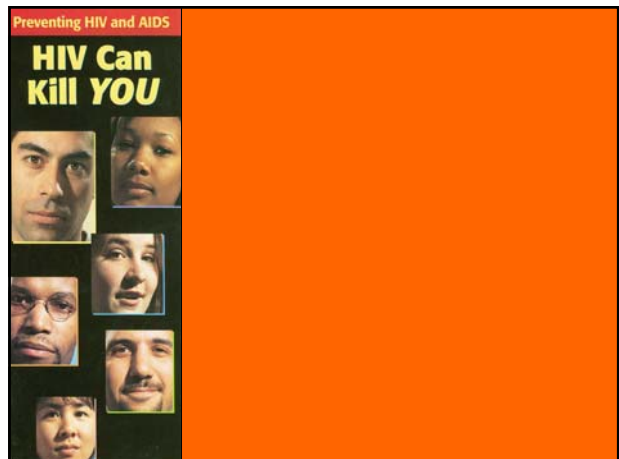


Fear appeals in HIV and AIDS public information documents in South Africa

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Fear appeals

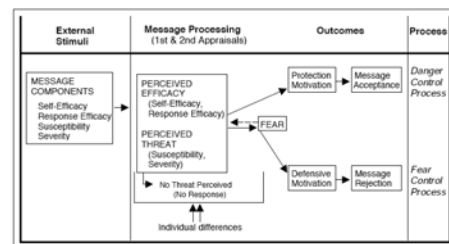
used in, for instance:

- ✚ anti-smoking warnings in Canada, Brasil and Belgium
- ✚ Dutch anti-obesity warnings
- ✚ some HIV and AIDS-brochures

Fear appeal messages

- ✚ encourage the receiver to perform a specific behaviour by presenting negative consequences of **not** performing the recommended behaviour
 - If you don't stop smoking / don't use condoms / don't eat less fatty food, then this will happen to you
 - So stop smoking / use condoms / eat less fatty food!

Extended Parallel Processing Model (EPPM) (Witte, 1998)



Fear appeal messages: beneficial or detrimental in health education?

Green & Witte (2006):

- ✚ Much opposition to using fear appeals in HIV and AIDS education, especially from Western health education experts
- ✚ Nevertheless sometimes fear appeal messages on HIV and AIDS seem to be successful, e.g. in Uganda
- ✚ Suggestion:

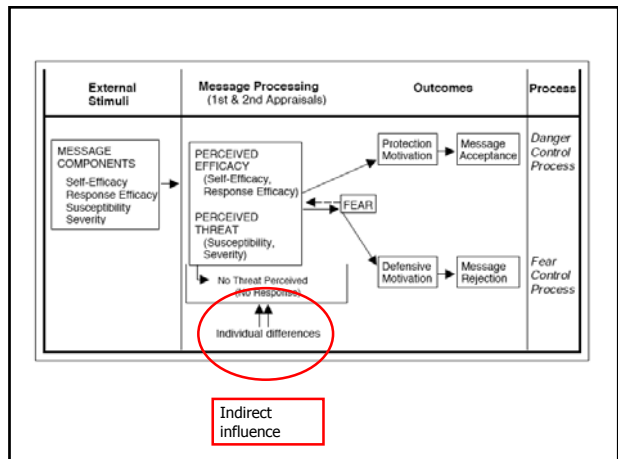
Could the relative success in fighting HIV and AIDS in Uganda partly be contributed to the usage of fear appeals in relation to the cultural orientation of the receivers?

Main research question in this project

- ✚ Which effects may be expected under which conditions from using fear appeal messages in HIV and AIDS texts aimed at various target groups in South Africa?

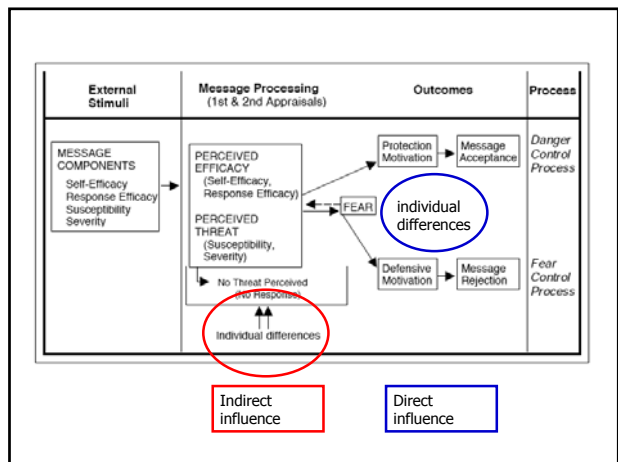
Unsolved problem so far

- In which way, and to what extent may characteristics of the receiver be of influence on the effects of fear appeal messages?
- ✚ Witte (1998): only indirect influence may be expected
 - Differences between receivers may lead to differences in, for instance, perceived severity and self-efficacy, which in their turn will lead to different outcomes




Unsolved problem so far

- ✚ Witte (1998): there will be no direct influence of characteristics of the receiver
 - When the perceived severity, susceptibility, response efficacy and self-efficacy of a group of receivers are comparable, these receivers will react to a given fear appeal message in the same way.

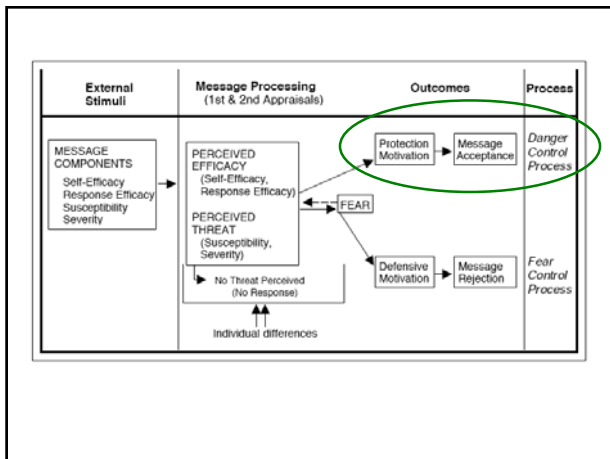


Possibly relevant characteristics of receivers

- ✚ What is relevant, may differ for various types of fear appeal messages
 - Gender for some anti-smoking warnings 
 - Perceived body weight for anti-obesity warnings
 - Cultural orientation for HIV and AIDS messages
 - Need for cognition for fear appeals in general

Need for cognition

- ✚ Study by Ruiter et al. (2004)
 - ✚ Expected that receivers with relatively high need for cognition would be more inclined to a cognitive reaction to a fear appeal message than other receivers would.



Need for cognition

Ruiter et al. (2004)

Expected that receivers with relatively high need for cognition would be more inclined to go into **danger control mode** when confronted with a fear appeal message than other receivers would.

Experiment confirmed this expectation.

Influence of cultural background on the effects of a fear appeal message

Study by Murray-Johnson, Witte, Liu et al. (2001)

Would the target of a fear appeal text interact with the cultural orientation of the readers?

- 93 US vs 87 Taiwanese college undergraduates
- two texts: factual information plus fear appeal messages
 - target of threat: self
 - target of threat: family

Murray-Johnson et al.: expectation

significant interaction between fear appeal and nationality on fear for HIV/AIDS

	self targeted threat	family targeted threat
US		
Taiwan		

Murray-Johnson et al.: surprising finding

cultural orientation held by US and Taiwanese students contrary to expectations

	Taiwanese	US
individualist	68	23
collectivist	19	70

Murray-Johnson et al.: findings reported

significant interaction between fear appeal and cultural orientation on fear for HIV/AIDS

	self targeted threat	family targeted threat
individualist	M=4.81	M=3.87
collectivist	M=3.74	M=4.02

replication study

performed by

- Jos van Baal
- Eefje Bouwmans
- Carel Jansen

aims of replication study

- 1 compare various **instruments** for measuring cultural variables
- 2 test again if culture and orientation of fear appeal have an **interaction effect** on fear

replication study

subjects: 435 students

- The Netherlands: 147
- Spain: 109
- South Africa: 179
 - white: 60
 - coloured: 51
 - African: 65
 - [missing values: 3]

materials in replication study

- performed by same texts as in original study
- performed by same questionnaire including INDCOL scale, with a number of additional questions on cultural orientation

outcomes: measuring cultural variables

INDCOL-scores per group

the higher the more collectivistic

- South African white 3.52
- South African coloured 3.56
- South African African 3.66
- Dutch 4.48
- Spanish 4.52

measuring individualism and collectivism

- scale introduced in Triandis et al. (1998)
- scale introduced in Singelis et al. (1995)

proved scales both to be unreliable

outcomes

- ✦ predicted interaction effect of culture and orientation of fear appeal on fear:

not found

- ✦ Possible explanations

- Problems in measuring cultural orientation
- Shortcomings in texts

New studies needed

- ✦ to find possible influence of cultural orientation and other characteristics of the receiver on the effects of fear appeal messages on HIV and AIDS, specifically in South Africa
- ✦ First step: look for possible differences in perceived severity of threats related to HIV and AIDS, and in perceived efficacy of recommended behaviour

Study carried out by Dineke Ehlers

- ✦ 436 respondents

- age: 12-20; $m=15.25$ $sd=1.75$

- ✦ grouped after

- gender (220 male, 210 female; 6 m.v.)
- cultural orientation (186 Western, 248 African; 2 m.v.)
- living area (115 rural vs 314 urban; 7 m.v.)

Study carried out by Dineke Ehlers

- ✦ Respondents filled out questionnaires administered by third year students from UNISA

- students had registered for the module *Persuasive Texts*
- maximum 3 respondents per student

Study carried out by Dineke Ehlers

- ✦ Presented were

- 40 negative effects of HIV and AIDS (A)
- 10 possible prevention measures (B)

- ✦ Respondents were asked to indicate

- perceived severity (A)
- response efficacy (B)
- self efficacy (B)

- ✦ Items were scored on five point scales

Question asked about perceived threat

Try to place yourself in the shoes of someone who is HIV-positive or who is at risk of getting the disease.

Please indicate for each of the following examples whether that possible consequence makes you feel afraid or not by making a cross in the block of your choice.

Possible negative consequences presented to the respondents: some examples

- ✚ Getting a deadly disease that cannot be cured
- ✚ Being regarded as a person with loose morals
- ✚ Bringing shame on my family
- ✚ Losing my boy-/girlfriend
- ✚ Being beaten up or verbally abused by my partner

Question asked about response efficacy of prevention measures

Please indicate for each of the following examples whether you think that this solution or prevention technique will work in preventing HIV/AIDS infection by making a cross in the block of your choice.

Possible prevention measures presented to the respondents: some examples

- ✚ Use a condom or ask one's partner to use a condom during every sexual encounter
- ✚ Not having sex at all (abstinence)
- ✚ Washing carefully after having sex
- ✚ Praying to God to protect one from HIV infection

Question asked about self efficacy of prevention measures

Please indicate whether you think you will be able to use these prevention methods yourself (now or in the future) by marking the appropriate block.

Possible prevention measures presented to the respondents: some examples

- ✚ Use a condom or ask one's partner to use a condom during every sexual encounter
- ✚ Not having sex at all (abstinence)
- ✚ Washing carefully after having sex
- ✚ Praying to God to protect one from HIV infection

Threat: results of factor analysis (principal axis, no rotation)

- ✚ One factor for all items under A (fear for negative consequences of HIV and AIDS)

✚ Cronbach's alpha:

■ All respondents	.93
■ Male	.93
■ Female	.93
■ Western	.95
■ African	.92
■ Rural	.93
■ Urban	.93

Response efficacy: results of factor analysis (principal axis, no rotation)

✚ Two factors for the items on response efficacy of various measures

■ Factor 1 (*adequate measures*)

- Use condoms
- Postpone sex
- Abstinence
- Be faithful
- Wait till marriage
- Stop sexual activity

■ Factor 2 (*inadequate measures*)

- Only sleep with people you know
- Wash careful after sex

Response efficacy

✚ Cronbach's alpha for Factor 1 (*adequate measures*):

■ All respondents	.81
■ Male	.81
■ Female	.80
■ Western	.69
■ African	.84
■ Rural	.74
■ Urban	.83

Response efficacy

✚ Cronbach's alpha for Factor 2 (*inadequate measures*):

■ All respondents	.59
■ Male	.64
■ Female	.56
■ Western	.62
■ African	.56
■ Rural	.50
■ Urban	.62

Self efficacy: results of factor analysis (principal axis, no rotation)

✚ One factor for all items on self efficacy

✚ Cronbach's alpha:

■ All respondents	.81
■ Male	.79
■ Female	.82
■ Western	.82
■ African	.78
■ Rural	.72
■ Urban	.82

Fear for negative consequences: univariate analysis of variance

✚ Fear for negative consequences

■ Total: M= 3.69; SD =0.69

✚ No main effects of gender, area or cultural orientation

✚ Interaction effects of

- gender and area
- gender and orientation

Fear for negative consequences

	male	female	total
rural	3.56	3.76	3.66
urban	3.82	3.58	3.71
total	3.76	3.63	3.69

$F(1,413)=12.40; p<.001; \eta^2=.029$

Fear for negative consequences

	male	female	total
Western	3.66	3.72	3.69
African	3.81	3.53	3.69
total	3.76	3.63	3.69

$F(1,413)=10.68; p=.001; \eta^2=.025$

Response efficacy 1: univariate analysis of variance

Response efficacy 1 (*adequate measures*)

■ Total: M=3.68; SD=1.00

✚ Main effect of cultural orientation

✚ No interaction effects

Response efficacy 1 (*adequate measures*)

Western	3.61
African	3.76
total	3.68

$F(1,411)=8.50; p=.004; \eta^2=.020$

Response efficacy 2: univariate analysis of variance

Response efficacy 2 (*inadequate measures*)

■ Total: M=2.59 ; SD =1.24

✚ Main effects of gender and cultural orientation

✚ No interaction effects

Response efficacy 2 (*inadequate measures*)

male	2.74
female	2.43
total	2.59

$F(1,410)=8.01; p=.005; \eta^2=.019$

Response efficacy 2 (*inadequate measures*)

Western	2.48
African	2.68
total	2.59

$F(1,410)=3.84; p=.05; \eta^2=.009$

Self efficacy: univariate analysis of variance

Self efficacy

- Total: M= 3.78; SD=0.85

Main effects of

- Gender
- Cultural orientation

No interaction effects

Self efficacy

male	3.67
female	3.89
total	3.78

$F(1,410)=6.00; p=.015; \eta^2=.014$

Self efficacy

Western	3.97
African	3.63
total	3.78

$F(1,410)=11.24; p=.001; \eta^2=.027$

Fear for specific negative consequences

Results from multivariate analysis of variance

- main effects of gender, area, and cultural orientation
- no interaction effects

($p<.05$)

Fear for specific negative consequences

rejected by family

- Western 3.59
- African 4.05

beaten up by partner

- rural 2.89
- urban 3.25

disappoint parents

- male 4.03
- female 4.22

Fear for specific negative consequences

loosing good looks

- rural 3.87
- urban 3.48

God's judgement on me after death

- Western 3.26
- African 3.71

Perceived response efficacy of specific measures

Some results from multivariate analyses of variance

- main effects of gender, area, and cultural orientation
- interaction effects of gender and cultural orientation

($p < .05$)

Perceived response efficacy of specific measures

- ✦ postpone sexual activity
 - male 3.61
 - female 3.85
- ✦ postpone sexual activity
 - Western 3.96
 - African 3.54
- ✦ wait till marriage
 - Western 4.10
 - African 3.72

Perceived response efficacy of praying to God to protect one from HIV infection

	male	female	total
Western	2.91	3.19	3.06
African	3.13	3.02	3.16
total	3.13	3.10	3.11

Perceived response efficacy of being faithful to one partner

	male	female	total
Western	4.09	4.41	4.26
African	3.80	3.52	3.76
total	3.91	3.96	3.94

Perceived self efficacy for specific measures

Some results from multivariate analyses of variance

- main effects of gender and cultural orientation
- no interaction effects

($p < .05$)

Perceived self efficacy for specific measures

- ✦ abstinence
 - male 3.06
 - female 3.59
- ✦ postpone sexual activity
 - Western 4.01
 - African 3.46
- ✦ being faithful to one partner
 - Western 4.61
 - African 4.15

A, B, C: perceived response efficacy

- ✦ Abstinence
 - M=3.72; SD=1.53
 - no main effects; no interaction effects
- ✦ Being faithful to one partner
 - M=3.94; SD=1.32
 - main effect of cultural orientation (Western > African)
 - interaction effect of gender and cultural orientation (Western females > other)
- ✦ Condom use
 - M=3.81; SD=1.37
 - no main effects; no interaction effects

A, B, C: perceived self efficacy

- ✦ Abstinence
 - M=3.32; SD=1.15
 - main effect of gender (female > male)
 - no interaction effects
- ✦ Being faithful to one partner
 - M=4.35; SD=1.06
 - main effects of cultural orientation (Western > African)
 - no interaction effects
- ✦ Condom use
 - M=4.33; SD=1.12
 - no main effects; no interaction effects

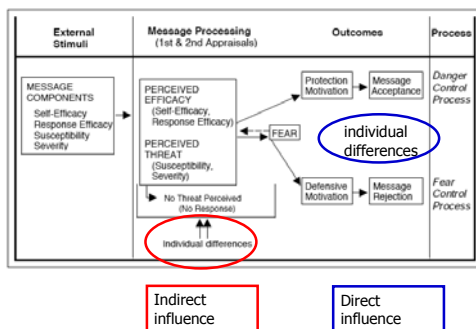
Implications for fear appeal experiments on HIV/AIDS prevention in S-A

- ✦ When designing text versions, differentiate in
 - danger that is referred to
 - behaviour that is recommended
- ✦ When selecting respondents, take into account their
 - gender
 - area
 - cultural orientation

Implications for new fear appeal experiments in S-A

- ✦ When analysing reactions, take into account possible
 - indirect influence of receiver differences
 - for one group, one **threat** may be perceived as more severe than another threat
 - for one group, one **measure** may be perceived as more effective than another measure
 - direct influence of receiver differences
 - in one group the tendency toward a **danger control** reaction may be stronger than in another group

Implications for materials for fear appeal experiments



New fear appeal experiments in S-A

- ✦ may lead to more insight in similarities and differences in the processing of fear appeals
- ✦ may help in designing more effective persuasive messages on HIV and AIDS

Thanks for your attention!