

# A Model of Mechanisms Underlying the Influence of Media on Health Behaviour Norms

Lise Renaud, PhD<sup>1,4</sup>

Caroline Bouchard, MSc<sup>1,2</sup>

Monique Caron-Bouchard, PhD<sup>1,5</sup>

Laurette Dubé, PhD<sup>1,6</sup>

Danielle Maisonneuve, PhD<sup>1,4</sup>

Lyne Mongeau, PhD<sup>1,7</sup>

## ABSTRACT

Media-based interventions are common in health promotion, yet their conceptual underpinnings tend to be based on a simple linear model of direct influence on individuals' health behaviour. Recent studies have suggested that the processes through which media influence health behaviours are actually far more complex. This paper presents a conceptual model of how the medias influence the emergence and maintenance of the social norms that can contribute to shaping health behaviours. Through positive (amplifying) and negative (dampening) loops, a total of six potential influence pathways are proposed, and the role of opinion leaders and specialists is specified. Future directions for empirical tests of the model are identified.

**MeSH terms:** Social change; mass media; health behaviour; communications media

## RÉSUMÉ

Les interventions médiatiques sont fréquentes en promotion de la santé. Leurs fondements conceptuels tendent à être basés sur un modèle linéaire d'influence ayant un effet direct sur les comportements sociosanitaires des individus. Or, de récentes recherches suggèrent que les processus médiatiques influençant les comportements sont davantage complexes. Cet article présente un modèle conceptuel au sujet des mécanismes médiatiques façonnant les normes et les comportements. À travers un positionnement positif et négatif, le modèle propose six voies d'action et définit le rôle des spécialistes et des leaders d'opinion. Des pistes de recherche sont proposées.

1. Groupe de recherche médias et santé
2. Direction de la santé publique Montréal Centre
3. Université de Montréal
4. Université du Québec à Montréal
5. Collège Jean-de-Brébeuf
6. McGill University
7. Institut national de santé publique du Québec

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**Correspondence:** Lise Renaud, Département des communications, UQAM, Case Postale 8888, Succursale Centre-Ville, J-3031, Montreal, QC H3C 3P8, Tel: 514-987-3000, ext. 4571, Fax: 514-987-4650, E-mail: renaud.lise@uqam.ca

Socio-environmental models of health and well-being<sup>1-5</sup> have considered communications delivered through mass media to be important forces of social influence and socialization for individuals and families. However, little empirical attention has yet been paid to the roles of media in structuring social and physical environments that are supportive of health and well-being. While some research is focussing on settings, legislative environments and macro-social conditions as determinants of positive health and social outcomes,<sup>6,7</sup> we lack a comprehensive understanding of how media contribute to and shape the social norms that influence these determinants, and how they interact with macro-level factors to influence health and well-being at the community level. This lack of attention is surprising, given inconsistent demonstrations of media effects on community-level change in health promotion interventions<sup>8,9</sup> despite clear evidence that media influence population levels of unhealthy behaviour such as smoking.<sup>10</sup> Recent critical analysis suggests that media-based interventions promoting health and well-being are rarely developed or evaluated using theory-driven, empirical approaches, and that their focus is generally on the direct relationship between media intervention and individual behaviours rather than on using media to reshape the social environment.<sup>11,12</sup>

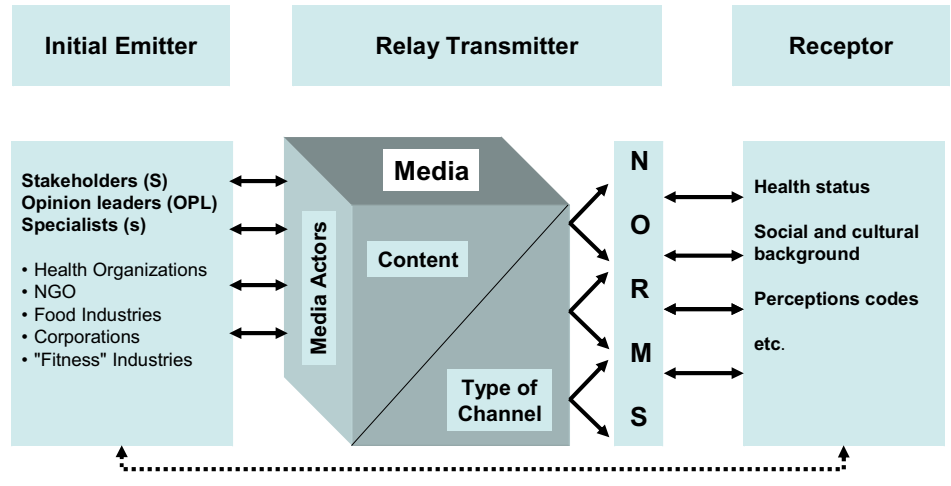
This paper presents a conceptual model of how media shape socially constructed understandings of health and interact with other macro-level health determinants (such as institutional agendas and policies) to influence population health. Media are defined very broadly as elements of communication systems that contribute to shared understandings<sup>13</sup> of health through the flow of information.<sup>14</sup> These communication systems include mass entertainment, information, and instructional/educational systems.

## Integrative model

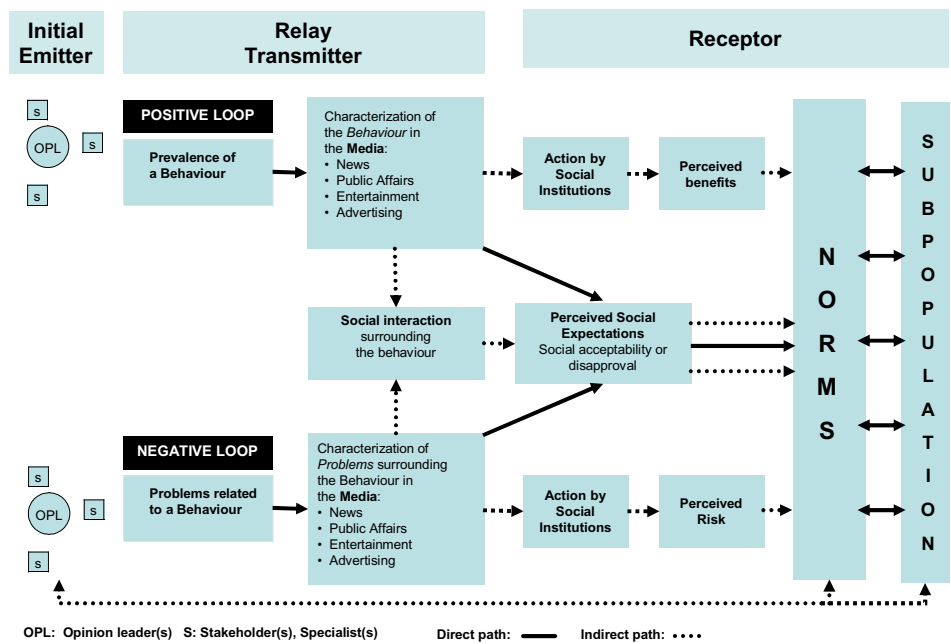
Trying to schematize the place of media in the developing of norms, a preliminary integrative conceptual framework articulates the mechanisms underlying the reciprocal influences of and on media in the production of health-related norms. Figure 1 shows that information relevant to health norms emitted by its initial generators/emitters (for example, specialists such

as public health officials or opinion leaders such as politicians or celebrities) is appropriated and transformed through real or virtual interaction with the systems, organizations and individuals that create and implement media products (including broadcasters, producers, writers, regulators, industry associations, etc.). The transformed message is offered to the media's target audiences, and is appropriated by receivers who interpret it according to their own life contexts and health concerns. This figure is intended to illustrate the pathways of influence mediating how health norm-related information passes from those who generate it to the population. From our point of view, literature focussing on advocacy does not have such a broad prospect of the whole process. Indeed, a large *media advocacy* concept-based literature (Wallack et al.) defines advocacy as "the set of skills used to create a shift in public opinion...".<sup>15</sup> Moreover, Wallack supports that media are one of the set of tools available to achieve advocacy. It is, however, necessary to point out that the effective norms mobilized by the common social agents need in our framework to be promoted by agents of change or specialists who initiate the process of changing the perception of the norms. The more complex prospect promoted by Seale<sup>16</sup> calls for a reception model gathering community empowerment, media advocacy, as well as production initiatives in order to more subtly characterize the media audience. Our framework involves the receptors because they are the ones that ultimately integrate or not the new norms.

For our present purpose, Figure 2 illustrates the micro-level processes of media influence on health-related norms. This framework has been presented in detail elsewhere with specific examples driven from nutrition,<sup>17</sup> but its main features are: the specification of the dynamic and potentially competing roles of media in driving the emergence and the maintenance of social characterization of health behaviours through media (positive loop) and of the problems surrounding the behaviour through media (negative loop); and too the recognition of the interplay of influences, both direct and indirect, of social interaction among existing peer groups, actions by social institutions (for example, public health interventions),



**Figure 1.** Pathways of mutual influence involving media portrayal of health norms



**Figure 2.** Mechanisms underlying the influence of media on norms

opinion leaders, and specialists. The emergence and maintenance of particular health-related norms will be linked to the relative strengths of the direct and indirect influence paths in both the positive and negative loops.

The model draws heavily on the work of norms theorists such as Homans,<sup>18</sup> Opp,<sup>19</sup> Rimal and Real,<sup>20</sup> Finnemore and Sikkink,<sup>21</sup> Ellickson,<sup>22</sup> Perkins and Berkowitz,<sup>23</sup> Linkenbach et al.,<sup>24</sup> and expands on Holder's<sup>25</sup> demonstration that media can have both positive (amplifying) and negative (dampening) roles in the production of norms. Because media are often used to convey the views and behaviours of influential individuals, the model specifies

the role of change agents such as opinion leaders and specialists. These agents of change, as described by Finnemore and Sikkink,<sup>21</sup> and Ellickson,<sup>22</sup> play important roles in the life cycle of norms.

The model also builds directly on recent empirical work by Yanovitzky and Stryker.<sup>26</sup> These authors demonstrated that, over an 18-year period, the influence of media coverage on a population health behaviour (risky drinking among youth) was better explained by its indirect effects on agenda-setting and policy actions of social institutions and on social acceptability of the behaviour, than by direct influences on individuals.<sup>26</sup> Levels of legislative activity related to the behaviour were

strongly associated with media coverage; these factors together seem to have produced changes in social norms that then drove changes in behaviour. This work helps explain the often limited direct media effects found in evaluation of health communications campaigns, and suggests that more research focus is needed on indirect paths of media influence on population health.

To help illustrate this model, we will use as an example the behaviour of “eating” and more specifically “eating less high-fat foods”. Media messages related to food consumption are omnipresent, and individuals are bombarded with both positive and negative media messages about eating through various mediated communication systems. In 1997, US food manufacturers, retailers and food services spent more than \$11 billion on media advertising, second only to the automotive industry.<sup>27</sup>

Applying the model developed for *binge drinking* by Yanovitzky and Stryker<sup>26</sup> to the less problematic issue of adopting healthier food practices may be useful. Contradictory messages are released by the media about consuming less high-fat food. Food ads tend to reinforce the desirability of any kind of food whereas nutrition messages focus on healthier habits based on choosing lower-fat food.

### Positive loop

In the positive loop of the model, the prevalence of a behaviour such as consumption of lower-fat foods can influence how the behaviour will be characterized in the media. This characterization of the behaviour may vary: news, public affairs shows, advertising, sitcoms and other entertainment media can contribute to the positive loop by characterizing the behaviour in ways that tend to amplify its prevalence. In this amplifying loop, three possible paths can explain media's effects on norms:

*Path 1:* Direct communication of information about social expectations and social acceptability of behaviours. For example, an individual learns that he ought to reduce his intake of fatty foods by exposure to news stories featuring the growing availability of fat-free products. This is the most common pathway underlying the expected direction of influence of health promotion campaigns.

*Path 2:* Indirect effect through social influence: the positive characterization of eating less fatty foods is mediated through social influence occurring in social interaction, where the direction of social influence is influenced by media coverage. For example, co-workers at lunch discuss the new fat-free product that one of them purchased following news reports of a study that found that people who consumed lower-fat foods seemed to perform better at work than those who did not. Through their social interaction, individuals learn about the social acceptability and approval of eating foods containing less fat.

*Path 3:* Indirect effect through influence on agenda setting and actions by social institutions: for example, a public affairs show may report on the difficulty of eating less fat when eating out in restaurants. A public health agency may subsequently develop a partnership with some restaurants so that the latter can offer menus featuring lower-fat meals. The behaviour of consumers is indirectly influenced by media, through the actions of the public health agency and the restaurants.

Media can thus have a “positive” influence on the norm of “eating less fatty food” through any or a combination of these three paths. Their relative strength will likely depend on characteristics of the health behaviour in question, the media coverage, and the individuals' social environment. It is important, however, to stress that media messages included in the positive loop will not automatically lead to healthier outcomes. For example, fast food chain ads announcing new “healthy choices” would be included in the positive loop even though these choices still have a lot of fat; the messages can have a “positive” influence on the “eating foods that have less fat” norm without actually reducing fat in the diet.

### Negative loop

The model also posits that media can influence norms through the negative loop. The negative loop concentrates on the problems that are caused by the behaviour and their depiction through the various forms of media: for example, heart disease related to high-fat diets. Three paths of influence, mirroring those of the positive loop, are possible:

*Path 1:* Direct communication of social disapproval. Through their exposure to the

media, individuals learn about the social disapproval of the risky behaviour associated with health problems. For example, media coverage may carry negative images of obese people, conveying social disapproval of their eating habits.

*Path 2:* Communication of social disapproval through media-influenced social interaction. For example, a group of co-workers begins to criticize the fat content of cafeteria foods and then influence each other to make healthier selections or bring their own meal.

*Path 3:* Indirect effect through influence on agenda setting and actions by social institutions. For example, multiple news stories linking increasing childhood obesity with intake of fatty foods might prompt policy actions by school boards, food industry lobbyists or professional associations (as was the case with the British Medical Association<sup>28</sup>).

Each of the three potential pathways in the negative loop can contribute to inhibiting the norms or to their decay. Again, the relative strength of these paths, and the relative success of the positive and negative loops in supporting the maintenance of norms, will depend on the nature of the risk behaviour, the health outcomes, and the social environment.

Especially the subpopulation defined as a group sharing a matrix of culture and a common feeling of belonging to the same community is an important issue in the social or group reception of the norms, even if there is always an individual aspect that ultimately defines the final positioning of social agents.

### Role of opinion leaders and specialists

Opinion leaders and specialists<sup>21,22,24</sup> can play pivotal roles in the life cycle of norms, and are thus included in both the positive and negative loops of the model. Mediated health messages are often communicated by celebrities, journalists, health authorities and other types of individuals who garner media coverage. Opinion leaders can have a particularly strong effect on norms of subpopulations. For example, for a group of middle-aged adults, the second path in the negative loop (indirect social influence) may be sparked by a TV interview with a celebrity who, recovering from a heart attack, urges viewers to reduce their fat intake. For a group of adolescents, the

same path may operate through negative remarks made by a rap star about overweight fans.

The interaction between media and opinion leaders and specialists can be two-way. Specialists and opinion leaders may use the media to “spread the word”, and may also be influenced by how the media characterize behaviour. In addition, each opinion leader or specialist is influenced by the norms of the subpopulation to which he or she belongs.

## CONCLUSION

Obviously, the next step is to test this theoretical model empirically, confirming or disconfirming the role of each of the hypothesized pathways in the production of health-related social norms. The analysis of the intermediary variables (acceptability, social interaction, and institutional actions) will be key to finding empirical support for the model. We are in the process of conducting a series of studies on a variety of health behaviour norms (including low-fat food consumption, use of diet products and physical activity) in various populations to test the hypotheses generated by the model.

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