

The role of associations in vocabulary acquisition: a psycholinguistic study of Indian ESL learners

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Abstract. Learning English as a second language is an area of study which demands persistent research, probing and application of the findings. In India, English language is a part of everyday life, and the exposure to English vocabulary comes through a multitude of sources which include media, game applications and social networking among others. In many instances, even complicated and less frequent words are made familiar by these sources. However, the learners of ESL struggle for a good choice of words when they are in a situation to use the language. This has led the researcher to question how the process of vocabulary acquisition happens and how the acquired words are organised and stored. The current research is a psycholinguistic analysis of the way words are organised and associated with each other in the mental lexicon of the learners. The researcher attempts to study the role and impact of associations in vocabulary acquisition through an experimental study. The participants of the study are 120 Indian ESL learners enrolled for an undergraduate programme. They were tested with two methods of teaching vocabulary, namely the word definition method and semantic cluster method. The outcome of the study is discussed in the research paper.

Preview

THE ROLE OF ASSOCIATIONS IN VOCABULARY ACQUISITION: A PSYCHOLINGUISTIC STUDY OF INDIAN ESL LEARNERS

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Abstract. Learning English as a second language is an area of study which demands persistent research, probing and application of the findings. In India, English language is a part of everyday life, and the exposure to English vocabulary comes through a multitude of sources which include media, game applications and social networking among others. In many instances, even complicated and less frequent words are made familiar by these sources. However, the learners of

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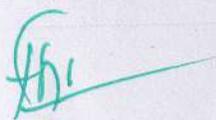
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Structural, Optical and Magnetic Properties of Cu-Doped ZnO Nanoparticles by Co-Precipitation Method

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Zn_{1-x}Cu_xO (0 ≤ x ≤ 0.2) nanoparticles were prepared by co-precipitation method followed by drying at 200 °C. A non-ionic surfactant Tween-80 which was not reported in earlier studies, was used during preparation process. X-ray diffraction analysis showed the formation of wurtzite ZnO phase nanostructures. The Rietveld analysis showed the appearance of impurity phase (CuO), when Cu²⁺ was doped with ZnO (x = 0.05 to 0.2). Morphological observations using scanning electron microscopy show the formation of nanoparticles with remarkable morphologies. Photoluminescence spectra revealed emission bands in both UV and visible regions due to the defect centres acting as trap levels. Diffuse reflectance spectroscopy (DRS) showed a decreasing trend in the value of the band gap with increasing Cu²⁺ doping for lower concentration (x = 0 to 0.1) and then increasing trend for higher concentration of Cu²⁺ doping. (x = 0.1 to 0.2). The elemental composition of Zn, Cu and O was quantitatively obtained from EDAX analysis where the chemical composition was close to the starting stoichiometries. Magnetisation-Field (M-H) hysteresis curves revealed the appearance of ferromagnetic behaviour, where the magnetic characteristics such as coercivity and saturation magnetization values, were found to be sensitive to Cu²⁺ doping level.

Keywords: Tween-80, Co-Precipitation, Cu-Doping, Rietveld Analysis, Ferromagnetism.

1. INTRODUCTION

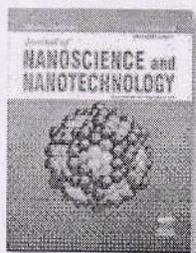
Metal oxide nanocrystals are effectively tunable in their structural, optical and electrical properties for different applications.^{1,2} ZnO with wide bandgap (≈ 3.4 eV) and high exciton binding energy (60 MeV) is a compound semiconductor which has proved itself as a versatile material for the construction of many electronic and optoelectronic devices.^{3,4} By reducing the size in nano region excellent electrical and optical properties with high chemical and mechanical stability can be induced.^{5,6} Various impurities are doped in ZnO⁷ to show promising applications in solar cells,⁸ ultraviolet light emitters, laser diodes, piezoelectric devices^{9,10} surface acoustic wave propagators,^{11,12} storage materials, fluorescent lamps, control panel displays and field effect transistors.¹³⁻¹⁷ Copper doped ZnO has considerable attention in optical switching

light emitting diodes,¹⁸⁻²⁰ magnetic semiconductors,²¹ surface acoustic wave applications.²² Cu²⁺ is best chosen impurity because it can form lowest formation energy due to smallest ionic size mismatch between Cu²⁺ and Zn²⁺ ions. Structural deformations can be created by Cu when it replaces either substitutional or interstitial Zn atoms in the ZnO lattice.²³

It has been reported that room temperature ferromagnetism is detected in many transition metal-doped ZnO. Ferromagnetism observed in Cu-based system is suggested to be due to intrinsic property of the material.²⁴ Some experimental results show non-ferromagnetism in n-type Cu-doped ZnO²⁵ where as few investigation suggested that ferromagnetic ordering cannot be developed in ZnO doped with 25 at%.²⁶ Further investigation suggested that low level of Cu²⁺ doping is more successful in inducing ferromagnetism.²⁷⁻²⁹ Ferromagnetism is very sensitive to the preparation methods and conditions.

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Structural, Optical and Magnetic Properties of Cu-Doped ZnO Nanoparticles by Co-Precipitation Method

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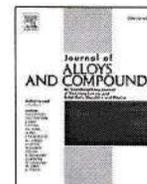


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$Zn_{1-x}Cu_xO$ ($0 \leq x \leq 0.2$) nanoparticles were prepared by co-precipitation method followed by drying at 200 °C. A non-ionic surfactant Tween-80 which was not reported in earlier studies, was used during preparation process. X-ray diffraction analysis showed the formation of wurtzite ZnO phase nanostructures. The Rietveld analysis showed the appearance of impurity phase (CuO), when Cu^{2+} was doped with ZnO ($x = 0.05$ to 0.2). Morphological observations using scanning electron microscopy show the formation of nanoparticles with remarkable morphologies. Photoluminescence spectra revealed emission bands in both UV and visible regions due to the defect centres acting as trap levels. Diffuse reflectance spectroscopy (DRS) showed a decreasing trend in the value of the band gap with increasing Cu^{2+} doping for lower concentration ($x = 0$ to 0.1) and then increasing trend for higher concentration of Cu^{2+} doping. ($x = 0.1$ to 0.2). The elemental composition of Zn, Cu and O was quantitatively obtained from EDAX analysis where the chemical composition was close to the starting stoichiometries. Magnetisation-Field (M-H) hysteresis curves revealed the appearance of ferromagnetic behaviour, where the magnetic characteristics such as coercivity and saturation magnetization values, were found to be sensitive to Cu^{2+} doping level.

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Optical and magnetic properties of Ni-doped ZnO nanoparticles

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ABSTRACT

Zn_{1-x}Ni_xO with 0 ≤ x ≤ 0.2 nanoparticles (NPs) were prepared by co-precipitation with subsequent annealing at 500 °C for 2 h. For a better control of particle's growth, a non-ionic surfactant namely Tween-80 was used during the preparation process. XRD Rietveld analysis confirmed the formation of the hexagonal wurtzite-type structure along with a secondary phase namely NiO. SEM observations revealed remarkable change in morphology, including rods, sheets and spheres. The purity of the as-prepared NPs as checked by EDAX analysis indicated that the chemical composition of Zn, Ni and O was in good agreement with the starting stoichiometries. The defect states were revealed from the UV and visible emissions of the photoluminescence spectra. The DRS analysis showed blue shift as Ni²⁺ increases from 5 to 20%. The existence of a peak at 432 cm⁻¹ in FTIR spectra confirmed the formation of ZnO phase. The Magnetization-Field (M-H) curves revealed the existence of ferromagnetism in Ni-doped ZnO NPs, which was attributed to bound magnetic polaron (BMP) mechanism.

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1. Introduction

Zinc oxide (ZnO) as transparent conductor oxides (TCOs), has shown particular interest from both experimental and fundamental aspects, offers various technological applications [1], including applications in flat panel displays, touch panels [2], solar cells, lasers, light emitting diodes (LED) [3–5], piezoelectric devices [6]. This is mainly due to its promising and unique properties such as high transmittance in the visible region of electromagnetic spectrum, low resistivity, abundance in nature, easy fabrication, non-toxicity, high energy band gap (~3.3 eV) [7] and high chemical stability under reducing atmosphere [8].

Ferromagnetism above room temperature is very essential for the potential applications in spintronic devices. Therefore, tremendous efforts were devoted towards understanding the possibility of inducing ferromagnetism above room temperature in diluted magnetic semiconductors (DMSs) [9]. The magnetization of transition metal (TM) doped ZnO, in addition to the nature, the doping element and its concentration, depends also on the post annealing treatment, which usually results in some important

changes in terms of microstructure and local structure of the as-prepared materials [10]. The thermal stability of the few percent of TM doping impurities determine the physical properties of the material and are considered very important for the practical applications [11]. Co-, Mn- and Ni-doped ZnO nanostructures have found new applications such as in spintronic materials [12]. Since the nature of the material is amorphous for most of the synthesis methods, subsequent annealing at relatively high temperature is therefore required in order to obtain a single phase (doping ions dissolve within the host lattice) and improved crystallinity. High Curie temperature ferromagnetic DMSs can be obtained when doping ZnO with magnetic TM such as Cr, Fe, Co or Ni [13,14].

The effect of Ni doping in ZnO not only induces a change in magnetic behaviour [15], but also imparts red shift in the optical band gap [16]. The combined effects of magnetic and optical characteristics, makes it an important source for the use in monolithic optical integrated circuit application with higher threshold [17]. The chemical stability of Ni²⁺ while occupying Zn²⁺ sites, makes it unique and identifies it as one of the most efficient doping element as it enhances ZnO with optical and electrical properties [18]. Therefore, Ni ions can be used to tune optical, electrical and magnetic properties of ZnO [19]. In addition, for higher doping concentrations, Ni has the tendency to form clusters of metallic Ni or NiO as secondary phase; due to the solubility limit

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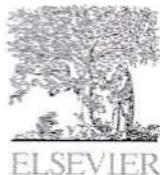
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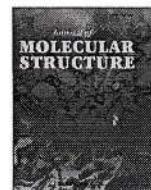
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Structural, microstructural, optical and magnetic properties of Mn-doped ZnO nanostructures



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ABSTRACT

Pure and Mn²⁺ doped ZnO nanoparticles (Zn_{1-x}Mn_xO with 0 ≤ x ≤ 0.2) were prepared by co-precipitation method followed by drying at 200 °C. A non-ionic surfactant, Tween-80, was used during preparation process to control the particles growth. X-ray diffraction analysis revealed the formation of hexagonal wurtzite for pure and Mn²⁺ doped ZnO samples with a minor secondary phase. The Rietveld analysis confirmed the formation of hexagonal wurtzite structure as well as the secondary phase as Mn₃O₄ for all doping levels. Morphological observations showed the formation of nanoparticles with remarkable morphologies of which spherical nanostructures seem to be more dominant. The quantitative analysis from EDAX confirmed the purity of the as-prepared nanopowders and that the chemical composition of Zn, Mn and O seem to be close to the starting stoichiometries. Emission bands in both UV and visible regions were revealed by photoluminescence spectra, which were due to defect centers acting as trap levels. The diffuse reflectance spectroscopy (DRS) indicated a decrease in the value of bandgap with increasing Mn doping concentration. The ferromagnetic behaviour was very clear from the Magnetisation-Field (M–H) hysteresis curves, where the magnetic characteristics such as coercivity and saturation magnetization values, were found to be sensitive to Mn doping level.

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1. Introduction

The possibility of revealing ferromagnetism at room temperature (RTFM) in metal-oxide based dilute magnetic semiconductors (DMSs) have attracted considerable attention. DMSs based on transition metal doping such as Mn, Ni, Co offer wide range of applications in particular in Spintronics [1]. This technology requires materials with ferromagnetic behaviour at room temperature; as it uses the spin of electron in addition of charge for reading/writing data and transferring information to be integrated with traditional semiconductor technology.

Mn-doped ZnO system has been preferred among other diluted magnetic oxides as its curie temperature (T_c) is above room temperature, due to its enhanced ferromagnetism at room temperature in addition to its facile fabrication compared to other oxide

materials [2]. The similarity in ionic radius of Mn and Zn atoms results in higher solubility of Mn into ZnO crystal lattice. This makes the availability of more carriers that makes Mn-doped ZnO for the appearance and enhancement of ferromagnetic behaviour at room temperature, which is ideal for the fabrication of spintronics devices [3]. However, there is controversy about the origin of the observed ferromagnetism. Sharma et al. and Cong et al. have reported room temperature ferromagnetism in transition metal doped ZnO materials [4,5], whereas Jung et al. have reported ferromagnetism only at low temperature [6]. The preparation conditions seem to be the major factor responsible for the controversy in the changes of ZnO properties, for instance magnetic behaviour and its origin. Due to its specific technological application, Mn-doped ZnO as DMS has attracted more attention in the past two decades. High surface-to-volume ratio of metal oxide nanostructures leads to increase surface active sites for chemical reactions and photon absorption [7].

The properties of ZnO can be tailored for different applications,

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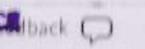
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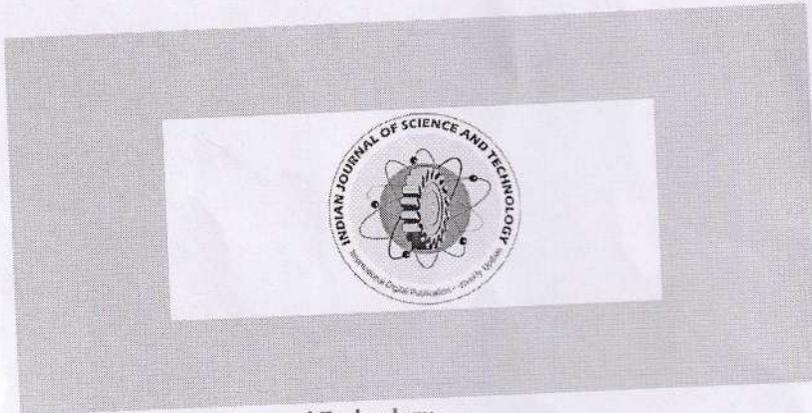
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Original Article

Comparative Analysis of Classification Algorithms on Endometrial Cancer Data

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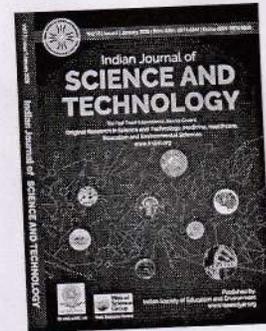
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ABSTRACT

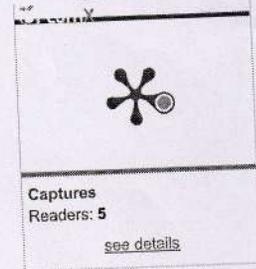
Objective: To expose the Performance of classification algorithms on endometrial cancer data. The best algorithms are listed based on the result of various test options and ranked based on their accuracies. **Methods and Analysis:** Classification is one of the data mining techniques used to find a model that describes the data classes or concepts. The class-label of strange instance is predicted with the help of classification. It compares the classification algorithms by measuring accuracies, speed and strength of algorithms using WEKA tool. Accuracies of classification algorithms are calculated by means of four different options. The error rate and time taken to build the model also measured. **Findings:** The accuracies of sixteen algorithms are measured by training set, test set, tenfold cross validation and percentage split testing options. The average accuracies are calculated, then compared and ranked with highest accuracy first. The best five algorithms are taken for final performance on endometrial cancer dataset. The accuracy of Random Forest algorithm is high, but it took 0.16 sec to build the model, whereas the IBK, Random Tree and KStar algorithms' performs well with 0sec to build the model. Bagging algorithm takes more time to build the model. In terms of time and accuracy IBK produces better results as compared to other algorithms. Random Forest algorithm is most excellent in provisos of correctly classified occurrence.

Novelty/Improvement: With the 315 instances of endometrial cancer data, the time taken to build the model is zero for IBK, KStar and Random Tree algorithms. If the number of instances increases then time also will increase.

Keywords: Classification Algorithms, Endometrial Cancer, IBK, KStar, Random Tree



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Comparative Analysis of Classification Algorithms on Endometrial Cancer Data

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Abstract

Objective: To expose the Performance of classification algorithms on endometrial cancer data. The best algorithms are listed based on the result of various test options and ranked based on their accuracies. **Methods and Analysis:** Classification is one of the data mining techniques used to find a model that describes the data classes or concepts. The class-label of strange instance is predicted with the help of classification. It compares the classification algorithms by measuring accuracies, speed and strength of algorithms using WEKA tool. Accuracies of classification algorithms are calculated by means of four different options. The error rate and time taken to build the model also measured. **Findings:** The accuracies of sixteen algorithms are measured by training set, test set, tenfold cross validation and percentage split testing options. The average accuracies are calculated, then compared and ranked with highest accuracy first. The best five algorithms are taken for final performance on endometrial cancer dataset. The accuracy of Random Forest algorithm is high, but it took 0.16 sec to build the model, whereas the IBK, Random Tree and KStar algorithms' performs well with 0sec to build the model. Bagging algorithm takes more time to build the model. In terms of time and accuracy IBK produces better results as compared to other algorithms. Random Forest algorithm is most excellent in provisos of correctly classified occurrence. **Novelty/Improvement:** With the 315 instances of endometrial cancer data, the time taken to build the model is zero for IBK, KStar and Random Tree algorithms. If the number of instance increases then time also will increase.

Keywords: Classification Algorithms, Endometrial Cancer, IBK, KStar, Random Tree

1. Introduction

Data mining is the method of extracting the data from the huge dataset¹. Classification is one of the techniques in data mining to allocate objects to one of several pre-defined groups. Data Classification is a two step method consisting of knowledge step used to make a classification model and a categorization step used to calculate the class labels for a given data². It serves as a descriptive modeling, to distinguish between objects of unlike classes. A Classification model can also serve in predictive modeling, to calculate the class label of unidentified records. This process is mainly fitting for describing data sets with dual or diminutive types. It is a methodical approach to construct a classification models from the input data set. It includes Function, Bayesian, Meta-learning, Lazy, Rule-

Based, Decision Tree and Miscellaneous classifiers. Each method utilizes a learning algorithm to recognize a model that best fits the liaison between the attribute set and class label of the input data. An important point of the learning algorithm is to construct the representation with generalization facility i.e., the representation precisely forecast the class labels of formerly unidentified instances³.

Endometrial cancer is a cancer that takes place from the endometrium, that is, the inside layer of the uterus or womb. It is the effect of the irregular progress of cells that have the ability to occupy or spread to other parts of the body⁴. During the premature section of the sequence, before the ovaries release an egg, the ovaries form hormones known as estrogens. Estrogen causes the endometrium to condense so that it could cultivate an embryo if pregnancy occurs. A woman's hormone stability took a

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A Study on Code Smell Detection with Refactoring Tools in Object Oriented Languages

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Abstract-A code smell is an indication in the source code that hypothetically indicates a design problem in the equivalent software. The Code smells are certain code lines which makes problems in source code. It also means that code lines are bad design shape or any code made by bad coding practices. Code smells are structural characteristics of software that may indicate a code or drawing problem that makes software hard to evolve and maintain, and may trigger refactoring of code. In this paper, we proposed some success issues for smell detection tools which can assistance to develop the user experience and therefore the acceptance of such tools. The process of detecting and removing code smells with refactoring can be overwhelming.

God class: It generally called also design flaw, refer to class that tends to centralize the intelligence of the system.

Long parameter list: A long list of parameters in a procedure or function make readability and code excellence worse.

Feature envy: It means that a method is more interested in other class than the one where it is currently located. This method is in the wrong place since it is more tightly coupled to the other class than to the one where it is currently located.

Contrived complexity: Forced usage of excessively complicated design patterns where simpler design would suffice.

Complex conditionals: Branches that check lots of unrelated conditions and edge cases that don't seem to capture the meaning of a block of code.

Primitive obsession: The smell represents a case where primitives are used instead of small classes.

Switch statement: The smell means a case where type codes or runtime class type detection is used instead of polymorphism.

Data clumps: the smell means that software has data items that often appear together.

Temporary fields: The smell means that class has a variable which is only used in some situation.

Refused bequest: The smell means that a child class does not fully support all the methods or data it inherits.

Lazy class: It means a class that is doing nothing enough and should be removed.

Data class: a class that contain data, but hardly any logic for it.

Middle man: It means that a class is delegating most of its tasks to subsequent classes.

Divergent change: The smell means that one class needs to be constantly changed for different reasons.

Keywords: Code Smells, Refactoring, Success Factors

I. INTRODUCTION

The development of Object Oriented Programming, the number of software analysis tools available for detecting bad smells significantly rise. Code smells are a method of giving names to these software design problems. A code smell is an uneasily written code that breaches software design principles. Refactoring and smell detection are both widely maintained by various tools for almost every recent programming language.

II. DETECTION OF CODE SMELL

The following requirements should be fulfilled to detect code smells from source code. First, all syntax information of source code should be represented. Second, it should be easy to access and extract semantic information from denoted source code model. Lastly, it should be simple to extract relational information between classes. [1]

Code smells are defined in two ways.

Primitive smell: Smell can be identified from one class
Derived smell: Derived smell can be discovered from relations between classes

2.1 Common Code Smells

The following bad smells are in Object Oriented Programming Languages given by Fowler et.al [2].

Duplicated code: It means that the same code structure appears in more than one place.

Long method: It is a method that is too long, so it is difficult to understand, change, or extend.
Large class: It means that a class is trying to do too much. These classes have too many instances, variables or methods.

III. REFACTORING

Software refactoring [3] is a procedure of altering a software system in such a way that it does not change the external behavior of the code, and amends its internal structure. Refactoring is measured a best practice in creating and maintaining software, and research suggests that programmers practice it frequently. The term refactoring was introduced by Opdyke[4] in the year 1990. The basic idea of software refactoring can be drew back to restructuring i.e. the transformation of one representation form to another, while preserving the system's external behavior. Refactoring is becoming very popular owing to lightweight development procedures such as extreme programming that advocate constant refactoring. Refactoring is basically the object - oriented variant



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A STUDY ON CUSTOMERS PREFERENCES TOWARDS SELECTED HOUSE FINANCING SCHEMES (WITH SPECIAL REFERENCE TO HDFC-CHENNAI.)

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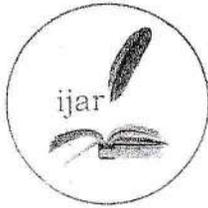
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Abstract

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Housing finance is what allows for the production and consumption of housing. It refers to the money we use to build and maintain the nation's housing stock. But it also refers to the money we need to pay for it, in the form of rents, mortgage loans and repayments. House is centre and domestic device for mankind's moral and substance development ever since the dawn of civilization. Housing is one of the most important that we human beings need. Adequate housing is essential for human survival with dignity. There are many things that we would find difficult, if not impossible to do without good-quality housing. Housing shortage is an universal phenomenon. It is more acute in developing countries. The housing scenario has become more critical in India in recent years. India has initiated so many housing reform that has taken many forms and manifestations characterized by the reduction in social allocation, cutbacks in public funding and promotion of a real estate culture in close partnership between the state and private actors. Mortgage financing markets can play an important role in stimulating affordable housing markets and improving housing quality in many countries. Unfortunately, these are still in nfancy in India. This lack of development often translates into lower homeownership rates or poor housing quality. Most of these problems stem from the central dilemma that the resources are always too limited and housing development heavily depend on the



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RESEARCH ARTICLE

**A STUDY ON CUSTOMERS PREFERENCES TOWARDS SELECTED HOUSE FINANCING SCHEMES
 (WITH SPECIAL REFERENCE TO HDFC-CHENNAI)**

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Abstract

Housing finance is what allows for the production and consumption of housing. It refers to the money we use to build and maintain the nation's housing stock. But it also refers to the money we need to pay for it, in the form of rents, mortgage loans and repayments. House is centre and domestic device for mankind's moral and substance development ever since the dawn of civilization. Housing is one of the most important that we human beings need. Adequate housing is essential for human survival with dignity. There are many things that we would find difficult, if not impossible to do without good-quality housing. Housing shortage is a universal phenomenon. It is more acute in developing countries. The housing scenario has become more critical in India in recent years. India has initiated so many housing reform that has taken many forms and manifestations characterized by the reduction in social allocation, cutbacks in public funding and promotion of a real estate culture in close partnership between the state and private actors. Mortgage financing markets can play an important role in stimulating affordable housing markets and improving housing quality in many countries. Unfortunately, these are still in infancy in India. This lack of development often translates into lower homeownership rates or poor housing quality. Most of these problems stem from the central dilemma that the resources are always too limited and housing development heavily depend on the financial institutions such as banks, credit corporations and development banks for the supply of finance to meet their daily financial needs. Against this backdrop, this paper will assess basic nuances of Indian financing system. Housing Development Finance Corporation Ltd (HDFC) is one of the leaders in the Indian housing finance market with almost 17% market share as on March 2010. Serving more than 38 lakh Indian customers as on March 2011, HDFC also offers customized solutions that fit to the need of the customer. In the FY 2010-11, it registered a net profit of `4528.41 crore. It also registered a net profit of ` 971 crore in the quarter ended September 30, 2011.

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Menstrual Hygiene and Emotions attached to Menstruation among Adolescent Girls: A Cross-Sectional Study among Irula Tribe (Tamil Nadu)

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Abstract: Menstrual hygiene is one of the vital components of reproductive health but it is insufficiently addressed. Especially in developing countrylike India, which is taking immense measures to bring in decline in maternal mortality rate and infant mortality rate, it is essential to be sensitive to these issues. Adolescent girls from the tribal community of India are undisputedly considered as the weakest sections of the population in view of socio cultural factors, economic, educational status, access to health care facilities and lack of adequate information on health. There are 23,116 Irula households in Tamil Nadu (Census,2011). Irulas are mainly concentrated in north-eastern part of Tamil Nadu. **Objective:** A descriptive, cross-sectional community based study was conducted among 140 adolescent girls situated in Chengalpattu, Kanchipuram, Thiruvallur and Villupuram. The present study was designed to assess the knowledge, beliefs and source of information regarding menstruation, identify the status of menstrual hygiene and emotions attached to menstruation. **Methods:** Consecutive sampling technique and mixed method was used to collect data. In the quantitative method, semi structured interview schedule was administrated to 140 adolescent females and two focus group discussion was used to collect data in the qualitative part. **Findings:** Respondents were found to be in the age group between 13 yrs-18 yrs and the mean age was 15yrs. Two third (67%) of the respondents were aware of menstruation prior to their own experience. The awareness was mainly from their friends. All the respondents were using only cotton clothes as absorbents. Majority (89%)of them were aware that menstruation was physiological. Nearly two fifth (58%) of the respondents failed to attend school during menstruation time. Lack of toilet facilities, water facility, distance between school and home were some of the major factors which prevented the respondents from attending school. Majority (91%) of the respondents considered attaining of puberty as curse as some of them were stopped from going to school and they are seen eligible for marriage. Food restrictions were common. Egg, chicken, mutton, sugar were considered to increase bleeding. Emotions like humiliation, anger, rejection were associated with menstruation. **Conclusion:** For women to enjoy good reproduction health it is very essential to concentrate the menstrual hygiene of the adolescent girls. During this period both the physical and mental health of the girls needs to be addressed. This would pave path to better reproductive health in women.

Keywords:

1. Introduction

Menstruation, though a natural process, has often been dealt with secrecy in many parts of Asian countries. Hence, knowledge and information about reproductive functioning and reproductive health problems amongst the adolescent is poor (Adhikari, 2007). In low and middle income countries, Menstrual hygiene management (MHM) is a problem for adolescent girls particularly when attending school¹. Cultural taboos add to girls' difficulties, preventing them from seeking help² and impose restrictions on their diet and activities when menstruating³. India is a country of contrasts, with extreme wealth and poverty and gender-related disparities, resulting in significant variation in health and social indicators among girls and women.

Several traditional norms and beliefs, socio-economic conditions and physical infrastructure can and do influence the practices related to menstruation. For example, a Hindu Indian woman abstains from worship, cooking and stays away from her family as her touch is considered impure during this time. Girls in poor countries can't afford sanitary pads or tampons, which would normally be changed around two to four times a day during menstruation. Instead, the vast majority of girls in tribal community use rags, usually torn from old saris. Rags are washed quickly inside the

latrine or in public bathearly in the morning and used severaltimes.

There is no private place to changeand clean the rags and often no safe waterand soap to wash them properly. Thegender unfriendly schools andinfrastructure, and lack of adequate menstrual protection alternatives and / or clean, safe and private sanitation facilitiesfor female girls and teachers, underminethe right of privacy, which results in a fundamental infringement of the humanrights of female students and teachers (Ten, 2007). Even in the homes, a cultureof shame forces girls to find wellhiddenplaces to dry the rags. These placesare often damp, dark and unhealthy. Ragsthat are unclean can cause urinary, vaginaland perineal infection. Very often seriousinfections are left untreated and maysometimes lead to potentially fatal toxicschock syndrome.

Ethic Consideration- Rights, anonymity and confidentiality ofthe respondents were respected in allphases of the study. Informed verbalconsent with the respective school'sPrincipal and heads of the tribal community for the respondents who do not attend schools were takenbefore data collection. Through verbalconsent process, the type and purpose ofdata collection, issuesof anonymity and confidentiality;voluntary participation and freedom todiscontinue the interview/discussion atany stage, and absence of any know

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Factors influencing condom usage among male to female transgender in Chennai City

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Abstract

Male to Female Transgender experience economic vulnerability, lack of employment opportunities, social exclusion gender – based violence and abuse. This makes them vulnerable to be one of group that are affected by HIV epidemic. Lack of education and employment forces them to take up sex work and evidence indicate that 90% of Male to Female Transgender in India are involved in sex work and thus makes the vulnerable to HIV infection. This made it very essential to study the condom usage patten and also the factors that influence the usage.

Objective: Study the condom usage patten and also the factors that influence condom usage.

Methodology: In June 2016, 784 Male to Female Transgender enrolled in the CBO - Thozhi, 275 in Transgender Rights Association (TRA) and 282 in Tamil Nadu Aravanigal Association (THAA). A sample size of 299 was taken. As mixed method was used in depth interviews (9) and three focus group discussion (6 respondents in each group) was conducted to collect data qualitative data.

Finding: One fourth (25%) of the respondents were living alone while nearly one fifth (18%) of the respondents lived with their male sex partners. More than one forth (28%) had sex work as their primary occupation while one third (34%) of them had it as their secondary occupation. Out of 120 respondents who were involved in sex work only forty percent were using consistently and of the 134 respondents who had permanent male partners only forty percent of them used condoms consistently. Need for more money (69%), influence of alcohol (63%), Unwilling to use by law enforcers & anti-socialists (24%), for sexual pleasure (74%) and with good looking clients (54%). For respondents who had permanent partners, love/scared of getting disserted/inability to use with husband was some of the responses expressed by the respondents.

Keywords: Condom, Transgender, India.

Introduction

Transgender people's immediate HIV risk is related primarily to sexual behaviours, especially unprotected anal sex with an HIV positive partner. The current national average HIV prevalence among Male to Female transgender people is estimated at 8.8%, more than 20 times the general population's average HIV prevalence (0.4%) (Annual report, 2011).

There is limited data on sexual risk behaviors of HIV-positive Male to Female Transgender. In a study among HIV positive Male to Female Transgender (Chennai and Mumbai), the prevalence of inconsistent condom use during receptive anal sex was 34% for male regular partners and 41% for male casual partners (Chakrapani. V et al, 2013). Even though two-fifths of male to female transgender participants in that study reported having disclosed their HIV status to their male regular partner, disclosure was not uniformly followed by safer sex, and non-disclosure did not always lead to unprotected sex.

Methodology

In June 2016, 784 Male to Female Transgender enrolled in the CBO - Thozhi, 275 in Transgender Rights Association (TRA) and 282 in Tamil Nadu Aravanigal

Association (THAA). A sample size of 299 was taken. As mixed method was used in depth interviews (9) and three focus group discussion (6 respondents in each group) was conducted to collect data qualitative data. A Semi structured interview schedule was used to collect data. SPSS was used to analyse the data.

After administering the informed consent, the IDIs and FGDs were conducted in vernacular language. IDIs and FGDs were tape recorded and were transcribed and translated. Codes were derived and thematic content analysis and constant comparative techniques were used to analyse the data.

Finding

Most of the respondents (89%) had exposure to formal education.

One fourth (25%) of the respondents were living alone while nearly one fifth (18%) of the respondents lived with their male sex partners. Only 12 % of the respondents lived with their parents.

Occupation

More than one fourth (28%) had sex work as their primary occupation while one third (34%) of them had it as their secondary occupation.

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