



# Limited choices: An exploratory study on paraffin use in KZN

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Social science that makes a difference



# Introduction

- All households require energy to satisfy basic human needs
- Half of the world's population depend on unsafe, inefficient & inconvenient energy practices
- Poor households in SA continue to use other fuels even when they have electricity
- But not enough focus has been given to other forms of energy
- PASASA requested HSRC to find out about paraffin use in the community & how to promote its safe use

# Multiple fuel use

- Multiple fuels used because of low & unpredictable income patterns

“I do have electricity but I use it for lighting, but paraffin is mainly used for hard things, like cooking dumpling, samp and beans. It really helps with saving. Electricity gets finished quickly on hard food.” (FGD 2 H Clinic)

# Purposes of paraffin use

- Paraffin is used for cooking, heating and lighting, **But...**
- Paraffin is widely used as a **cleaning agent**

“...I used to take any candle and melt them. ...I then pour paraffin ... into the candle mixture and it becomes soft and manageable, you then apply it on the floor and you won't believe the beauty that is there! It gives the home dignity especially when you don't have the means of buying floor carpet but you want it to be clean...” (FGD 3 H Clinic)

# Purposes of paraffin use continued

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- Used for cultural or traditional practices

“Men use the primus stove when they want to steam the body or to cook traditional ‘muti’ (medicine) for inducing vomiting. For steaming, they put the stove underneath the blanket with muti boiling.”  
(FGD 8 V Clinic)

# Reasons for paraffin use

- Can be bought in small quantities (1L, 2L, 5L)
- Available at 'spaza' shops in the community
- No connection fees or transport costs
- Meals can be prepared quickly

“...When you are unemployed you cannot go buy electricity... When you find a temporary job and you get just a little bit of money you need food. You cannot even buy electricity. Life goes on with paraffin because with it you can buy just small amounts, litre by litre.”  
(FGD 9 V Clinic)

# Containers

- Women are responsible for buying paraffin
- Children as young as 10 years are often sent to buy paraffin
- Consumer is responsible for the container
- Paraffin is sold in cool drink bottles, milk containers, juice bottles & alcohol bottles
- Safety caps are not used to close containers
- Containers are not appropriately labeled

# Safety information at pt of sale

- No safety information given
- Paraffin is sold like any other household commodity – *“it is like how you buy bread”* (FGD 7 V Clinic)
- Retailers are only concerned with making a profit

*“...they don’t care, they know that you are the one who needs to check how your container is. Whether you send your child or you go for yourself, even it there is oil, he will just pour.”*  
(FGD 1 H Clinic)



# Storage in the home

- Participants are aware that paraffin must be stored out of reach of children

But...

- Most store paraffin on the floor, either hidden behind a table cloth, appliance or furniture under the belief that “*the child does not usually reach there*” (FGD 1 H Clinic)

# Paraffin stoves

- Wick stoves are of poor quality, last for 3-6 months, but are cheaper (R20-30), & hence are widely used:
    - Made of poor quality metal, bend easily & become unbalanced
    - Rust easily & leak paraffin
    - Emit paraffin fumes & smoke
    - Overheat & explode
- “...Sikeni stoves often burst even the primus stove as well. The Sikeni stoves are worse. The problem is either paraffin is powerful or Sikeni too weak.” (FGD 5 U Clinic)

# Safety information on stoves

- No safety information is provided, safety & maintenance information gained through personal experience
- Recommendations to improve design of wick stoves:
  - Wicks should be replaceable & sold at local stores
  - Improve quality of metal used
  - Make allowance for a funnel to refill paraffin
  - Holding area should be transparent & appropriately demarcated
  - Naked flame should not be visible
  - Institute QC before stoves are sold

# Scenarios – risks associated with paraffin stoves

Three scenarios were explored:

- Moving a stove while in use
- Refilling a stove while in use
- Device that would shut the stove off when moved
- Participants immediate concern was for the meal that would be ruined  
“...I take a chance. I open it and pour paraffin while it is still on. I do not switch it off. When there is little paraffin the flame is also low, so I pour paraffin.” (FGD 9 V Clinic)

# Adverse consequences

- Participants had intimate knowledge of the dangers of paraffin use. These include:
  - accidental and intentional ingestions
  - acts of violence
  - burns
  - fire
  - indoor air pollution
  - skin exposure
- **Yet...** incidents emanate from preventable causes

# Ingestion

“I once bought paraffin with a coke bottle. **THE CHILD CRAWLED AND REACHED INTO IT AND DRANK ALL OF IT.** We did not even see that she drank paraffin. We only realized when we were changing the nappy. Instead of the smell of urine there was a smell of paraffin.” (FGD 6 U Clinic)

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# Burns

“...my sister’s maid was cooking the candle just as it was boiling after putting paraffin, her child was crawling and then tin just fell on the child’s head....**SHE JUST PULLED THE TABLECLOTH.**” (FGD 2 H Clinic)

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# Fire

“...My neighbours house at the slum where I stay got burnt. The mother of that house went out for drinking while she was boiling beans. ...The stove just went that way and the beans that way. The wick stove just exploded. The house got burnt. Even the bed got burnt. It was very cold. That is when I realized how dangerous the wick stove was. **YOU SHOULD ALWAYS BE PRESENT WHEN IT IS ON OR AT LEAST IN THE YARD...**” (FGD 9 V Clinic)



# Stigma

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“Even when you are all dressed up and ready to go but you still smell of paraffin and you are afraid of leaving because person might try to touch you and they will exclaim about the paraffin smell.” (FGD 7 V Clinic)

“At school children who use paraffin can be easily identified and people will know that they are staying in a rented house because their clothes smell of paraffin which means they use paraffin where they stay....They laugh at the fact that they use a paraffin stove.” (FGD 9 V Clinic)

# Safety practices

- Participants had not received information on paraffin safety
- **Yet...** they had a wealth of knowledge on safety practices
- **But...** safety practices are not being instituted

“Because of that we are compelled to do something that we know is dangerous. We do not have electricity. It is just these stoves and the coal ones which do not use paraffin. Because we do not afford we are forced to use paraffin”

# Community education

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- A number of strategies were recommended:
    - Discussions led by community members
    - Warnings on the dangers of paraffin use from retailers & manufacturers
    - School-based education
- “..When the child uses paraffin he has no clear knowledge, we really wish that the things that bring information to the community not only targets us but also our children in schools. We (mothers) now have moved away from our homes because of work or something and the children have become the new mothers and she has to cook for her father and others...” (FGD 3 H Clinic)

# Additional strategies

- Sold in prepackaged units with child resistant caps
- Labeled as a harmful chemical
- Sale restricted to garages for strict regulation
- Paraffin stoves to include an information brochure with directions for use & warnings

# Alternate Fuels

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Deciding factors:

- Health & safety
- Accessibility
- Costs
  
- Gas was considered an even greater risk than paraffin

# Discussion

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- **Limited choices** force participants to use a known hazardous product
- **Breaking the cycle of poverty** is an important intervention
- Paraffin use does not decline when electricity becomes available
- Poverty alleviation is also about **sustainable access to basic services**

# Discussion continued

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- Participants are aware of the dangers of paraffin use, but behaviour is not changing
- **Knowledge is not enough!**
- Programmes are needed in the home, schools, clinics, communities & at points of sale
- **Prepackaging** of paraffin must be made compulsory
- Standards for wick stoves have been made compulsory, we must **advocate for enforcement of the law**

# Discussion continued

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- **Community education & community mobilization** supported by awareness raising is the best way to take ownership of the issue
- **Home visits** are required to support health education
- **Health care workers** must continue to educate patients & offer practical first aid
- **School based programmes** must promote safe use of paraffin and destigmatize its use



# Discussion continued

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- **Retailer education** on importance of safety caps, labeling & distribution of safety material
- Medium to long-term strategy is to **move to safer, cleaner & more efficient fuels**