Effective Health Communication - A Key Factor in the Battle against COVID-19

Panel "Persuasive Messaging to Curb the COVID-19 Pandemic and Infodemic: Questions and Lessons from around the Globe"

ICA 2021

Julia van Weert & Thabo van Woudenberg (presenters)

Moniek Buijzen, Marijn de Bruin, Mattijs Lambooij, Roy Hendrikx, Martine Bouman & Bas van den Putte (co-authors)

Today

- RIVM Corona Behavioral Unit

- Example of findings based on large longitudinal dataset: What is the difference in physical distancing between emerging adults and older adults and the (mediation) role of using social media as a source for news and information on COVID-19?

RIVM = National Institute for Public Health and the Environment

Corona Behavioural Unit @ RIVM

March 2020: No formal position crisis structure, no name, no money

1 week later:
– scientific advisory board kick off
– 30 behavioral scientists RIVM part-time available
– 3 seniors 4 days/week

Scientific Advisory board: health communication & behavior experts; first meeting: March 20, 2020

Corona Behavioural Unit @ RIVM

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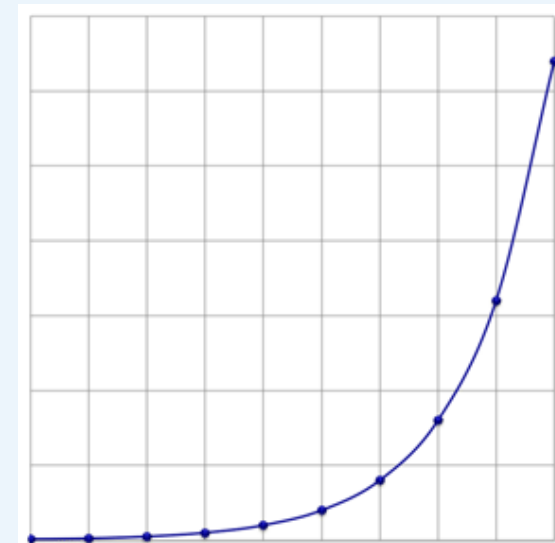– 30 behavioral scientists RIVM part-time available
– 3 seniors 4 days/week

5 days later:
– Intensive meetings @the Hague, NKC
– Theoretical framework COVID-19 prevention
    behaviors taxonomy behavioral advice

7 days later: 1 million euro research grant
– Additional funding and 50 staff (20fte)

Growth curve unit

RIVM Corona Behavior Unit

The Corona Behavioral Unit bundles, channels and makes expertise readily available for informing and supporting policy and government communication (national and regional).

Goals:

- Rapid advice
- Scientific Research

5e brief gedragsreflecties maatregelenpakket COVID-19

De Corona Gedragsunit van het Rijksinstituut voor Volksgezondheid en Milieu deelt de resultaten van een gedragstoets op 2 conceptscenario's voor aanpassing van de coronamaatregelen.

Download '5e brief gedragsreflecties maatregelenpakket COVID-19'

PDF document | 8 pagina's | 204 kB

Brief | 22-03-2021

Dit document is een bijlage bij

› Kamerbrief stand van zaken COVID-19

Minister De Jonge beschrijft de stand van zaken van de bestrijding van het coronavirus.

Kamerstuk: Kamerbrief | 23-03-2021

AC HC **Amsterdam Center** for Health Communication

UNIVERSITY OF AMSTERDAM

Nederlands

Research Areas   Research Team   Publications   Partners   News Archive   Tools   Contact   COVID-19

ACHC research on COVID-19 communication and behavior change

Published on August 13, 2020 – Several ACHC researchers have started health communication and behavior change research on COVID-19 in the past months. Our ACHC website now has a dedicated COVID-19 section where news and publications about COVID-19 are collected. Below we summarize some of our pending projects.

Read more »

Effective health communication in fighting the COVID-19 pandemic

Published on May 13 2020 – There are many uncertainties in the COVID-19 pandemic crisis, but health communication is a key factor in fighting this crisis. An international team of health communication and behavioral scientists provides advice on how to communicate effectively and promote behavioral change and maintanance. The advice [...]

Read more »

First ACHC results on media use during Covid-19 crisis

Published on April 29 2020 -The first results of a study by Fam te Poel, Annemiek Linn and other ACHC colleagues focusing on media use and information needs of the Dutch population during the Covid-19 crisis, show that mainly traditional media such as news programs on tv, and newspapers (both [...]

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10 tips for teen campaigns to curb the corona crisis

Here, we provide 10 science-based guidelines for effective communication with teens. Many of these tips can also be used by teachers, parents, and social media influencers. The Bitefile is offered to you by the Dutch Young Consumers Network, who bundled their insights from the literature and their own research on [...]

Read more »

Scientific foundation: theoretical framework
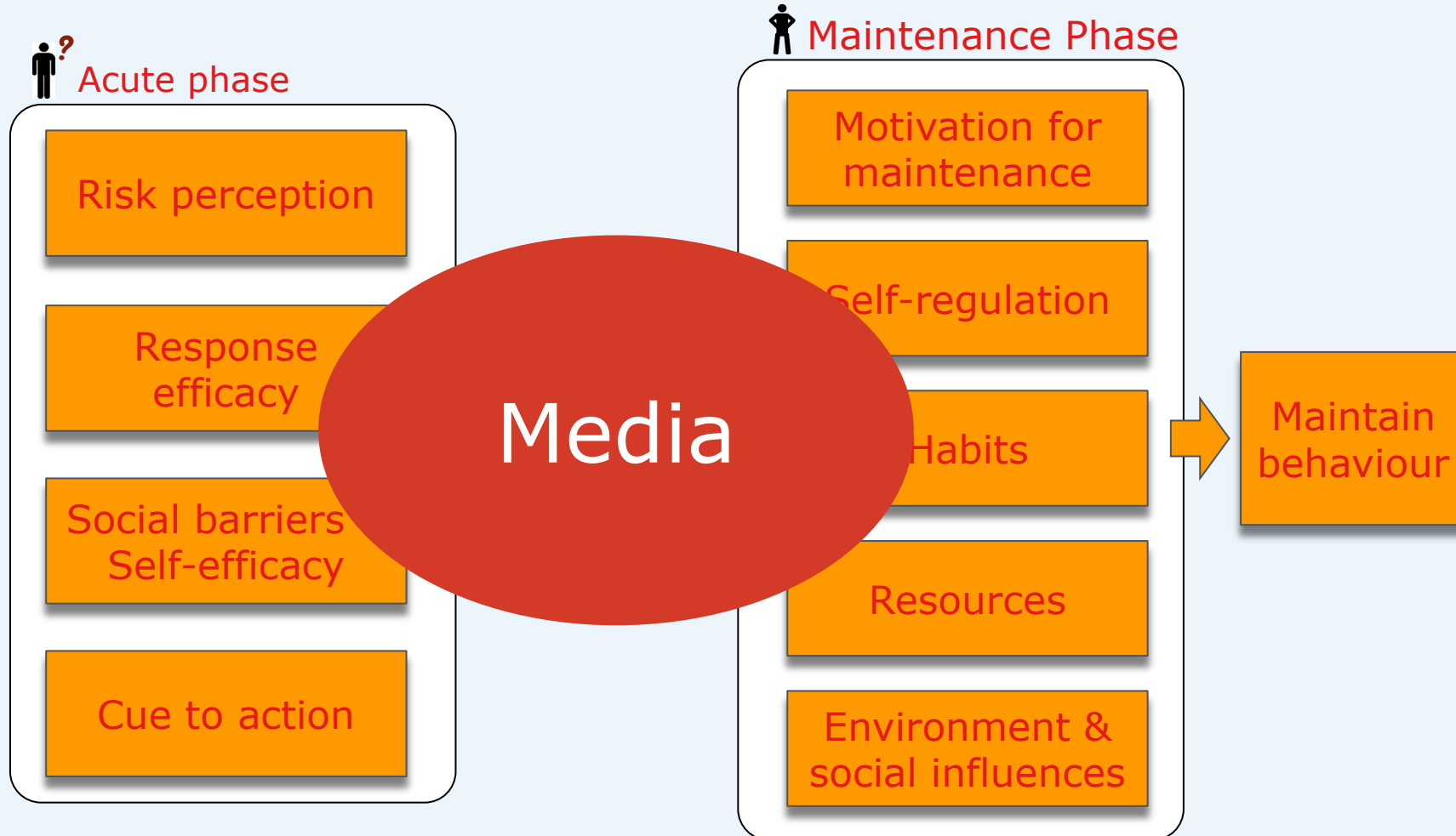
First wave:
Correlations between exposure to COVID-19 information (press conferences, government media, news media, social media) and determinants

Results

Positive correlation between COVID-19 information and:

- Risk perception: susceptability (no relation with news media; small differences)
- Risk perception: severity (in particular with news media)
- Response efficacy (no relation with social media; strongest relation with news media)
- Anxiety and concerns (strongest relations with government media and news media)

Hardly any relations with self-efficacy

Longitudinal data (wave 1 to 8)

What is the difference in physical distancing between emerging adults and older adults and the (mediation) role of using social media as a source for news and information on COVID-19?

Data: Analytical sample

Total analytical sample (N = 123,848, 34.11% male, >17 y/o)
    One wave (n = 47,708, 38.5%)
    Multiple waves (n = 76,140, 61.5%)

Maximize number of observations → mixed effects models

Wave	Number of participants	Between dates	
1	65,572	17 Apr 2020	24 Apr 2020
2	52,847	07 May 2020	12 May 2020
3	63,773	27 May 2020	01 Jun 2020
4	50,200	17 Jun 2020	21 Jun 2020
5	50,366	08 Jul 2020	12 Jul 2020
6	61,361	19 Aug 2020	23 Aug 2020
7	47,670	30 Sep 2020	04 Oct 2020
8	63,989	11 Nov 2020	15 Nov 2020

Data: Design

Using social media
as source

Sex
Wave
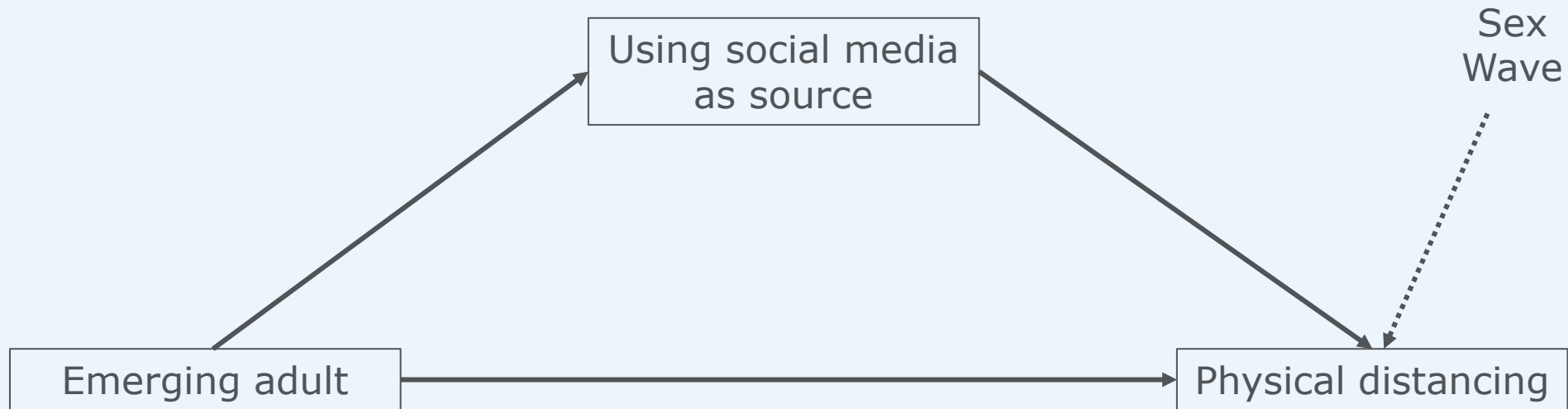
Emerging adult

Physical distancing

*"In the past 7 days, how
often were you successful in
always keeping a physical
distance of 1.5 meters"*
*(M = 4.34, SD = 1.58,
Range 1-7)*

https://osf.io/ypa75/

Emerging adults keep less physical distance than older adults

Figure 1

Physical Distancing in Emerging Adults and Adults over the Eight Waves
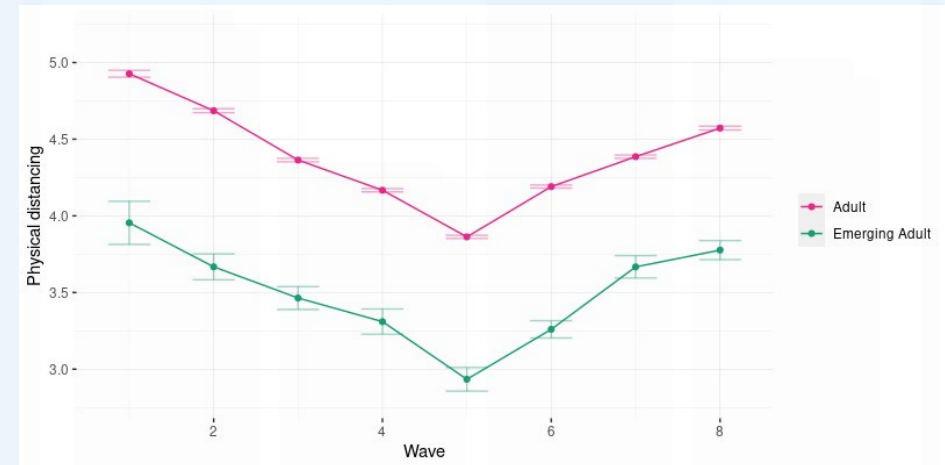
Figure 2

Physical distancing per age category

Table 3

Multivariate Linear Mixed-Effects Model Predicting Physical Distancing Behavior.

Variable	B	95% CI for B		SE	β	df	t	p
		LL	UL					
Intercept	3.44	3.41	3.48	0.02		98929.46	194.46	<.001
Emerging adult	-0.89	-0.96	-0.82	0.03	-.08	86213.83	-26.79	<.001
Sex	0.12	0.10	0.14	0.01	.03	65587.82	10.04	<.001
Wave	0.29	0.29	0.30	0.00	.18	148077.18	96.81	<.001

Note. N = 70,629. $N_{observations}$ = 185,208. $ICC_{Participant}$ = .48. Marginal R^2 = .04. Conditional R^2 = .50

Using social media has a negative effect on physical distancing

Using social media as source

Emerging adult → Physical distancing
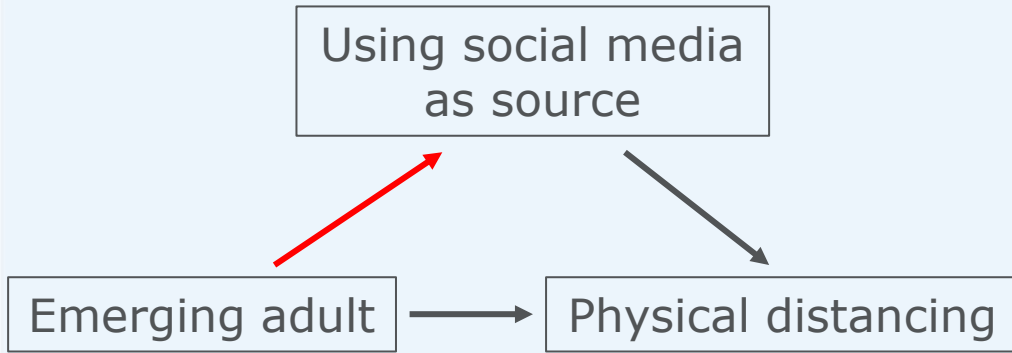
Emerging adolescents were 11.93 (95% CI = [9.72; 14.65]) times more likely to use social media as a source for COVID-19 related news and information than older adults.

Table 4

Multivariate Linear Mixed-Effects Model Predicting Physical Distancing Behavior.

Variable	B	95% CI for B LL	95% CI for B UL	SE	β	df	t	p
Intercept	3.49	3.41	3.58	0.04	0.00	21431.25	81.18	<0.001
Social media	-0.11	-0.15	-0.07	0.02	-0.03	37716.88	-5.12	<0.001
Emerging adult	-0.87	-1.04	-0.71	0.08	-0.06	19270.30	-10.58	<0.001
Sex	0.12	0.07	0.16	0.02	0.03	16880.60	4.85	<0.001
Wave	0.28	0.27	0.29	0.01	0.16	28390.16	39.04	<0.001

Note. $N = 38,423$. $N_{\text{observations}} = 17,714$. $\text{ICC}_{\text{Participant}} = .47$. Marginal $R^2 = .03$. Conditional $R^2 = .48$.

Mixed-Effects Mediation Model
(mlma package; Yu & Li, 2020)

Total effect (B = -0.91, 95% CI = [-1.06; -0.77])
Direct effect (B = -0.88, 95% CI = [-1.04; -0.74])
Indirect effect (B = -0.03, 95% CI = [-0.04; -0.02])

indirect effect substantially smaller than the direct effect

→we conclude that there is a partial, but *very limited*, mediating path of using social media as a source in the association between emerging adults and physical distancing.

Exploring directions: Social media ←→ Physical distancing
Random Intercept Cross-lagged Panel Model (lavaan; Rosseel 2012)

Table 5

*Random Intercept Cross-Lagged Panel Model of Physical Distancing and Social Media.*

Parameters	B	95% CI for B		SE	β	z	p
		LL	UL				
W5 correlation	-0.01	-0.02	0.00	0.01	-0.03	-2.10	0.036
Distance → Social media	-0.01	-0.01	0.00	0.00	-0.02 to -0.02	-2.52	0.012
Social media → Distance	-0.07	-0.15	0.01	0.04	-0.02 to -0.03	-1.65	0.099
Distance → Distance	0.12	0.10	0.15	0.01	0.12 to 0.12	11.00	<0.001
Social media → Social media	0.12	0.10	0.14	0.01	0.11 to 0.12	10.33	<0.001
Correlated change W6-8	0.00	-0.01	0.01	0.00	0.00	0.01	0.989
Between-person correlation	-0.03	-0.04	-0.02	0.01	-0.09	-5.27	<0.001

Note. $N = 7,325$. . CI = confidence interval; LL = lower limit; UL = upper limit.

Wave 5   Wave 6   Wave 7   Wave 8
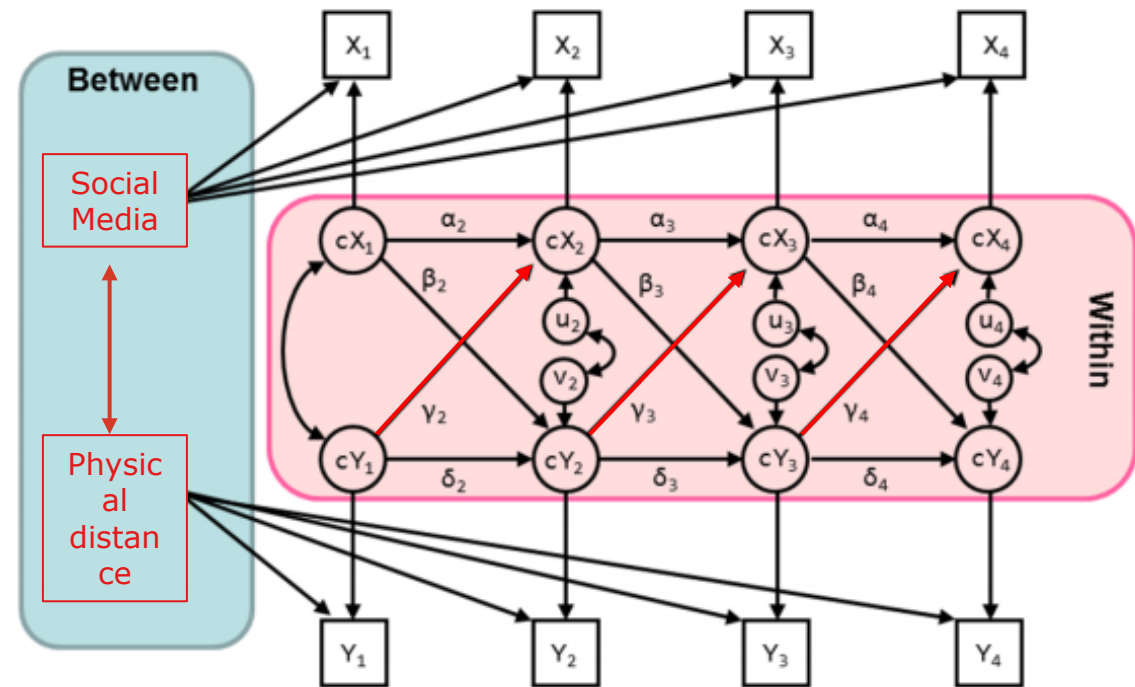
$(\chi^2 = 229.18, df = 23, p = <.001, CFI = .989, TLI = .987, RMSEA = .035, SRMR = .027)$

Conclusion

- Emerging adults keep less physical distance than other adults
  the older, the more often

- Using social media as a source plays a role, but very limited

- Physical distancing predicts subsequent social media use
  not the other way around

https://www.bitescience.com/bitefiles/10-tips-for-teen-campaigns-to-curb-the-corona-crisis/

Thank you

Julia van Weert

j.c.m.vanweert@uva.nl

@JuliavanWeert

www.healthcommunication.nl

Thabo van Woudenberg

vanwoudenberg@essb.eur.nl

@thabovw

www.tvanwoudenberg.com