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Human Parasitic Diseases in Ancient and Medieval Indian Texts and the *Bhagavad Gita*: An Indian Knowledge System Perspective

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Abstract

Parasitic diseases have affected human populations since antiquity and were recognized long before the development of modern diagnostic techniques. Ancient and medieval Indian medical texts provide systematic descriptions of parasitic diseases under the conceptual framework of *Krimi*, encompassing classification, clinical features, transmission pathways, preventive strategies, and therapeutic interventions. This review examines descriptions of human parasitic diseases in classical Indian texts from an Indian Knowledge System (IKS) perspective and correlates these observations with contemporary parasitological understanding. In addition to Ayurvedic treatises such as the *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya*, the study explores preventive health principles articulated in the *Bhagavad Gita* and their indirect relevance to disease susceptibility and control.

A narrative review of peer-reviewed literature, classical text translations, and paleoparasitological studies was conducted. Classical descriptions of *Krimi* were analyzed and compared with modern concepts of helminthic and ectoparasitic infections. The findings indicate a strong correspondence between ancient symptom descriptions and modern clinical manifestations, including gastrointestinal disturbances, anemia, malnutrition, and skin involvement. Ancient texts also recognized key transmission factors such as contaminated food and water, poor hygiene, and environmental conditions, emphasizing preventive measures that align closely with modern public health strategies. Experimental studies validating the anthelmintic activity of traditional medicinal plants further support the empirical basis of classical therapeutic practices.

Health-related concepts in the *Bhagavad Gita*, including dietary discipline, lifestyle moderation, cleanliness, and balance, complement Ayurvedic preventive approaches by addressing host resilience and disease susceptibility. Together, these sources reflect a holistic and observation-driven tradition of health knowledge. Integrating insights from ancient Indian texts, philosophical literature, and modern biomedical research can enrich the understanding of parasitic diseases and inform future interdisciplinary research in parasitology and public health.

Keywords: Krimi Roga; Parasitic diseases; Indian Knowledge System; Bhagavad Gita; Preventive health

Introduction

Parasitic diseases have afflicted human populations since antiquity and were recognized long before the advent of modern diagnostic and microbiological techniques. Early medical traditions relied primarily on systematic clinical observation, visible manifestations of organisms, symptom progression, and environmental associations to understand parasitic infections (Cox, 2002). Archaeological and paleoparasitological evidence confirms that parasitic diseases were widespread in ancient civilizations, indicating a significant and persistent burden of infection across human history (Reinhard, 1992; Chai et al., 2023).

In the Indian subcontinent, ancient and medieval medical texts such as the *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya* describe parasitic diseases under the collective term *Krimi*. These texts provide systematic accounts of classification, etiology, clinical manifestations, transmission pathways,

preventive measures, and therapeutic interventions related to parasitic conditions (Jain, 2019; Bairagi, 2023). From an Indian Knowledge System (IKS) perspective, these descriptions reflect an empirical and structured understanding of disease grounded in careful observation and experiential knowledge.

In addition to medical treatises, foundational Indian philosophical texts such as the *Bhagavad Gita* contributed to broader concepts of health, lifestyle regulation, diet, and disease prevention within the Indian Knowledge System. Although the *Bhagavad Gita* is not a medical text, its emphasis on bodily discipline, dietary moderation, cleanliness, and balance between physical and mental states provided a preventive framework that influenced later Ayurvedic and health-related thought. The present review synthesizes descriptions of parasitic diseases from ancient and medieval Indian texts, correlates them with modern parasitology, and situates these observations within the wider philosophical context of the Indian Knowledge System.

Aim and Objectives

The aim of this study is to examine descriptions of human parasitic diseases in ancient and medieval Indian texts from an Indian Knowledge System perspective, while also exploring preventive health principles articulated in the *Bhagavad Gita*. The study seeks to analyze classical Ayurvedic concepts of *Krimi*, correlate these descriptions with modern parasitological understanding, evaluate traditional therapeutic and preventive approaches, and assess how dietary discipline, lifestyle regulation, and cleanliness emphasized in the *Bhagavad Gita* conceptually support disease prevention. This study synthesizes modern scientific and experimental evidence that validates classical observations related to parasitic diseases.

Methodology

A narrative review was conducted using open-access literature from PubMed Central and Ayurveda-focused journals. Keywords included *Bhagavad Gita, Krimi Roga*, ancient Indian parasitic diseases, Ayurvedic anthelmintics, paleoparasitology, and Indian Knowledge System.

Results

The reviewed literature demonstrated that ancient and medieval Indian medical texts described parasitic diseases systematically under the conceptual framework of *Krimi*.

Parasites were classified into internal (*Abhyantara*) and external (*Bahya*) categories, with further subdivisions based on habitat, origin, and clinical manifestations. *Purisaja Krimi* was most frequently discussed and showed strong resemblance to intestinal parasitic infections described in modern medicine. Clinical features such as abdominal pain, diarrhea, anorexia, anemia, malnutrition, weakness, and skin manifestations were consistently described. These features closely align with the clinical presentation of helminthic and ectoparasitic infections recognized today (Das, 2021; Aiswarya, 2022). Transmission was associated with contaminated food and water, poor hygiene, and unsanitary conditions, while preventive strategies emphasized cleanliness, dietary regulation, and seasonal discipline (Jain, 2019). Analysis of health-related verses from the *Bhagavad Gita* revealed indirect but consistent alignment with Ayurvedic preventive concepts. The Gita emphasizes moderation in diet, purity of food, disciplined lifestyle, and balance in sleep and activity, all of which are recognized determinants of host resistance to disease. These principles conceptually support preventive strategies for parasitic diseases by reducing exposure to contamination, improving nutritional status, and maintaining immune competence.

For example, the classification of food types in the *Bhagavad Gita* highlights the importance of wholesome and pure diet:

"आयुःसत्त्वबलारोग्यसुखप्रीतिविवर्धनाः
रस्याः स्निग्धाः स्थिरा हृद्या आहाराः सात्त्विकप्रियाः"
(*Bhagavad Gita*, 17.8)

Meaning: Foods that promote longevity, vitality, strength, health, happiness, and satisfaction are dear to those of a balanced nature.

Such dietary principles align with modern understanding of nutrition and gut health in preventing intestinal parasitic infections.

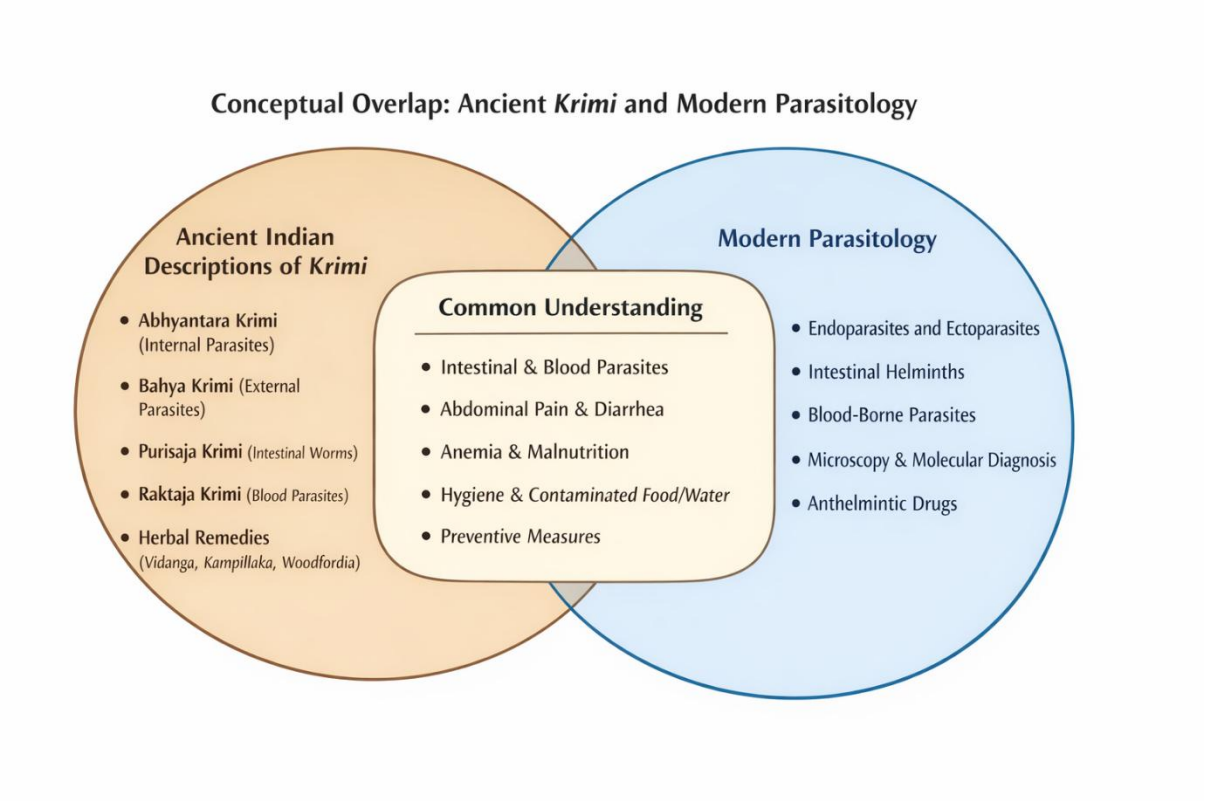

Table 1. Comparison of Ancient Indian Descriptions of *Krimi* with Modern Parasitology

Aspect	**Ancient & Medieval Indian Texts (*Krimi*)**	**Modern Parasitology**
Basis of classification	Habitat, origin, and symptoms	Morphology, life cycle, genetics
Major categories	Abhyantara (internal), Bahya (external)	Endoparasites, ectoparasites
Intestinal parasites	Purisaja Krimi	Intestinal helminths
Blood/tissue involvement	Raktaja Krimi	Blood-borne parasites
Diagnostic approach	Clinical signs and observation	Microscopy, serology, molecular tools
Understanding of transmission	Contaminated food, water, hygiene	Fecal–oral route, vectors

Sources: *Cox (2002); Jain (2019); Bairagi (2023); Das (2021)*

Table 2. Symptom Comparison Between Classical *Krimi* Descriptions and Modern Helminthiasis

Clinical Feature	Mentioned in Ancient Texts	Reported in Modern Medicine
Abdominal pain	Yes	Yes
Diarrhea	Yes	Yes
Weight loss	Yes	Yes
Anemia	Yes	Yes
Malnutrition	Yes	Yes
General weakness	Yes	Yes
Skin irritation	Yes (Bahya Krimi)	Yes (ectoparasites)

Sources: *Das (2021); Aiswarya (2022); Cox (2002)*

Table 3. Traditional Antiparasitic Remedies and Modern Scientific Evidence

Medicinal Plant / Formulation	Classical Use	Modern Evidence
Vidanga (*Embelia ribes*)	Expulsion of intestinal worms	Proven anthelmintic activity
Kampillaka	Treatment of *Krimi Roga*	In vitro helminth paralysis
Woodfordia fruticosa	Anthelmintic therapy	Significant laboratory efficacy
Polyherbal formulations	Gut cleansing	Experimental validation
Dietary regulation	Prevention	Aligns with public health principles

Sources: *Dubey et al. (2017); Siddiqui & Patni (2020); Rahate et al. (2024)*

Table 4. Preventive Concepts in Indian Knowledge System and Modern Public Health

Preventive Measure	Ancient Texts	Modern Interpretation
Personal hygiene	Emphasized	Key control strategy
Clean food and water	Strongly advised	Prevents fecal–oral transmission

Seasonal regimens	Recommended	Disease seasonality recognized
Dietary moderation	Core principle	Nutritional immunity
Environmental cleanliness	Highlighted	Sanitation programs

Sources: *Jain (2019); Reinhard (1992); Chai et al. (2023)*

Table 5. Health and Preventive Concepts in the Bhagavad Gita Relevant to Parasitic Disease Prevention

Concept in Bhagavad Gita	**Sanskrit Reference**	**Health Interpretation**	**Relevance to Parasitic Diseases**
Wholesome diet (*Sattvic Ahara*)	BG 17.8	Promotes strength and immunity	Supports gut health, reduces susceptibility
Avoidance of impure food	BG 17.10	Prevents bodily imbalance	Reduces risk of food-borne parasites
Moderation in lifestyle	BG 6.16–17	Balanced sleep, activity, diet	Limits exposure and improves resistance
Cleanliness of body and mind	BG 13.8	Discipline and self-care	Aligns with hygiene-based prevention
Self-regulation (*Yoga*)	BG 6.5	Control over habits	Supports long-term disease prevention

Discussion

The findings indicate that ancient and medieval Indian medical texts contained a coherent and observation-based understanding of parasitic diseases that closely aligns with modern parasitology. The concept of *Krimi* encompassed diverse parasitic organisms and clinical presentations, allowing ancient physicians to recognize disease patterns consistent with helminthic and ectoparasitic infections.

The *Bhagavad Gita* provides a broader philosophical foundation that complements these medical descriptions. Although it does not describe parasites directly, its emphasis on dietary purity, moderation,

cleanliness, and disciplined living aligns strongly with Ayurvedic preventive strategies for *Krimi Roga*. Verses discouraging excessive consumption and irregular lifestyle underscore the importance of behavioral regulation in maintaining health:

"नात्यश्नतस्तु योगोऽस्ति न चैकान्तमनश्नतः

न चाति स्वप्नशीलस्य जाग्रतो नैव चार्जुन"

(*Bhagavad Gita*, 6.16)

Meaning: Yoga is not for one who eats too much or too little, sleeps too much or too little.

Such principles resonate with modern public health approaches that recognize lifestyle, sanitation, and nutrition as critical determinants of parasitic disease burden. Validation of traditional anthelmintic remedies through experimental studies and corroboration from paleoparasitological evidence further strengthen the scientific relevance of ancient Indian knowledge systems.

Conclusion

This review highlights that ancient and medieval Indian medical texts provide a detailed, systematic, and observation-based understanding of human parasitic diseases under the conceptual framework of *Krimi*. Classical descriptions encompass disease classification, symptomatology, transmission pathways, preventive measures, and therapeutic strategies that show strong conceptual alignment with modern parasitology. The close correspondence between ancient symptom descriptions and contemporary clinical manifestations underscores the empirical foundations of early Indian medical knowledge, developed through careful observation and experiential learning.

In addition to classical Ayurvedic treatises, the preventive health philosophy articulated in the *Bhagavad Gita* offers a broader conceptual context for understanding disease susceptibility within the Indian Knowledge System. Although not a medical text, the *Bhagavad Gita* emphasizes dietary discipline, lifestyle moderation, cleanliness, and balance, principles that indirectly support host resistance and disease prevention. These concepts complement Ayurvedic strategies for managing *Krimi Roga* and resonate with modern public health approaches focused on hygiene, nutrition, and behavioral regulation.

Experimental validation of traditional anthelmintic remedies and evidence from paleoparasitological studies further strengthen the scientific relevance of classical descriptions. Together, medical, philosophical, and archaeological sources reflect a holistic and integrated tradition of health knowledge. Integrating insights from ancient Indian texts with contemporary biomedical research can enhance understanding of parasitic diseases and support interdisciplinary approaches in parasitology, pharmacology, and public health.

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