Quality of work life’. Or rather they didn’t have a work life at all, in the modern meaning of the term.

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With industrialisation came the factories, plants and offices which separated the work place from the society. The employees got ‘trapped’ inside the huge buildings and they got cut-off from the society at least during the working hours, which constitute a major portion of the total waking hours of a person. The employees surrendered their freedom in return for the wages. They had to follow instructions of the management or the supervisors appointed by the management. They generally didn’t have a say in the working of the organization and worse, they didn’t even have the freedom to decide what work they do and how. The employer treated the employees as just another means of production and in many cases the wages given to the employees were only just sufficient to support them and their families. In certain organisations, the employees worked in unhygienic and even in hazardous work environments. They had to grin and bear all these because ‘job loss’ hung like the Sword of Damocles over their head. Under such circumstances, we cannot expect the employees to experience a sense of well being while at work. This gives us a starting point to gain an understanding of the concept of QWL. The Quality of work life, or rather the absence of it, was the reason behind the employees not experiencing a sense of well being.

What is Quality of work life?

Quality of work life is a philosophy, a set of principles, which holds that people are the most important resource in the organization as they are trustworthy, responsible and capable of making valuable contribution and they should be treated with dignity and respect (Straw and Heckscher 1984). QWL is a multidimensional construct which has been defined differently by various scholars. One of the basic definitions is that quality of work life is “the degree to which members of a work organization are able to satisfy important personal needs through their experiences in the organization” (Suttle 1977). The word ‘degree’ in the definition shows that QWL indicates a level. It can be high, it can be low, or it can be anywhere in between. Some scholars are of the opinion that the definition, although useful in understanding the QWL concept and relevant too in the early decades, is outdated as of now, since for today’s employees who enjoy a high standard of living a high level of QWL means much more than the satisfaction of ‘important’ or ‘basic’ personal needs. Although to some extent contemporary workforce are compensated appropriately, their personal spending practices, lifestyles, leisure activities, individual value systems, health and so forth can affect their levels of need. (Rethinam et al., 2008). Rethinam et al. (2008) use Maslow’s hierarchy of needs theory to argue that different employees’ needs may fall in different hierarchical levels and hence what is important to some employees may not be important to others. So, although they are being treated equally in the same organization, they may experience different levels of QWL. This observation is important since it underlines the subjective nature of QWL. This is not to suggest that there are no objective dimensions at all to QWL. An improvement in the working conditions in an organisation will cause a positive change in the QWL of the work force in general. The subjectivity only indicates that despite the general increase in QWL, the QWL as perceived by an employee will be different from that perceived by another. Jean- Martel and Dupius (2006) has mentioned that QWL which was considered an objective construct in the early years of the development of the construct has now been accepted by most researchers as one having a subjective nature.

Emergence of the concept of Quality of work life

The evolution of QWL began in late 1960s emphasizing the human dimensions of work by focusing on the quality of the relationship between the worker and the working environment. In the late 1960s Irving

Bluestone, who was then employed by General Motors, used the expression “Quality of work life” for the first time (Goode 1989). But the concept of QWL had been taking shape much before that. The studies by sociologist Elton Mayo, at Western Electric’s Hawthorn plant in 1933 – now recognized as “classic” – involved verifying the influence of environmental factors on plant workers’ performance. (Martel and Dupius 2006). The concept of QWL, or whatever terms were used to convey the same meaning, was gaining in importance, but different stakeholders looked from different viewpoints at different aspects of QWL. The employees hoped to secure safe and hygienic working conditions, whereas the employers were interested in improving productivity through improvement of QWL programmes. Martel and Dupius (2006) has quoted Seashore (1975) in emphasising that in addition to the above two view points, the ‘society’ had a different perspective of QWL. The society was interested to know to what extent the talent and competencies of employees are being utilised in the work organisation, because underuse of such capacities represent a net loss to the society. The obvious assumption here is that the improvement of QWL will help in the proper utilisation of the talents and capabilities of the employees.

The elements that are relevant for an individual’s quality of worklife include the task, the physical work environment, social environment within the organization, administrative system and relationship between life on and off the job (Cunningham and Eberle 1990). Indeed it is difficult to conceptualize the quality of work life elements. Walton (1975) proposed eight major conceptual categories relating to QWL as 1) adequate and fair compensation 2) safe and healthy working conditions 3) immediate opportunity to use and develop human capacities 4) opportunity for continued growth and security 5) social integration in the work organization 6) constitutionalism in the work organization 7) work and total life space 8) social relevance of work life. Feuer (1989) considered QWL as a set of methods, such as autonomous work groups, job enrichment and high involvement aimed at boosting satisfaction and productivity of employees. It requires employee commitment to the organization and an environment in which this commitment can flourish (Walton 1975). Winter et al., (2000) viewed QWL as an attitudinal response to the prevailing work environment and posited five work environment domains that include role stress, job characteristics, supervisory, structural and sectoral characteristics to directly and indirectly influence employee’s quality of work life.

Quality of work life of an individual is defined by the individual’s affective reactions to both objective and experienced characteristics of the work organization (Igarria et.al., 1994). QWL has been well recognized as a multi-dimensional construct and it may not be universal or eternal. The key concepts captured and discussed in the existing literature include job security, better reward systems, higher pay, opportunity for growth, participative groups, and increased organizational productivity, among others (Martel and Dupius 2006). Thus, QWL is a comprehensive construct that includes an individual’s job related well-being and the extent to which work experiences are rewarding, fulfilling and devoid of stress and other personal consequences (Shamir and Solomon 1985).

Psychological Contract

‘**Psychological contract**’ as a concept was introduced in 1960 by Argyris. It can be described as the set of expectations held by the individual employee which specifies what the individual and the organization expect to give to and receive from each other in the course of their working relationship (Sims 1995).

The psychological contract provides a means of establishing effective relationships between organizations and their employees. Psychological contracts emerge when individuals believe that their organization has promised to provide them with certain inducements in return for the contributions they make to the organization (Turnley and Feldman 2000).

Contracts can be legal or behavioral/psychological in nature. Rousseau (1989), who has pioneered work on different types of behavioral contracts and has worked extensively on understanding the psychological contracts of employees, defined Psychological contract as “The beliefs individuals hold regarding the terms and conditions of the exchange agreement between themselves and their organizations.” This takes the employees views about what they expect from the organization and what they feel they owe to the organization into account. Because psychological contracts involve employee beliefs about the reciprocal obligations between themselves and their employers, they can be viewed as the foundation of employment relationships (Rousseau 1995).

The expectations and obligations are not limited to the quantum of work that has to be done and the amount of pay that will be received in return. There are several dimensions to the mutual obligations between the employee and the organisation. For example, the worker may expect the company not to fire him after he has worked for a certain number of years and the company may expect that the worker will not run down the company’s public image or give away company secrets to competitors. Expectations such as these are not written into any formal agreement between employer and organization, yet they operate powerfully as determinants of behaviour (Schein 1965; Roehling 1997).

Millward, & Brewerton, (2000) suggests that psychological contracts are an important component of the relationship between employees and their organizations. This employment relationship can be described as an exchange relationship, which runs the entire contract spectrum from strictly legal to purely psychological (Spindler 1994). Many aspects of this relationship may be covered by legislation or included in employment contract signed by the employee detailing aspects such as hours, salary and benefit plans. But it is very much likely that there are aspects of the employment relationship which are confined to the subconscious. (Spindler 1994). This “hidden” aspect of the employment exchange has come to be known as the psychological contract (Rousseau 1989)

Psychological contract refers to the employees’ subjective interpretations and evaluations of their deal with the organization (Rousseau 1996; Turnley and Feldman 1998). The psychological contract is a dynamic concept and the terms of the contract evolve with time. Sparrow (1996) suggests that psychological contracts help employees to predict the kind of rewards they will receive for investing time and effort in the organization. If the organization fails to honour the original contract or if the terms of the contract are changed to the dislike of the employee, the feeling of contract breach will have a negative impact on employees’ willingness to contribute to the organization and on their intentions to stay with the organization (e.g.Coyle- Shapiro 2002; Robinson 1996; Robinson et al., 1994; Turnley and Feldman 1998). Other studies have found a positive correlation with actual turnover (Robinson 1996). Another potential danger is a misunderstanding of the terms of the psychological contract by the employee. The employee may expect something which the organization might never have thought about providing to the employee.

The subjective nature of Quality of work life and Psychological Contract

To better understand the subjective nature of QWL (as per more recent definitions), it will be helpful to look at a related concept, QOL (Quality of Life). Costanza et al., 2008 has defined Quality of Life (QOL) as the extent to which objective human needs are fulfilled in relation to personal or group perceptions of subjective well-being (SWB). SWB is assessed by individuals' or groups' responses to questions about happiness, life satisfaction, utility, or welfare. The relation between specific human needs and perceived satisfaction with each of them can be affected by mental capacity, cultural context, information, education, temperament, and the like, often in quite complex ways. Moreover, the relation between the fulfillment of human needs and overall subjective well-being is affected by the (time-varying) weights individuals, groups, and cultures give to fulfilling each of the human needs relative to the others. (Constanza et.al., 2008) "Quality of life, at a given time, is a state that corresponds to the level attained by a person in the pursuit of her hierarchically organized goals (Dupius et.al., 2000)

In the context of health problems, Martel and Dupius (2006) mentions that Quality of life goes well beyond the disability imposed by the disease and that some patients with a given disease have a much better QOL than other patients with the same disease. The authors rely on Dazord et al., (1994), Ferrans et al., (1992) and WHOQOL (1994) to conclude that QOL is subjective. The physical aspects must be considered as factors able to influence it to varying degrees depending on the individual (Dupuis et al., 2000). One is therefore justified in supposing that, within the specific objective conditions; one worker's QWL could be very different from another worker's (Martel and Dupius 2006). A quality work life means something different to each and every individual, and is likely to vary according to the individual's age, career stage, and/or position in the industry (Kiernan and Knutson 1990).

Based on the model of general QOL, Martel and Dupius (2006) has defined QWL in the following way: "Quality of Work Life, at a given time, corresponds to a condition experienced by the individual in his or her dynamic pursuit of his or her hierarchically organized goals within work domains where the reduction of the gap separating the individual from these goals is reflected by a positive impact on the individual's general quality of life, organizational performance, and consequently the overall functioning of society." The point to be noted here is that the definition is individual-centric and not organisation-centric. Further, by qualifying QWL using the phrase 'at a given time' it is indicated that the QWL may vary with time. When there is a reduction in gap separating the individual from his goals, we can say that the QWL has improved.

The subjectivity and the changes that may take place with time are important characteristics of Psychological Contract as well. The employment relationship itself is becoming more and more personalised. 'Differential Pay' system has been introduced in several organisations cutting across sectors. Individual job seekers, especially the knowledge workers like software professionals, negotiate employee benefits with the employer, on their own. Thus the terms of employment for a particular individual will vary from those of another whose level of skills/abilities is different. Thus, there are basic differences even in the formal written contracts of different employees. Hence it is obvious that the psychological contract too will differ from employee to employee. Different employees will have different perceptions about what they owe to the employer and what the employer owe in return.

Relationship between Psychological Contract and Quality of work life

To measure psychological contract fulfilment/breach Coyle-Shapiro, & Kessler, (2000) use a scale for which the items (employer obligations) were taken from Rousseau (1990) and extended to include additional obligations. These obligations included long term job security, good career prospects, up to date training and development, pay increases to maintain standard of living, fair pay in comparison to employees doing similar work in other organisations, necessary training to do job well, support to learn new skills, fair pay for responsibilities in the job and fringe benefits that are comparable to employees doing similar work in other organisations. A close look at the above items and the items from other Psychological Contract literature (Millward and Brewerton 2000) shows some similarities between the Psychological contract items on the one hand and the items constituting QWL structures proposed by Turcotte (1988), items in the Quality of Working Life Systemic Inventory (QWLSI) presented by Martel and Dupius (2006), items in Work Structure proposed by Kolhl and Shooler (1982) and the dimensions used by Royuela et.al.,(2008) on the other. I propose that the fulfilment of Psychological Contract of an employee will have a positive effect on Quality of Work life as perceived by that employee. Thus, an employee whose Psychological Contract has been fulfilled to a great extent will perceive a higher Quality of work life, whereas an employee who feels that his Psychological Contract has been breached will perceive a lower Quality of work life. By definition, reduction of the gap separating an individual from his hierarchically organized goals within work domains indicates a better QWL. The same set of goals is likely to find a place in the Psychological Contract of the employees. A person with very high goals will consequently have high expectations from his employer (and will feel highly obliged to deliver excellent performance). Fulfilment of the expectations and obligations (Psychological Contract fulfilment) will bring the individual closer to his hierarchically organized goals and will thus improve the QWL. But there is a realistic chance of breach of Psychological Contract if the expectations are high. Another employee who works in the same organisation under the same working conditions, but whose needs, goals and expectations from the employer are at a lower level of the hierarchy will find his Psychological Contract more readily fulfilled. This will lead to a feeling of well being and a reduction in the gap between the employee and his goals, both of which will contribute to an improvement of his QWL. The QWL as used here is in the realm of 'perception' and is purely subjective in nature. Thus, there is enough theoretical support for a positive correlation between Psychological Contract fulfilment and QWL.

Two important focal points of an employee's life are family and work. The expectations from these two domains are not always compatible thus relating to conflicts (Netemeyer et.al., 1996). These conflicts are related to outcomes such as job dissatisfaction, turnover and burnout as well as to outcomes related to psychological distress e.g. depression (Gutek et.al., 1991). From the existing literature of Psychological contract and Quality of work life it is clear that individual work attitudes are important indicators of both these constructs. Individuals selectively perceive and make attributions about their jobs in accordance with the expectations they bring to the workplace. The ways that people respond to their jobs have consequences for their personal happiness, the effectiveness of their work organizations and even to the stability of the society (Beh and Che Rose 2007).

Conclusion

As a result of globalization of the market and liberalization of the economy, there are sea changes in the psychosocial environment of Indian organizations and in the values, attitudes and behaviour of employees in these organizations (Joshy and Srilatha 2011). The article's main objective was to find out and explain the relationship between the constructs of Psychological contract and Quality of work life and to understand how it helps to maintain good employment relationship. This paper successfully establishes the relationship between Psychological contract and Quality of work life constructs. Both are subjective in nature, multidimensional and items used to operationalize these two constructs are similar. Another important finding from this paper is that if an employee's psychological contract is not violated then he experiences good Quality of work life which in turn improves the organizational performances.

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INSTRUCTIONS TO AUTHORS

Research Articles (not exceeding 4000 words) should be the results of original, unpublished research work in various academic disciplines.

Review articles (not exceeding 4000 words) are expected to survey and discuss current developments in a field.

Short Communication (not exceeding 2000 words) are brief accounts on projects undertaken. They should include a brief abstract and an introductory paragraph

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The manuscript should be ordered as follows: Title page, abstract, key words, text, acknowledgements, references, figure and table legends, figures and tables. All manuscripts should be typeset in MS Word (Font: Times New Roman; Size: 12 points) double-spaced with at least 1" margin from all sides. Manuscript pages should be serially numbered.

Title Page: The first page of the article should contain the title of the paper, the names of authors, affiliations and addresses. The address of the corresponding author should be provided in full.

Abstract: The second page must contain an abstract of not more than 200 words and 3-5 keywords.

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Tables and Figures: All figures and tables should be included as separate sheets or files, are to be numbered using Arabic numerals and be cited in text in consecutive numerical order. Figures should be uploaded separately, not embedded in the article file. Soft copies of figures in Tagged Image Format or Joint Photographic Experts Group (TIFF or JPEG) with at least 300 dpi resolution in Grayscale mode is preferred. Use the table function, not spreadsheets, to make tables. Legends to tables and figures may be provided on a separate page.

Abbreviations, Characters and Units: Define abbreviations that are not standard in a footnote to be placed on the first page of the article. Superscripts, subscripts and ambiguous characters should be clearly indicated. Units of measure should be metric or, preferably, SI.

Acknowledgements: The acknowledgements of people, grants, funds, etc. should be given at the end of the paper, before the reference list and should be as brief as possible. The names of funding organizations should be written in full.

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Journal article

Amann RI, Ludwig W, Schleifer K-H (1995) Phylogenetic identification and *in situ* detection of individual microbial cells without cultivation. *Microbiological Reviews* 59: 143 – 165

Book

Bull AT (2004) *Microbial diversity and bioprospecting*. ASM press, New York

Online document

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