Inferring Norms from Numbers: Boomerang Effects of Online Virality Metrics on the Persuasiveness of HIV Prevention Messages

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BACKGROUND

- Virality metrics depict the aggregated counts of online shares for a piece of information. Typically displayed as numbers alongside an article or a video, virality metrics indicate the real-time popularity of which information has attracted.
- A few studies experimentally identified its effects in influencing the persuasiveness of a health message through changing relevant behavior determinants including injunctive norm, perceived susceptibility, and fear. However, no research has investigated whether and how virality metrics and source similarity – another important online feature influencing message persuasiveness – interactively influence individuals' judgment of a health message and related behavioral determinants.
- To contribute to the literature, we examined how virality metrics impacted behavior intention through both injunctive norm and descriptive norm and whether source similarity moderated such effects in the context of a HIV prevention video message that promoted both condom use and HIV testing.

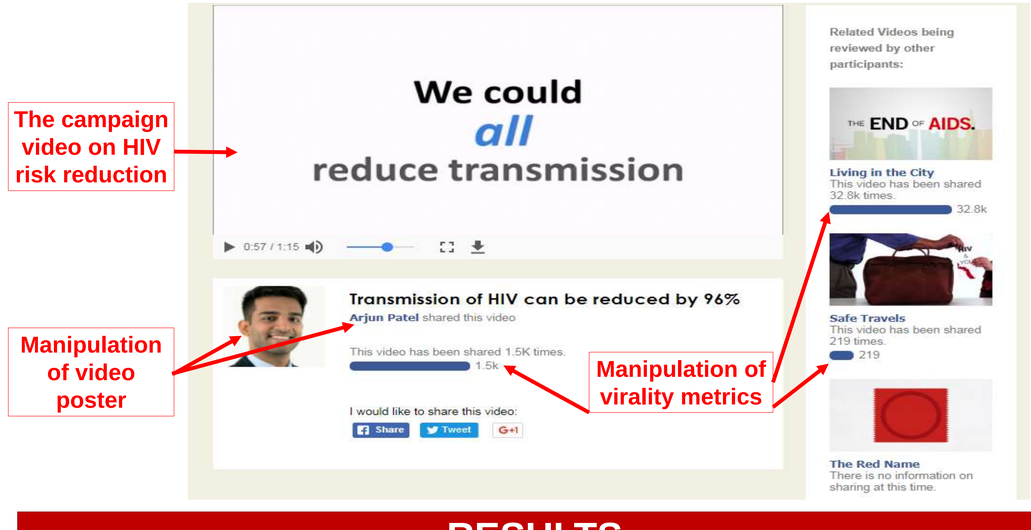
HYPOTHESES

- **H1. Virality metrics will lead to greater acceptance of the message than no virality metrics.**
- **H2. Virality metrics will lead to greater injunctive norm and descriptive norm supporting the recommended behavior than no virality metrics.**
- **H3. Virality metrics will lead to greater behavior intention through increasing injunctive norm and descriptive norm supporting the recommended behavior than no virality metrics.**
- **H4. Source similarity will moderate the effects of virality metrics, making the effects larger when the source matches the viewer's demographic characteristics including gender, age, and race.**

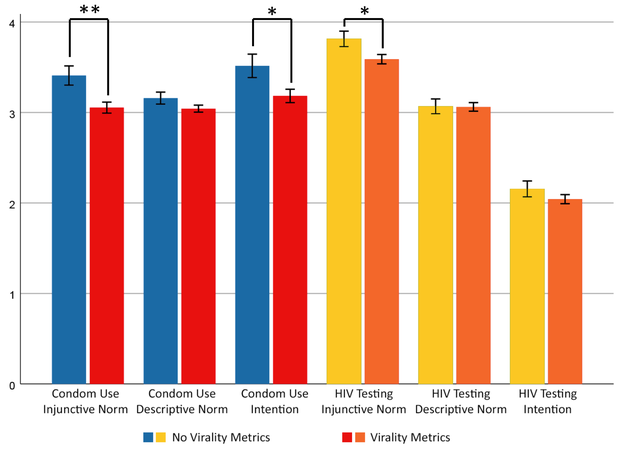
METHODS

- **Design**: An online factorial experiment testing the effects of virality metrics (i.e., high, medium, low, and no metric) and source similarity (i.e., similar versus dissimilar).
- **Sample**: 621 participants aged 18 to 35 recruited from Amazon mTurk in 2017.

ONLINE EXPERIMENT

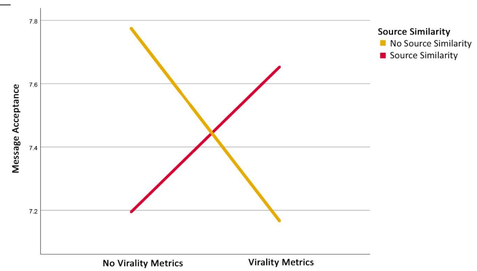


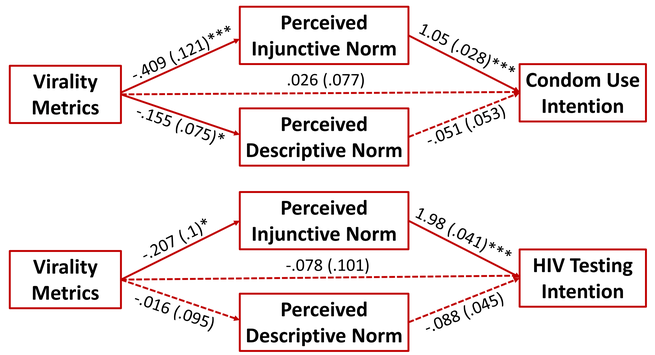
RESULTS



Note: * p < .05, ** p < .01.

1. Virality metrics DID NOT have an effect on message acceptance.
2. Virality metrics ***decreased participants' perceived injunctive norm for condom use*** (b = -.35, p = .004), and ***decreased intention to use condoms*** (b = -.33, p = .027).
3. Virality metrics ***decreased perceived injunctive norm for HIV testing*** (b = -.23, p = .031).
4. Source similarity moderated the effects of virality metrics on message acceptance (b = 1.07, p < .01). ***Virality metrics increased message acceptance only when the message source was matched with the user's profile.***





Note: These mediation models were analyzed using SPSS PROCESS Macro.
* p < .05, ** p < .01, *** p <. 001.

DISCUSSION

1. In contrast to what previous studies found, the strong boomerang effect shown in this study invites researchers to rethink about using virality metrics in online campaigns.
2. Virality metrics can backfire when people infer that others actively share the message because they are not encouraged by norms of protective behaviors and they want to make a change.
3. Virality metrics may enhance message acceptance only when people perceive the message poster share similar demographic characteristics with them.
4. These findings suggest a strong need for future replications studies. The boomerang effects may be replicated using similar persuasive messages addressing stigmatized health topics.

ACKNOWLEDGEMENT

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