New Emergency Management in a Resilience Era Facing Health, Climate and Energy Challenges

6th to 10th December 2021

Date and slot of presentation to be filled in shortly

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Research into the Potential Links Between Covid-19, Misinformation and the "Mismedication" in the Kingdom of Lesotho

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Introduction

- The spread of misinformation about the COVID-91 pandemic causes fear and panic in the rural folks of Lesotho.
- This is deeply explained by the Motivation Protection Theory: Threat information creates fear and panic and makes people resort to easily available and cheap responses to deal with threats (Rogers, 1975).
- This has made the rural folks of Lesotho resort to the unscientific use of medicinal plants (mismedication) to treat and prevent COVID-19.
- This study is important because rural folks make up more than 70 percent of Lesotho's population (Dick-Sagoe et al., 2021).
- No attention was paid to mismedication during COVID-19.
- This study seeks to fill this gap.

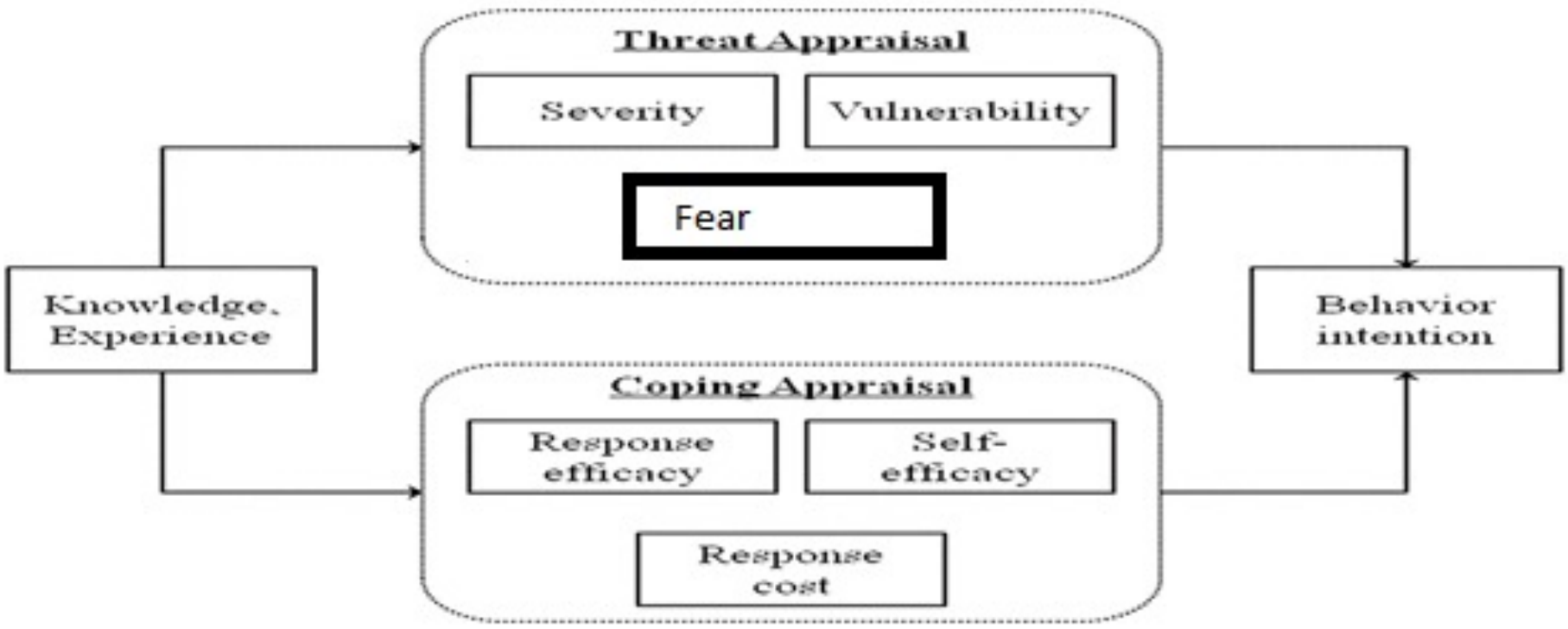
Materials and methods

- Qualitative Study.
- Descriptive phenomenological research design was adopted (Lopez & Willis, 2004).
- The study made use of 50 rural folks in all the 10 districts of Lesotho.
- The study's instruments included a semi-structured interview guide.
- The data was analyzed using thematic analysis.

Overview of COVID-19 Situation in Lesotho

- Lesotho had four (4) confirmed Coronavirus illness (COVID-19) cases as on June 15, 2020 (Shale, 2020).
- On March 18, 2020, the government proclaimed a national emergency, which was followed by a mandatory shutdown of all non-essential services on March 29, 2020 (Shale, 2020).
- The lockdown was lifted on May 19, 2020, however rules requiring the use of masks in public places remain in place.
- Lesotho is vulnerable to COVID-19 because of its closeness to South Africa, socioeconomic ties between the two nations, and Lesotho's fragile health system, according to the Infectious Disease Vulnerability Index (at or below 40).

- Protection Motivation theory



Source: Adapted from **Xiao, Li, Chen, Yu, Gao, Yan & Okafor (2014)**

- # Medicinal plant usage among rural folks in Lesotho.

Vernacular/ common name	Botanical name & (family)*	Reasons for it use	Parts used	Preparation
Lesoko	Alepidea cordifolia B. E. van Wyk (Apiaceae)	Boost immunity	Roots	Dry, crush & cook
Garlic	Allium sativum L. (Alliaceae)	General wellbeing, boost immunity	Bulbs	Cut into pieces & cook
Konofolo	Allium spp. (Alliaceae)	Boost immunity	Leaves	Cut into pieces & cook
Lekhala la Quthing	Aloe ferox Mill. (Aloaceae)	Boost immunity, abdominal pains, rashes	Leaves	Extract juice & mix with water
Seholobe	Aloe striatula Haw. (Aloaceae)	Abdominal discomforts and pains	Leaves	Dry & immerse in water
Lengana	Artemisia afra Jacq. (Asteraceae)	Colds & flues	Leaves	Cook fresh leaves

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- **Medicinal plant usage among rural folks in Lesotho… cont'd.**

Phate ea ngaka	**Helichrysum caespititium (DC.) Sond. (Asteraceae)**	**Colds, boost immunity**	**Whole plant**	**Cook the plant**
Seletjane	Hermannia depressa N.E.Br. (Sterculiaceae)	Boost immunity	Roots	**Dry, crush & cook**
Moli (African potato)	Hypoxis hemerocallidea Fisch., C.A.Mey. & Avé-Lall. (Hypoxidaceae)	Boost immunity	Roots	**Dry, crush & cook**
Poho tšehla	Xysmalobium undulatum R.Br. (Asclepiadaceae)	Boost immunity	Roots	**Dry, crush & cook**
Unidentifi ed medicinal herbs	-	-	**Liquid concoctions**	-

*Medicinal herbs are arranged in alphabetical order of botanical names; (-) denotes missing information; Authorities of plant taxa and families were obtained from The International Plant Names Index (2014).

Source: Adopted from Mugomeri, Chatanga and Chakane (2016)

Results and Discussion

Characteristics of the participants

- Males-50% Females – 50%
- Christians - 70%, Muslims – 30%
- Married- 60%, Unmarried- 40%
- No education- 30%, Primary education- 40%, Secondary education- 10%, Diploma- 20%
- Unemployed- 40%, Students- 10%, farmers- 205, teachers- 20%, factory worker- 10%
- Age: 11-70 years (range); %50 years + = 40%, Below 25 years = 30%, 26-49 =30%

Results and Discussion

Sources of information on COVID-19 pandemic among the rural folks

- All participants depended on information from close people such as friends to understand what COVID-19 is, how it spreads and the symptoms.
- It was observed that most of the sources used by the participants to get information on the COVID-19 pandemic were from unverified and untrusted sources, which comes with a high risk of misinformation.
- Potential sources with high risk of misinformation on the COVID-19 pandemic identified in the study were family members and friends, social media, village people, and information from grandchildren.
- All these sources are arguably potential sources of misinformation and lead to high levels of mis-medications.
- The rest, who represent a few, depended on information from the reports and information presented on the radio and television.

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Results and Discussion

Use of medicinal plants as preventive or treatment for COVID-19 by rural folks

Common name/ Botanical (family) name	Form of use (drinking or steaming)	Participant(s)
Lengana / Artemisia afra Jacq. (Asteraceae)	I drink home prepared lengana and boiled water	P1, P19, P28, P30
-	I do not use any treatment to prevent COVID-19	P2, P22 and P25
Taraputsoe (Stachys rugosa) and Eucalyptus / Eucalyptus globulus (Myrtaceae).	I use Taraputsoe, mixed with Eucalyptus. Also use amoxicillin, zinc pills and Vitamin C.	P3, P11, P12, P15, P18, P21, P28, and P31
Lengana / Artemisia afra Jacq. (Asteraceae)	I drink Lengana only	P4, P20
Lengana / Artemisia afra Jacq. (Asteraceae) Ginger / Zingiber officinale Chillies / Pinerspp (Piperaceae)	I drink Lengana and drink other herbal concoctions with ginger and chillies	P5, P33, P34, P35

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Use of medicinal plants as preventive or treatment for COVID-19 by rural folks

Lemon / Citrus limon	Steaming with eucalyptus leaves and langana. I also drink herbal mixture (concoctions) with lemon, ginger and honey	P7, P38, P39
Tsebe ea pela / Drymoglossum piloselloides	I drink mixture of tsebe ea pela and langana	P8, P36, P40
Phate ea ngaka / Helichrysum caespititium (DC.) Sond. (Asteraceae)	I drink mixture of phate ea ngaka and langana	P9, P26, P27
Lengana / Artemisia afra Jacq. (Asteraceae) Taraputsoe (Stachys rugosa)	I drink langana and taraputsoe. I also drink water with garlic and honey	P10, P41, P43, P46, and P49.

Conclusion and policy recommendations

- High levels of misinformation and mismedication exist in Lesotho
- Based on these, the following recommendations are offered:

➢ The government should use innovation and alternative avenues to carry information on COVID-19 to alleviate fear and panic.

➢ Strategies to encourage hospital treatment of COVID-19 cases

➢ Proper scientific education on the proper preparation of medicinal plants

➢ The proper integration of COVID-19 treatment and prevention should be well connected with rural people's culture: For example formalising medicinal plant usage to avoid mismedication

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