

Feasibility and Acceptability of a Novel Ceramic Cord-Cutting Device (C3D)
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Background: Most of the world's childbirths occur outside healthcare facilities in low-resource environments. These environments promote unclean birthing practices due to insufficient supply of sterile surgical instruments and sanitizing equipment, and a lack of clean water and clean procedure surfaces. As a result, opportunistic bacteria colonize the newly cut umbilical cord producing infection, bacteremia, sepsis, and neonatal death. Introducing a reusable, safe, and easy to clean cord-cutting device is an opportunity to prevent infections.

Ceramic Cord Cutting Device (C3D) is the first device specifically designed to cut umbilical cords with ease and accuracy, while promoting safety for the birth attendant, newborn, and mother. C3D enhances safety and reutilization, but feasibility and acceptability have not been explored.

Methods: Minimal research exists about culture specific birth attendant practices and interest in changing delivery practice behavior. Assessing cultural needs of the users are paramount to C3D's acceptance into practice. Qualitative studies assessing feasibility and acceptability of the device are the first step to optimization and will guide further development and implementation of C3D. This study will focus on garnering interest in C3D and identifying potential challenges to utilization, including: perceived need of C3D, reaction to C3D, user requirements and goals, impact on user training, challenges to operating logic, other devices in the users' environment, and potential performance challenges and error-inducing factors.

Implications for Diversity and Cultural Competence: This research provides cultural context and guidance for implementation of a safe and reusable cord cutting device that can improve hygienic birthing practices globally.