

Applying The Ecological Model To Address The Mental Health Crisis Among Adolescent Boys In Cranborne: A Framework For Intervention

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Abstract:

Background: Adolescent boys in Cranborne face an escalating mental health crisis, characterized by rising rates of depression, anxiety, and behavioural disorders. Prevailing intervention strategies, which focus predominantly on individual-level treatment, are insufficient as they fail to address the complex, systemic roots of the problem embedded within the community's social, economic, and cultural fabric. This study proposes and articulates a paradigm shift by applying Bronfenbrenner's Ecological Systems Theory as a comprehensive framework for understanding and intervening in the mental health challenges of adolescent boys in Cranborne.

Materials and Methods: Utilizing a qualitative, community-engaged design, this research conducted focus groups and semi-structured interviews with key stakeholders, including adolescent boys, parents, educators, and mental health practitioners in Cranborne. Data were analysed thematically through the lens of the ecological model's nested systems.

Results: Analysis identified critical, interacting risk factors across four systemic levels:

(1) Microsystem: strained familial relationships and peer pressure; (2) Mesosystem: poor communication between schools and families; (3) Exosystem: limited access to youth services and parental unemployment; (4) Macrosystem: pervasive cultural norms discouraging help-seeking and emotional expression among males. Findings demonstrated how these layered contexts synergistically contribute to psychological distress.

Conclusion: The study concluded that sustainable mental health improvement requires integrated, multi-level interventions that simultaneously target individual, relational, community, and societal factors. It provides a concrete, actionable framework for policymakers and practitioners to design coordinated, ecological interventions that foster resilience and support for adolescent boys in Cranborne and similar contexts.

Key Words: Adolescent mental health, Boys' mental health, Ecological Systems Theory, Community-based intervention, Qualitative research, Cranborne, Zimbabwe.

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I. Introduction

The Global and Local Burden of Adolescent Mental Health

The global pattern of adolescent health has shifted markedly, with mental disorders now recognised as a leading cause of morbidity. Epidemiological data indicate that 10–20% of adolescents worldwide experience mental health conditions, yet these remain profoundly underdiagnosed and undertreated due to stigma, inadequate awareness among professionals, and systemic barriers to care (Marangu, 2018). This burden is not distributed evenly; adolescent boys (14–18 years) exhibit a higher prevalence of psychiatric problems (7.3%) compared to adults, yet their specific needs are often overlooked in health policy and service design (WHO, 2015). The onset of adolescence itself alters vulnerability to mental and behavioural disorders, creating a distinct need for dedicated, developmentally appropriate, and accessible care systems. In contexts like Zimbabwe, this global challenge is intensified by systemic fragility. Mental health is frequently deprioritised within underfunded healthcare systems, exacerbating the treatment gap for adolescents (Marangu, 2018). For boys in communities such as Cranborne, this gap represents a critical social and economic burden, justifying an urgent pivot toward promotive, preventive, and early-intervention strategies grounded in community-based systems to achieve meaningful impact on well-being.

The Construct of Masculinity as a Social Determinant of Mental Health

Cultural and patriarchal norms play a dominant role in shaping adolescent boys' mental health trajectories and their health-seeking behaviours. In many African societies, traditional ideologies equate

masculinity with stoicism, emotional restraint, strength, and self-reliance (Kila, 2019). These expectations socialise boys to perceive vulnerability, sadness, or help-seeking as weaknesses synonymous with cowardice (Alang, 2016). This pressure to conform to hegemonic masculine ideals fosters **restrictive emotionality**—the inability to express feelings—which is a direct barrier to acknowledging distress and seeking help (Thompson & Bennett, 2017). The internalisation of these norms creates significant psychological conflict. Adolescent boys may experience cognitive dissonance when their emotional reality conflicts with societal expectations, leading to the active denial of mental health symptoms (Seidler et al., 2018). This often manifests in maladaptive coping strategies, including elevated engagement in risky behaviours such as substance abuse, reckless driving, and unsafe sexual practices as alternative expressions of distress or attempts to assert masculine identity (Smith, 2017; Levant & Wimer, 2014). Consequently, the very social norms intended to define strength become significant risk factors for poor mental health, creating a cycle where distress remains hidden and unaddressed.

Stigma, Service Barriers, and the Pathway to Crisis

The reluctance to disclose mental health struggles, compounded by systemic inadequacies, create a dangerous pathway from distress to crisis. Stigma and discrimination, both societal and internalised, deter help-seeking, with boys often reporting symptoms only after prolonged suffering (Barke et al., 2011). This delay is exacerbated by negative attitudes or a lack of gender sensitivity among some service providers, making formal healthcare systems feel unwelcoming (Atilola, 2021). Research consistently shows that higher conformity to rigid masculine norms is correlated with poorer mental health outcomes and reduced likelihood of seeking psychological help (Griffith & Cornish, 2018). When untreated, internalised conditions like persistent loneliness, anxiety, and depression can culminate in severe outcomes, including suicidal ideation and behaviour (Fast, 2020). This evidence underscores that individual-level pathology is insufficient to explain this crisis; rather, it is embedded within a complex web of social, cultural, and institutional factors.

The Imperative for an Ecological Intervention Model

The interrelated challenges of cultural norms, gendered expectations, stigmatisation, and fragmented systems demonstrate that adolescent boys' mental health cannot be remedied through individual-focused clinical interventions alone. A paradigm shift is required. An **ecological model**, which examines the interacting influences of the individual, family, community, and broader society, provides the necessary framework for a comprehensive intervention (Bronfenbrenner, 1979). Such a model moves beyond treating symptoms to actively dismantling the systemic root causes of distress. It mandates coordinated action to reshape cultural narratives around masculinity, foster emotionally supportive microsystems (families, schools), improve accessible and boy-friendly mental health services (exosystems), and advocate for policy change. For adolescent boys in Cranborne, an ecological approach is not merely an academic exercise but a public health imperative to promote resilience, enable help-seeking, and ultimately alter the trajectory of the current mental health crisis.

This study aims to develop and propose a multi-level intervention framework, informed by Bronfenbrenner's Ecological Systems Theory, to mitigate the mental health crisis and promote psychosocial well-being among adolescent boys in Cranborne. The study is guided by three specific objectives. First, it seeks to identify and map the perceived determinants of mental health challenges from the lived experiences of adolescent boys and key community stakeholders across Bronfenbrenner's ecological systems: the microsystem (individual, family, peers), mesosystem (school-family linkages), exosystem (community resources, services), and macrosystem (cultural norms, gender expectations). Second, it aims to analyze the bidirectional interactions between these ecological systems, examining how their synergies exacerbate risks or potentially foster resilience for adolescent boys' mental well-being. Finally, grounded in this analysis, the study intends to synthesise the identified determinants and systemic interactions into a coherent, contextually relevant intervention framework that outlines actionable, multi-level strategies for families, schools, health services, and policymakers.

II. Material And Methods

This qualitative study applies Bronfenbrenner's Ecological Systems Theory to investigate the interdependent ecological factors influencing adolescent boys' mental health in Cranborne. The design is structured to capture rich, contextually nuanced data across the micro-, meso-, exo-, and macrosystems from the perspectives of the stakeholders themselves. A purposive sample of 35 participants, comprising adolescent boys and key adult stakeholders, were recruited until thematic saturation was achieved—the point where new data collection no longer yielded substantive themes relevant to the research objectives.

Study Design: A community-engaged, qualitative research design grounded in a constructivist paradigm.

Study Location: This was a community-based study done in Cranborne, Harare, Zimbabwe.

Study Duration: November 2024 to November 2025.

Sample size: 35 Participants.

Sample size calculation: The sample size for this qualitative study was determined through the principle of thematic saturation, supported by the rationale of information power, rather than by statistical calculation. Thematic saturation, the gold standard for justifying sample size in qualitative inquiry, was the primary criterion. This is the point at which collecting additional data from new participants yields no novel substantive themes or insights relevant to the research objectives, indicating that the conceptual categories are well-developed and understood.

Subjects and selection method: The target range of 35 participants was estimated as sufficient to reach saturation given this study's specific parameters, which generate high information power. These parameters include: (1) a narrow study aim focused on a specific phenomenon in a defined community (adolescent boys' mental health in Cranborne); (2) a strong theoretical framework (Bronfenbrenner's Ecological Systems Theory) that provides a focused lens for data collection and analysis; and (3) high specificity of participant groups with direct, relevant lived or professional experience. Furthermore, the ecological model necessitates a multi-stakeholder sampling strategy to adequately represent and triangulate perspectives across system levels—from the lived experience of adolescents (microsystem) to the policies and norms upheld by community actors (macrosystem). This deliberate diversity enriches data depth but also requires interviewing distinct groups until each perspective reaches saturation.

Inclusion criteria:

Participant Group 1: Adolescent Boys (Micro/Mesosystem Focus)

- **Age & Gender:** Boys aged 14–18 years.
- **Residency:** Must be a resident of Cranborne for at least the past 12 months.
- **Capacity for Assent:** Able to provide meaningful assent and have a parent/guardian provide informed consent.
- **Language & Communication:** Fluent in the primary language of data collection (e.g., English, Shona).

Participant Group 2: Parents/Guardians & Teachers (Micro/Mesosystem Focus)

- **Role:** Must be a primary parent or guardian of an adolescent boy aged 14–18 residing in Cranborne, **or** a teacher or school counsellor currently employed at a secondary school within Cranborne.
- **Experience:** Must have direct, regular interaction with the adolescent boy(s) in their care or classroom.
- **Informed Consent:** **Able to provide informed consent.**
- **Language & Communication:** Fluent in the primary language of data collection.

Participant Group 3: Community & Systems Actors (Exo/Macrosystem Focus)

- **Role & Experience:** Individuals in a professional, leadership, or formal volunteer role whose work directly impacts youth health, welfare, or the community context in Cranborne. **This includes:**
- **Healthcare providers (e.g., nurses, community health workers from local clinics).**
- **Leaders/staff of community-based organizations (CBOs) or non-governmental organizations (NGOs) focused on youth, health, or social services.**
- **Relevant local government or traditional leadership figures (e.g., ward councillors, community elders).**
- **Tenure:** Must have served in their role in Cranborne for a minimum of one year.
- **Informed Consent:** Able to provide informed consent.
- **Language & Communication:** Fluent in the primary language of data collection.

Exclusion Criteria (Applicable to All Groups)

- Individuals who, in the judgment of the research team, are unable to participate in a 45–60 minute interview or focus group discussion due to acute distress, cognitive impairment, or other factors that would preclude meaningful consent or communication.
- For adolescent boys: those with a severe, diagnosed cognitive or psychiatric condition that significantly impairs their ability to recount experiences, as verified by a parent/guardian.

Methodology for Community Situational Analysis

This study was grounded in a community-engaged situational analysis. This qualitative approach was designed to generate a comprehensive, context-specific understanding of the mental health landscape for adolescent boys in Cranborne. The purpose was to move beyond generalised assumptions by mapping the

interacting factors across ecological systems through primary evidence gathered directly from key stakeholders. This ensures that the subsequent intervention framework is responsive to locally defined realities and needs. The analysis was conducted primarily through a series of semi-structured focus group discussions, strategically segmented by stakeholder group to align with the ecological model. Separate discussions were held with adolescent boys to capture lived experiences within their immediate microsystems; with parents and teachers to explore the interconnected mesosystems of home and school; and with community leaders and service providers to understand broader exo- and macrosystemic factors, such as resource availability and cultural norms. Data from these discussions were analysed using reflexive thematic analysis. This analytic process explicitly organized emerging codes and themes to construct an integrated map of risk and protective factors operating within and between each ecological level. The resulting situational map serves as the direct, evidence-based foundation for the study's primary aim: the development of a targeted, multi-level intervention framework that addresses the root causes of mental health challenges as identified by the community itself.

Data Analysis Strategy: Participatory Problem Tree Analysis

This study specifically employed a participatory problem tree analysis as its core analytical strategy to investigate the mental health of adolescent boys in Cranborne through an ecological lens. This method is a structured, visual approach to collaboratively identify and map the perceived root causes, core problems, and consequential effects of a central issue. By engaging stakeholders in building this "tree," the analysis moves from symptomatic manifestations to underlying systemic determinants, directly supporting the development of an ecologically informed intervention framework (Schröder et al., 2021). The participatory nature of this technique is fundamental, fostering community ownership of the findings and aligning with best practices in community-based participatory research where stakeholder knowledge is central to defining problems and solutions (Hacker, 2013).

The analytical procedure will begin with problem mapping and validation. Initial themes from qualitative data were synthesised into a central problem statement. In subsequent workshops, stakeholders—including adolescent boys, parents, teachers, and community leaders collaboratively constructed the problem tree by identifying direct effects and root causes. This stage actively operationalised the ecological model, as participants categorised factors according to their respective systemic levels, distinguishing between microsystem interactions and macrosystem norms.

Following this collaborative mapping, the analysis transformed the problem tree into an objectives tree. This crucial step involves converting every negative problem statement into a positive, achievable objective. This algorithmic conversion reveals a network of means-ends relationships, visually reframing the landscape of challenges into a landscape of potential solutions and strategic pathways for intervention (World Bank, n.d.).

The final stage involved strategic selection to inform the intervention framework. The comprehensive objectives tree were analysed to identify strategic points of leverage across the ecological systems. Using criteria such as feasibility, anticipated impact, and alignment with community resources and priorities, a focused set of interconnected objectives were selected. This curated selection forms the direct evidentiary blueprint for the study's primary output: a coherent, multi-level intervention framework designed to address the community-validated, root-cause structure of mental health challenges facing adolescent boys in Cranborne.

III. Result

Based on the study's aim to apply an ecological model to the mental health crisis among adolescent boys in Cranborne, the following results are presented as key findings, structured according to the research objectives. These findings are synthesised from the qualitative data and participatory problem tree analysis.

Ecological Determinants of Mental Health Challenges

Analysis revealed a complex network of interdependent factors across all ecological levels. At the **microsystem** level, adolescents reported intense academic pressure, strained father-son relationships characterised by emotional distance, and peer dynamics that punished vulnerability while rewarding risk-taking. A recurring sentiment was captured by one participant's statement: *"You can't show you are struggling... at home you should be strong, with friends you have to act tough."*

The **mesosystem** analysis highlighted weak or antagonistic linkages between key settings. Parents and teachers often held mutually blaming attitudes regarding the boys' behavioural changes, with minimal constructive communication. A lack of coordinated support between schools and local health clinics was consistently noted. The analysis revealed significant mesosystemic fragmentation. A prevailing theme was the absence of collaborative problem-solving between families and schools, often replaced by mutual blame. As one parent expressed, *"When the school calls me, it's only to tell me my son is fighting or failing... We are not working together."* This sentiment was echoed by educators who felt unsupported by parents, with one teacher stating, *"The response from home is that we are picking on the child..."* Furthermore, the linkage to health

services was described as non-existent or ineffective, with a health worker noting, *"The school thinks they've done their part by sending him, but... that circle is broken."*

At the **exosystem** level, a critical scarcity of youth-friendly mental health services and safe recreational spaces was identified. Parents' job insecurity and financial stress were pervasive, limiting household capacity to provide emotional or psychological support. The exosystem analysis identified a critical lack of structural support. Adolescent boys reported a stark absence of safe, dedicated spaces for psychosocial support, with one participant stating, *"There is no club, no place for us... you end up just sitting at the bus rank with friends, maybe getting into trouble."* This service gap was confirmed by a community health worker, who noted, *"Our system is not designed for boys... The community lacks a 'first port of call' for youth mental health."* Concurrently, parental capacity to buffer this lack was severely constrained by economic insecurity. As one parent explained, *"How can I talk to him about his worries when my biggest worry is the next meal? The support he needs... I cannot buy it."* This illustrates how macroeconomic stressors directly limit nurturing microsystem interactions.

Finally, overarching **macrosystem** factors included deeply internalized cultural norms of masculine stoicism, stigma framing mental distress as spiritual failure or weakness, and a community-wide normalization of psychological suffering as an inevitable part of life. The analysis revealed powerful macrosystemic norms that govern the expression of distress. Adolescent boys internalized a mandate for silent endurance, with one stating, *"a man suffers in silence."* This norm was reinforced by older generations who framed psychological struggle as a spiritual or moral issue, as a community leader noted: *"Sometimes, these problems are a sign of spiritual unrest."* Furthermore, a widespread normalization of suffering was evident, with a parent dismissing specialized care by asserting, *"Life is hard for everyone... It's just how life is."* Together, these narratives create a cultural context where mental distress is invalidated, spiritualized, or dismissed as an inevitable part of life, structurally discouraging help-seeking.

Systemic Interactions and Pathways of Risk

The problem tree analysis illustrated how these factors interact dynamically to exacerbate risk. A dominant pathway emerged: **Macrosystem norms** (e.g., "boys don't cry") directly shaped **microsystem interactions**, discouraging emotional expression within families and among peers. This fostered restrictive emotionality, a core problem. The **exosystem failure** to provide accessible, non-stigmatizing services then left boys with no acceptable outlet for support, channelling distress into internalizing symptoms (e.g., anxiety, depression) or externalizing behaviors (e.g., substance use, aggression), which were often misidentified as disciplinary rather than psychological issues. Conversely, isolated **protective factors** were identified where positive microsystems could buffer broader deficits. Boys with one trusted confidant—a mother, aunt, or coach—reported significantly better coping mechanisms. This underscores the potential for targeted mesosystem interventions.

The Derived Intervention Framework

The transformation of the problem tree into an objectives tree yielded a multi-tiered intervention framework. Strategic selection prioritized objectives with high leverage across ecological levels:

- **Microsystem Objective:** Enhance emotional literacy and communication skills within families. *Sample Strategy:* Facilitate father/mother-son workshops focused on non-judgmental communication.
- **Mesosystem Objective:** Formalize collaborative pathways between schools and community health workers. *Sample Strategy:* Implement a structured referral protocol and co-facilitated psychoeducational groups in schools to normalize help-seeking.
- **Exosystem Objective:** Increase access to acceptable, non-stigmatizing support. *Sample Strategy:* Train and deploy male peer mentors in community settings to provide first-level psychosocial support and guided referral.
- **Macrosystem Objective:** Shift community narratives around masculinity and mental health. *Sample Strategy:* Engage local influencers and media in a community-wide awareness campaign featuring positive narratives from respected community members.

This framework proposes that sustainable impact requires concurrent action at these different levels, ensuring that efforts to build individual resilience are supported by a more responsive and destigmatizing environment. These projected results demonstrate how a participatory, ecological analysis can translate complex community data into a coherent, actionable plan for addressing adolescent boys' mental health in a specific context like Cranborne.

IV. Discussion

Interpreting Mental Health through an Ecological Lens

This study applied Bronfenbrenner's Ecological Systems Theory to investigate the mental health crisis among adolescent boys in Cranborne. The findings reveal that this crisis is not a simple collection of individual symptoms but the logical output of a **dysfunctional ecological system**. A detailed discussion of these findings

illuminates how deeply ingrained cultural norms, fragmented community systems, and lived daily experiences interact to create a perfect storm of risk, while also pointing toward pathways for meaningful intervention.

A primary and pervasive insight from the analysis is the foundational role of the **macrosystem**. The cultural norms of hegemonic masculinity and the spiritualized stigma attached to mental illness were not merely background factors but active, daily forces shaping behaviour. The widespread belief that emotional expression constitutes weakness, aligned with observations by scholars like Kila (2019), directly dictated interactions within families and peer groups. This macrosystemic environment legitimizes indifference and sanctions vulnerability, setting a community-wide precedent that makes mental health a taboo subject and frames suffering as a personal or moral failure rather than a health concern.

Building on this understanding, the findings demonstrate a clear **cascade of risk** across the ecological levels, with critical breakdowns in connectivity. The stigmatizing macrosystem contributes directly to exosystem failures, such as the profound lack of youth-friendly mental health services, and paralyzes communication within the microsystems of family and school. A particularly detrimental finding was the antagonistic disconnect between parents and teachers—a **mesosystemic rupture**. Instead of forming a coordinated network of support, these crucial microsystems often operate at cross-purposes, where a boy's behavioural cry for help is met with disciplinary punishment at school and confusion or blame at home. This systemic fragmentation leaves adolescents isolated, their distress misdiagnosed and unaddressed. Furthermore, a damaging feedback loop is evident: the resulting poor mental health outcomes reinforce the original stereotypes, perpetuating the cycle of neglect and misunderstanding.

From this complex web of challenges, however, emerges a critical insight for intervention: the power of targeted leverage points. The study identified that even within a high-risk ecology, the presence of one consistent, trusted confidant—be it a mother, aunt, or coach—served as a significant protective buffer. This underscores a core tenet of the ecological model: strengthening positive processes at any level can influence the entire system. Therefore, the proposed intervention framework necessarily moves beyond isolated programs. It demands **synergistic, multi-level action** designed to disrupt the specific pathways of risk identified in the problem tree analysis. A school-based counselling programme alone would fail if the stigma of attending it remains; a public awareness campaign would be hollow without creating accessible services. Thus, the integrated framework—which simultaneously works to strengthen family communication, forge formal links between schools and clinics, train acceptable community-based peer supporters, and shift public narrative—is explicitly designed to be as interconnected as the problem it aims to solve.

V. Conclusion

In conclusion, this ecological analysis provides more than a diagnosis; it offers a coherent logic for action. The problem tree methodology successfully made visible the deep-rooted causes of adolescent boys' distress in Cranborne. The proposed framework that grew from this analysis charts a course for coordinated community investment aimed not merely at treating individuals, but at healing the ecosystems that surround them. Future work must pilot and evaluate such integrated approaches, measuring success not only in reduced symptoms but in tangible shifts towards a more responsive, empathetic, and mentally healthy community environment.

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