ANTECEDENTS AND CONSEQUENCES TO TABOONESS PERCEPTION AROUND WOMEN'S HEALTH AND HYGIENE: AN INVESTIGATION

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INDIAN INSTITUTE OF TECHNOLOGY DELHI

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ANTECEDENTS AND CONSEQUENCES TO TABOONESS PERCEPTION AROUND WOMEN'S HEALTH AND HYGIENE: AN INVESTIGATION

by

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Submitted

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to the



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In loving memory of my late Bua Ji, Sudesh Bhatia.

She wished to see me complete my Ph.D.

This thesis is dedicated to her love, blessings, and eternal presence in my heart.

CERTIFICATE

This is to certify that thesis titled, "**Antecedents and Consequences to Tabooness Perception around Women's Health and Hygiene: An investigation,"** being submitted by Nidhi Bhatia to the Department of Management Studies, Indian Institute of Technology Delhi, for the award of the degree of Doctor of Philosophy is a record of bonafide research work carried out by her. She has worked under my supervision and has fulfilled all the requirements for the submission of this thesis, which has attained the standard required for a PhD degree at this Institute. The results presented in this thesis have not been submitted in part or whole for the award of any degree or diploma in any other University or Institute.

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ABSTRACT

Menstruation is a natural part of women's lives, yet in many societies it continues to be surrounded by silence, restrictions, and negative beliefs. These practices extend far beyond health concerns, shaping how women experience their bodies, communicate about menstruation, and choose or avoid menstrual products. While previous research and policy initiatives have largely concentrated on improving access to menstrual health services and reducing economic barriers, comparatively less attention has been paid to the socio-cultural influences that shape women's consumption behaviour. This thesis addresses this gap by placing perceived menstrual taboo at the centre of analysis and examining how it is shaped by antecedents that influence menstrual health management and product behaviour.

The research is organised into four stages. The first stage undertakes a systematic literature review to identify the principal antecedents of perceived menstrual taboo, including cultural beliefs, religious restrictions, social norms, awareness, affordability, and accessibility. The second stage employs Interpretive Structural Modelling (ISM) and MICMAC analysis, supported by expert panel discussions involving gynaecologists, social workers, product innovators, and policy stakeholders. This stage maps the interrelationships among the identified antecedents and determines their relative influence within the broader system of menstrual health management.

The third stage explores women's lived experiences of perceived menstrual taboo and menstrual health management through twenty-five in-depth interviews conducted in the Delhi NCR region. The findings illuminate how silence, stigma, and everyday restrictions are experienced and negotiated within social and familial settings, and how these experiences influence preferences for sanitary pads, cloth, tampons, and menstrual cups. The final stage empirically tests the proposed behavioural framework using survey data collected from 204 women. The data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM), with purchase behaviour conceptualised as the outcome variable reflecting women's menstrual product adoption and buying decisions.

The findings reveal that menstrual practices cannot be explained by affordability or product availability alone. Socio-cultural antecedents, operating through perceptions of menstrual taboo, play a significant role in shaping product preferences, usage patterns, and purchase decisions. These findings help explain the coexistence of a rapidly expanding

menstrual product market in India with the continued reliance on traditional practices and the relatively slow adoption of alternatives such as menstrual cups and tampons.

By integrating evidence from systematic review, structural modelling, qualitative inquiry, and quantitative validation, this thesis develops a comprehensive understanding of how socio-cultural antecedents shape perceived menstrual taboo and influence menstrual product behaviour. The study contributes to consumer behaviour and menstrual health scholarship by developing and empirically validating a behavioural framework that explains the role of perceived menstrual taboo in women's product choices and purchase decisions. The findings further highlight the importance of addressing social norms, cultural beliefs, stigma, and information barriers alongside improvements in affordability and accessibility. These insights offer practical guidance for policymakers, educators, healthcare practitioners, employers, social organisations, and product manufacturers seeking to promote informed menstrual choices and strengthen menstrual health management initiatives.

सार

मासिक धर्म महिलाओं के जीवन का एक स्वाभाविक हिस्सा है, फिर भी अनेक समाजों में यह आज भी चुप्पी, प्रतिबंधों और नकारात्मक धारणाओं से घिरा हुआ है। ये सामाजिक व्यवहार केवल स्वास्थ्य संबंधी चिंताओं तक सीमित नहीं हैं, बल्कि महिलाओं के अपने शरीर के प्रति अनुभव, मासिक धर्म के विषय में संवाद करने के तरीके, तथा मासिक धर्म उत्पादों को अपनाने या न अपनाने के निर्णयों को भी प्रभावित करते हैं। पूर्ववर्ती शोध और नीतिगत प्रयासों ने मुख्यतः मासिक धर्म स्वास्थ्य सेवाओं की उपलब्धता बढ़ाने और आर्थिक बाधाओं को कम करने पर ध्यान केंद्रित किया है। इसके विपरीत, महिलाओं के उपभोग व्यवहार को प्रभावित करने वाले सामाजिक-सांस्कृतिक कारकों पर तुलनात्मक रूप से कम ध्यान दिया गया है। यह शोध इसी अंतर को संबोधित करता है और perceived menstrual taboo अर्थात् मासिक धर्म से संबंधित अनुभूत वर्जना को विश्लेषण के केंद्र में रखते हुए यह अध्ययन करता है कि इसके पूर्ववर्ती कारक मासिक धर्म स्वास्थ्य प्रबंधन और उत्पाद व्यवहार को किस प्रकार प्रभावित करते हैं।

यह शोध चार चरणों में संगठित है। प्रथम चरण में व्यवस्थित साहित्य समीक्षा के माध्यम से मासिक धर्म से संबंधित अनुभूत वर्जना के प्रमुख पूर्ववर्ती कारकों की पहचान की गई है, जिनमें सांस्कृतिक विश्वास, धार्मिक प्रतिबंध, सामाजिक मानदंड, जागरूकता, वहनीयता और उपलब्धता शामिल हैं। द्वितीय चरण में Interpretive Structural Modelling (ISM) और MICMAC विश्लेषण का उपयोग किया गया है, जिसे स्त्री रोग विशेषज्ञों, सामाजिक कार्यकर्ताओं, उत्पाद नवप्रवर्तकों और नीति हितधारकों से युक्त विशेषज्ञ पैनल चर्चाओं द्वारा समर्थन प्रदान किया गया। इस चरण में पहचाने गए पूर्ववर्ती कारकों के पारस्परिक संबंधों को समझा गया और मासिक धर्म स्वास्थ्य प्रबंधन की व्यापक प्रणाली में उनके सापेक्ष प्रभाव को निर्धारित किया गया।

तृतीय चरण में दिल्ली-एनसीआर क्षेत्र में पच्चीस गहन साक्षात्कारों के माध्यम से महिलाओं के मासिक धर्म से संबंधित अनुभूत वर्जना और मासिक धर्म स्वास्थ्य प्रबंधन से जुड़े अनुभवों का अन्वेषण किया गया। निष्कर्षों से यह स्पष्ट हुआ कि चुप्पी, कलंक और दैनिक प्रतिबंध सामाजिक तथा पारिवारिक संदर्भों में किस प्रकार अनुभव किए और समझौते के साथ निभाए जाते हैं, तथा ये अनुभव सैनिटरी पैड, कपड़ा, टैम्पोन और मासिक धर्म कप जैसे उत्पादों की प्राथमिकताओं को किस प्रकार प्रभावित करते हैं। अंतिम चरण में 204 महिलाओं से प्राप्त सर्वेक्षण डेटा के आधार पर प्रस्तावित व्यवहारिक रूपरेखा का अनुभवजन्य परीक्षण किया गया। डेटा का विश्लेषण Partial Least Squares Structural Equation Modelling (PLS-SEM) के माध्यम से किया गया, जिसमें खरीद व्यवहार को महिलाओं के मासिक धर्म

उत्पादों को अपनाने और खरीद संबंधी निर्णयों को दर्शाने वाले परिणाम चर के रूप में अवधारित किया गया।

शोध के निष्कर्ष बताते हैं कि मासिक धर्म संबंधी व्यवहार को केवल वहनीयता या उत्पाद उपलब्धता के आधार पर नहीं समझा जा सकता। सामाजिक-सांस्कृतिक पूर्ववर्ती कारक, मासिक धर्म से संबंधित अनुभूत वर्जना के माध्यम से, उत्पाद प्राथमिकताओं, उपयोग पैटर्न और खरीद निर्णयों को आकार देने में महत्वपूर्ण भूमिका निभाते हैं। ये निष्कर्ष भारत में तेजी से बढ़ते मासिक धर्म उत्पाद बाजार और पारंपरिक प्रथाओं पर निरंतर निर्भरता, साथ ही मासिक धर्म कप और टैम्पोन जैसे वैकल्पिक उत्पादों को अपेक्षाकृत धीमी गति से अपनाने के बीच विद्यमान विरोधाभास को समझने में सहायता करते हैं।

व्यवस्थित साहित्य समीक्षा, संरचनात्मक मॉडलिंग, गुणात्मक अन्वेषण और मात्रात्मक प्रमाणीकरण से प्राप्त साक्ष्यों को एकीकृत करते हुए यह शोध इस बात की व्यापक समझ विकसित करता है कि सामाजिक-सांस्कृतिक पूर्ववर्ती कारक मासिक धर्म से संबंधित अनुभूत वर्जना को कैसे आकार देते हैं और मासिक धर्म उत्पाद व्यवहार को कैसे प्रभावित करते हैं। यह अध्ययन उपभोक्ता व्यवहार और मासिक धर्म स्वास्थ्य संबंधी साहित्य में योगदान देता है, क्योंकि यह एक ऐसी व्यवहारिक रूपरेखा विकसित और अनुभवजन्य रूप से प्रमाणित करता है जो महिलाओं के उत्पाद चयन और खरीद निर्णयों में मासिक धर्म से संबंधित अनुभूत वर्जना की भूमिका को स्पष्ट करती है। इसके अतिरिक्त, निष्कर्ष यह भी रेखांकित करते हैं कि वहनीयता और उपलब्धता में सुधार के साथ-साथ सामाजिक मानदंडों, सांस्कृतिक विश्वासों, कलंक और सूचना संबंधी बाधाओं को संबोधित करना भी आवश्यक है। ये अंतर्दृष्टियाँ नीति-निर्माताओं, शिक्षकों, स्वास्थ्यकर्मियों, नियोक्ताओं, सामाजिक संगठनों और उत्पाद निर्माताओं को सूचित मासिक धर्म विकल्पों को बढ़ावा देने तथा मासिक धर्म स्वास्थ्य प्रबंधन पहलों को सुदृढ़ करने के लिए व्यावहारिक मार्गदर्शन प्रदान करती हैं।

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List of Abbreviations

Abbreviation	Full Form
AF	Affordability
AISHE	All India Survey on Higher Education
AMOS	Analysis of Moment Structures
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWC / AWW	Anganwadi Centre / Anganwadi Worker
AVE	Average Variance Extracted
BCC	Behaviour Change Communication
β	Path Coefficient (Beta)
CA	Cronbach's Alpha
CCT	Consumer Culture Theory
CFA	Confirmatory Factor Analysis
CI	Confidence Interval
CSR	Corporate Social Responsibility
CSE	Comprehensive Sexuality Education
DDWS	Department of Drinking Water and Sanitation
df	Degrees of Freedom
DLHS	District Level Household and Facility Survey
EFA	Exploratory Factor Analysis
f^2	Effect Size (Cohen's f-squared)
FGD	Expert Panel Discussion Discussion
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
HMIS	Health Management Information System
H1–H6	Research Hypotheses (1 to 6)
HTMT	Heterotrait–Monotrait Ratio of Correlations
IC	Informed Consent
ICMR	Indian Council of Medical Research
IEC (Comm)	Information, Education and Communication
IEC (Ethics)	Institutional Ethics Committee
IDI	In-Depth Interview
IIPS	International Institute for Population Sciences

IRB	Institutional Review Board
ISM	Interpretive Structural Modelling
JJM	Jal Jeevan Mission
KAP	Knowledge, Attitude and Practice
MHAI	Menstrual Hygiene Alliance of India
MHM	Menstrual Hygiene Management
MICMAC	Cross-Impact Matrix Multiplication Applied to Classification
MoE	Ministry of Education
MoHFW	Ministry of Health and Family Welfare
MoHUA	Ministry of Housing and Urban Affairs
MoJS	Ministry of Jal Shakti
MWCD	Ministry of Women and Child Development
MHS	Menstrual Hygiene Scheme
n	Sample Size
NFHS	National Family Health Survey
NFHS-5	National Family Health Survey, Round 5 (2019–21)
NHP	National Health Profile
NHM	National Health Mission
NITI	National Institution for Transforming India (NITI Aayog)
NSO / NSS	National Statistical Office / National Sample Survey
ODF	Open Defecation Free
ODF+	Open Defecation Free Plus
PB	Purchase Behaviour
PEU	Perceived Ease of Use
PLS-SEM	Partial Least Squares – Structural Equation Modelling
PPP	Public–Private Partnership
PRI	Panchayati Raj Institutions
Q^2	Stone–Geisser Predictive Relevance
QoL	Quality of Life
R^2	Coefficient of Determination
RKSK	Rashtriya Kishor Swasthya Karyakram
SAG (SABLA)	Scheme for Adolescent Girls (earlier SABLA)

SBM	Swachh Bharat Mission
SBM-G	Swachh Bharat Mission – Gramin
SBM-U	Swachh Bharat Mission – Urban
SCN	Socio-Cultural Norms
SD	Standard Deviation
SDG	Sustainable Development Goals
SE	Standard Error
SEM	Structural Equation Modelling
Smart PLS	Smart Partial Least Squares (Software)
SRMR	Standardized Root Mean Square Residual
SRS	Sample Registration System
TAB	Menstrual Taboo
TAM	Technology Acceptance Model
TCCM	Theory–Context–Characteristics–Methodology Framework
TNA	Thematic Narrative Analysis
TRA	Theory of Reasoned Action
t-stat	t-Statistic
UGC	University Grants Commission
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNESCO	United Nations Educational, Scientific and Cultural Organization
VHSNC	Village Health, Sanitation and Nutrition Committee
VHND	Village Health and Nutrition Day
VIF	Variance Inflation Factor
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
WTP	Willingness to Pay