

Clinical Research Study: Evaluating the Efficacy of the MEDi-Derm Applicator in Improving Quality of Life and Health Outcomes.

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Study Period: August 1st, 2024 – August 31st, 2024

Introduction

Topical medications are commonly prescribed for various dermatological and musculoskeletal conditions, but their efficacy can be hindered by patients' inability to apply them properly to hard-to-reach areas. Patients with **limited mobility, those living alone, and older adults** face particular challenges in medication adherence due to physical limitations, lack of assistance, or dexterity issues.

The **MEDi-Derm Applicator** is a patented medical device designed to facilitate **self-application** of medicated creams, ensuring precise dosing, minimal waste, and enhanced accessibility. This study evaluates the **efficacy** of the MEDi-Derm Applicator in improving **quality of life, independence, and mental well-being** among individuals with difficulty applying topical medications.

Hypothesis

The MEDi-Derm Applicator improves overall quality of life and health by addressing the following:

1. **Regaining independence** in applying topical medications.
2. **Improving confidence and mental well-being** by reducing reliance on caregivers.
3. **Enhancing treatment adherence and patient satisfaction** through ease of use.

Study Design

This **prospective, observational study** was conducted on **100 participants**, equally divided into **three groups**:

- **Group 1:** Adults aged **60 and older** (n=33).
- **Group 2:** Adults aged **21 and older who live alone** (n=33).
- **Group 3:** Individuals with **limited mobility** (n=34), defined as **inability to bend down to reach lower extremities or individuals classified as obese (BMI ≥30)**.

All participants were prescribed a medicated cream for an existing dermatological or musculoskeletal condition and were provided with the **MEDi-Derm Applicator** for **daily self-application** over a **four-week period**.

Methodology

1. **Baseline Assessment:** Participants completed an **initial survey** evaluating their previous experience with topical medication application, dependency on caregivers, self-confidence in medication use, and mental well-being.
 2. **Intervention:** Participants were trained on the proper use of the MEDi-Derm Applicator and instructed to use it daily for four weeks.
 3. **Follow-up Survey:** At the end of the study, participants completed a **post-intervention survey** assessing the following:
 - Ability to apply medication independently.
 - Confidence in self-care and overall well-being.
 - Reduction in reliance on caregivers or assistance.
 - Overall satisfaction with the applicator.
 4. **Qualitative Interviews:** A subset of participants (n=20) provided additional feedback on usability, challenges, and personal experiences.
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Results

Key Findings from the Post-Intervention Survey:

- **85%** of participants reported an improvement in **independent application** of medicated creams.
- **78%** of participants experienced a **boost in confidence** regarding self-care.
- **82%** reported a **positive impact on mental well-being**, citing reduced frustration and improved sense of autonomy.

- **72%** of individuals who previously relied on caregivers for application **reduced or eliminated their need for assistance.**
- **Overall satisfaction rate: 92%** of participants found the MEDi-Derm Applicator beneficial and would continue using it.

Group-Specific Findings:

- **Older Adults (60+): 80%** reported improved ability to apply medications independently.
- **Individuals Living Alone: 85%** experienced reduced reliance on external assistance.
- **Limited Mobility Group: 76%** found the applicator significantly eased self-application of medication.

Discussion

The study results strongly support the hypothesis that the **MEDi-Derm Applicator enhances quality of life by promoting independence, confidence, and well-being.** Participants across all groups reported **greater ease of use, higher adherence to medication regimens, and a reduction in the need for caregiver assistance.**

These findings are particularly relevant for **aging populations, individuals with disabilities, and those living alone**, who often struggle with medication adherence due to physical limitations. By **bridging this accessibility gap**, the MEDi-Derm Applicator has the potential to become a **standard tool in self-administered dermatological and pain management treatments.**

Conclusion

This study demonstrates that the **MEDi-Derm Applicator is an effective solution** for individuals facing difficulties in applying medicated creams. By improving **independence, confidence, and mental well-being**, the device enhances both **treatment adherence and patient satisfaction.**

Future research may explore **long-term adherence rates, clinical efficacy of specific topical formulations with the MEDi-Derm**, and expanded use cases in **post-surgical and rehabilitative care settings.**

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For further inquiries or access to the full study data, please contact:

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