



## Recall and understanding of a communication campaign designed to promote positive parenting and prevent child maltreatment

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### ARTICLE INFO

#### Keywords:

Social marketing  
Child abuse  
Parenting  
Health communication

### ABSTRACT

Evidence-based parenting support programs are among effective strategies for preventing child maltreatment. The launch of mass media campaigns accompanying the implementation of such programs has been recommended to optimize reach and parent enrollment. This paper focuses on a communication campaign developed to support the implementation of the Triple P - Positive Parenting Program in two French-Canadian communities. Proximal outcomes (recall and understanding) were assessed through a randomized telephone survey conducted between January and April 2017 among 1029 mothers of children aged 6 months to 8 years.

Distribution and correlates of the respondents' recall and understanding of the campaign were examined. Results show that 32.1% of respondents recalled having seen the campaign material. Among these, a large majority reported having understood the intended messages (parenting difficulties are normal, seeking help is the right thing to do, and/or effective support is available). However, some respondents also retained unintended messages blaming parents and/or children, and almost half the sample retained mixed messages (intended and unintended). Multivariate logistic regression analyses revealed that community of residence, annual household income, and psychological aggression towards the child at home were three significant correlates of campaign recall + intended messages understood. None of the examined factors were associated with recall + mixed messages understood. Findings suggest a neighborhood effect on the proximal outcomes of the campaign, and a slightly higher reach and understanding among better-off families as well as families struggling with psychologically violent parenting practices. These results are discussed in light of the outcomes of similar campaigns.

### 1. Introduction

The World Health Organization identified child maltreatment (CM) as a significant public health issue (WHO, 2014) based on its high worldwide prevalence (Stoltenborgh et al., 2015), its serious negative consequences for children's development, well-being, and health (Maguire et al., 2015; Norman et al., 2012), and its extensive societal costs (Fang et al., 2012; Wang and Holton, 2007). Effective prevention of CM is thus critically needed. To this end, the Centers for Disease Control and Prevention recommended the implementation of evidence-based parenting support programs (Fortson et al., 2016).

A major challenge associated with the implementation and future impact of such programs is reaching and enrolling parents, especially

those at high risk of maltreating their children (McCurdy and Daro, 2001; Sanders and Pidgeon, 2011; Shapiro et al., 2010; Spoth and Redmond, 2000). To this end, it has been suggested that mass media campaigns be launched alongside the implementation of prevention programs (Fortson et al., 2016; Gagné et al., 2014). Mass media campaigns have the potential to reach all parents, avoiding stigma associated with parenting difficulties (Fromm, 2003; Prinz and Sanders, 2007; Sanders and Prinz, 2008). Moreover, positive impact of such campaigns might be more important in vulnerable or deprived populations. In New-Zealand for instance, the national “Breaking the Cycle” campaign had the larger impact in the aboriginal population than in the non-aboriginal population (Stannard et al., 1998).

The Triple P system (Positive Parenting Program – Sanders, 2012)

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<https://doi.org/10.1016/j.pmedr.2018.09.015>

Received 14 May 2018; Received in revised form 28 August 2018; Accepted 29 September 2018

Available online 06 October 2018

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provides an example of how communication strategies can be embedded in a large-scale parenting support program (Wilkinson, 2018). Triple P comprises five levels involving different intervention strategies and hypothesized mechanisms. At the first level of the system, the “Stay Positive” campaign focuses on children’s misbehavior and was designed to raise parents’ awareness of the program, and normalize help-seeking. This campaign was first developed, launched, and evaluated in Amsterdam in a sample of 1922 parents. Findings suggested high awareness of the campaign among parents (50 to 77%) and positive parent attitudes towards the campaign (Goossens & de Graaf, 2010, cited in Wilkinson, 2018). An increase in the normalization of help seeking was also observed over 2 years; however, in the absence of a control group, there is a possibility that this increase was not solely due to the campaign.

According to the Communication/Persuasion Matrix, a relevant conceptual framework for the evaluation of communication campaigns (McGuire, 1989), adequate reach of the target audience and accurate understanding of the communicated messages are important prerequisites for communication effectiveness. To our knowledge, very few studies have paid attention to these proximal outcomes of campaigns aimed at promoting positive parenting practices and preventing CM (Horsfall et al., 2010; Poole et al., 2014). The available evidence suggests that awareness of such campaigns has varied considerably, with 20% to 91% of the target audience having recalled the campaign material and messages, and recall being highest when campaigns have included television advertising (Andrews et al., 1995; Centre for Social Research and Evaluation, 2010; Evans et al., 2012; Hall and Stannard, 1997; Norton et al., 2004). Clearly, further evaluation studies are needed to examine recall and understanding of communication campaigns about parenting.

There is also a need to identify correlates of recall and understanding. As previous research has found that those living in favored conditions are more likely to be reached by communication campaigns and be receptive to their messages (Viswanath and Ackerson, 2011), it is crucial to examine the extent to which a communication campaign is successful in reaching more educated/better-off individuals. This is especially pertinent for campaigns aimed at preventing CM, as this social problem is more prevalent in disadvantaged families and communities (Butchart et al., 2006; Wolfe, 2011). Other well-known correlates of CM that could possibly affect recall and understanding are parenting and child variables such as parental attitudes and self-efficacy, child behavior problems, and coercive parenting practices (Stith et al., 2009).

The present study was conducted in a project designed to evaluate the implementation and effectiveness of Triple P in the province of Quebec, Canada. Inspired by the Community-Based Prevention Marketing (CBPM) approach (Bryant et al., 2007), this project was initiated through a university-community partnership. A communication campaign (see description below) was developed to promote positive parenting practices, normalize the challenges of parenting and help-seeking, and promote the program itself (Charest et al., 2017). Although it accompanied Triple P, this campaign did not rely on the Stay Positive campaign materials because the partners involved wished to: (1) focus on parenting practices rather than only on child misbehavior; (2) ensure the cultural appropriateness of the material; and (3) foster the involvement of all stakeholders in the process, as required by the CBPM approach.

The present analysis examines the extent to which individuals living in the communities in which Triple P and the associated communication campaign were implemented recalled and understood the campaign messages. The correlates of recall and understanding were also examined. The specific research questions were: (1) How many respondents recalled having seen the campaign?; (2) Among these, to what extent did they retain the intended messages or unintended messages?; (3) Were other sociodemographic, parenting, and child variables significantly correlated with parents’ recall and

understanding, reflecting inequalities in the campaign’s reach? (4) Because the program was implemented in two communities we were also able to examine whether there was a neighborhood effect on recall and understanding of the campaign and its messages.

## 2. Method

### 2.1. Design and sample

This study adopted a posttest-only design, using data from a telephone survey (including landline and mobile phones) conducted among 1029 mothers or maternal figures between January 26, 2017 and April 3, 2017, that is, two years after the initial launch of the communication campaign in Québec, Canada. Respondents lived in one of the two communities in which Triple P was implemented (one urban, one suburban) and were randomly selected from households registered under the Government of Quebec’s universal child allowance program. Inclusion criteria were: (1) living 40% (or more) of the time with at least one child aged 6 months to 9 years minus one day, and (2) being able to answer the survey in French or English. When there was more than one eligible child in the household, a target child was randomly selected; 52% were girls. In the context of the present study, a community refers to a health-catchment area served by a Local Community Services Centre (public primary-care facility). This study was approved by the Ethics Committee of the local university and verbal informed consent was obtained from participants.

### 2.2. The positive parenting communication campaign

The development of the campaign involved consultation with key stakeholders and parents regarding the objectives and main messages of the campaign (Charest et al., 2017). This led to the development of key visual imagery and messages (“We’ve all thought about it,” “Here’s some help that all parents can use (the Triple P)” and “It’s free and it works”), which were diffused via printed documents (posters and flyers), in French only. Posters contained the main messages and additional information on Triple P (see Fig. 1). In addition to these messages, flyers contained a ten parenting tips designed to promote positive parenting practices (e.g., “Praise your child when they do something you like,” “Set clear family rules and let your child know what the consequences will be if they break them,” etc.).

The campaign was launched in February 2015. Between February 2015 and November 2015, posters were displayed in the restrooms of family-style restaurants in the two targeted communities. Up to December 2016 (the end of active communication activities), the campaign’s posters and flyers were also disseminated in places usually frequented by families (schools and childcare centers, libraries, public swimming pools, arenas, grocery stores, clinics, etc.). We also sent to the mailing lists and networks of community-based partners. In the suburban community, flyers were systematically distributed door-to-door to households in the most disadvantaged areas (March 2015), and distributed to children who were instructed to put them in their schoolbag and give them to their parents (September 2015). In the urban community, flyers were handed-out by local staff in various community-based settings and family-centered events such as community fairs or parent-teacher meetings, relying mostly on public relations. Overall, 49,500 and 25,000 flyers were distributed in the suburban and urban communities, respectively. In accordance with the CBPM approach, each community was free to add activities to increase the campaign’s visibility and exposure to parents (e.g., booth at community events, advertisement on CCTV monitors in waiting rooms, etc.).

### 2.3. Measures

#### 2.3.1. Recall and understanding

Prompted recall of the campaign was assessed using a single



Fig. 1. Key campaign visual and messages. (Translation:

WE'VE ALL THOUGHT ABOUT IT  
Here's some help that all parents can use:

Triple P is a program that can help you improve your relationship with your child. How? With concrete and effective strategies to help you with parenting.

**It's free and it works!**

Proven effective in over 25 countries, Triple P is offered exclusively and completely free of charge at a location near you.

Find answers at [parentspositifs.ca](http://parentspositifs.ca))

question: “Do you remember seeing a poster or leaflet in your neighborhood depicting a boy or girl taped to the wall with duct tape, with the slogan: We've all thought about it?” Answer choices were “yes,” “no,” or “I don't know”; the two latter categories were coded “no recall.” Respondents who answered yes to this first question were then asked a series of questions regarding their understanding of the message: “Did this image mean that: (1) Some children are really uncontrollable?; (2) It's normal for parents to have difficulties?; (3) Some parents go too far with their children?; (4) It's okay to seek help when we feel overwhelmed with our children?; (5) Some children only understand strong discipline?; and (6) Free and effective support is available for parents?” Respondents could answer yes or no to each item. Items 2, 4, and 6 referred to the messages that the campaign aimed to get across, whereas items 1, 3, and 5 referred to possible unintended messages that the respondents might have retained. For the purpose of statistical analyses and because a correct understanding of the messages might be of particular importance in the context of CM, a composite indicator of recall and understanding was created to examine the distribution and correlates of (1) recall + intended messages understood, (2) recall + unintended messages understood, (3) recall + mixed messages understood, and (4) no recall.

### 2.3.2. Correlates of recall and understanding

Because the campaign was tailored to each targeted community, the correlates of recall and understanding included the community (suburban vs. urban community) in which the respondents lived. In addition, the associations between recall/understanding of the campaign and socio-demographic risk factors of CM (annual household income, level of education, unemployment, and being a single mother) were examined. In line with previous surveys relating to family violence (Clément and Bouchard, 2005; Clément et al., 2013; Gagné et al., 2007), mothers' attitude towards spanking of children was examined by asking the degree of agreement with the statement: “Spanking is an effective way to discipline children.” Parents responded on a 4-point Likert scale; responses were recoded as a binary variable (agree/disagree). Parental self-efficacy (11 items:  $\alpha = 0.68$ ) and parental stress generated by perceived difficult child (5 items:  $\alpha = 0.76$ ) were assessed using subscales from the previously validated Parenting Stress Index (Abidin, 1986, 1995), measured on a 4-point Likert scale. Child behavior problems in the last six months were assessed using the conduct problems scale (5 items:  $\alpha = 0.63$ ) from the widely used Strengths and

Difficulties Questionnaire (SDQ – Goodman, 1997), measured on a 3-point scale. For each measure, a score was calculated based on the mean of all item responses, with higher values indicating higher risk. Finally, family violence was assessed using an adapted version of the Parent-Child Conflict Tactics Scales (PCCTS; Straus et al., 1998), measuring the prevalence of psychological aggression (5 items), minor physical violence (4 items), and severe physical violence (7 items) towards the child in the household. This adaptation of the PCCTS has been validated (Clément et al., 2018), with the three scales showing polychoric alphas of 0.79, 0.76, and 0.88, respectively. Annual prevalence of psychological aggression (less than 3 vs. 3 or more occurrences) and minor and severe physical violence (none vs. 1 or more occurrences) were calculated.

### 2.4. Statistical analyses

Descriptive statistics (n, %) provide a portrait of the sample and their recall and understanding of the main campaign messages (dependent variables). Multivariate logistic regression analyses were also performed to identify correlates of recall/understanding. To determine which independent variables should be entered into the logistic regression, preliminary bivariate correlations (point biserial or phi coefficients) were calculated between recall/understanding and all other variables under study; only variables that were significantly correlated at  $p < .05$  with the outcome were further considered. Bivariate correlations between independent variables were also examined, in order to avoid multicollinearity. To examine potentially different patterns of associations between recall and the different categories of messages understood, the analyses were conducted separately among those who recalled the campaign and reported retaining the intended messages and those who recalled the campaign but reported retaining mixed messages. Because few respondents reported retaining only unintended messages (see below), regression analyses were not conducted among this segment of the targeted population.

## 3. Results

### 3.1. Description of the sample

Survey response rates were 38.9% in the suburban community (n = 528) and 43.6% in the urban community (n = 501). The majority

**Table 1**

Proportion of respondents who reported retaining intended, unintended, or mixed messages from the campaign, among respondents who recalled the campaign.

Message content	n (%)
Normalizing, validating, and supporting messages (intended)	
It's normal for parents to have difficulties	301 (92.6)
It's okay to seek help when we feel overwhelmed with our children	302 (92.9)
Free and effective support is available for parents	268 (82.5)
Blaming messages and endorsement of harsh discipline (unintended)	
Some parents go too far with their children	111 (34.2)
Some children are really uncontrollable	93 (28.6)
Some children only understand strong discipline	12 (3.7)
Only intended messages understood	163 (50.5)
Mix of intended and unintended messages understood	153 (47.4)
Only unintended messages understood	7 (2.1)

of respondents were between 30 and 39 years of age (66.5%), held a post-secondary diploma or degree (75.1%), held paid employment (77.8%), and owned their residence (64.1%). One family out of five (19.6%) reported an annual household income of less than CAD \$45,000, corresponding to the poverty threshold for a two-parent-two-child family (Retraite Québec, 2018). Because 12% of all Quebec families with at least one child between 6 months and 8 year-old live under the poverty threshold (Statistics Canada, 2018), the present sample overrepresents disadvantaged parents. French was the main language spoken at home (86.8%), as expected in the province of Quebec in which the majority of the population is French speaking.

### 3.2. Recall and understanding

Two years after the initial launch of the campaign, one third of the sample (n = 325; 32.1%) recalled having seen, in their community, a poster or flyer displaying a boy or girl taped to the wall. The proportion of respondents who reported retaining intended, unintended, or mixed messages from the campaign are presented in Table 1.

### 3.3. Correlates of recall and understanding

Preliminary analyses revealed that none of the examined risk factors were significantly associated with recall + mixed messages understood. Hence, correlates of this variable were not further examined. However, the following risk factors were associated with recall + intended messages understood, and were thus considered for further analysis: community ( $\phi = 0.16$ ), psychological aggression towards the child in the household ( $\phi = 0.09$ ), positive attitudes towards spanking ( $\phi = 0.08$ ), annual household income ( $r_{pb} = 0.16$ ), mother's education level ( $\phi = 0.09$ ), employment status ( $\phi = 0.10$ ), and being a single mother ( $\phi = 0.07$ ). Inter-correlations between these factors were non-significant or weak, except for employment status and being a single mother, which were both moderately correlated with annual household income ( $r_{pb} = 0.41$  in both cases). Therefore, only annual household income was entered into the logistic regression, as this variable showed the highest correlation with the dependent variable.

The results of the multivariate logistic regression performed to examine the correlates of recall + intended messages understood are presented in Table 2. Mothers who recalled the campaign and reported retaining the intended messages were twice as likely to come from the suburban community (OR = 2.02), and one and a half times as likely to report psychological aggression towards their child at home (OR = 1.53). They also reported higher annual household income (OR = 1.16). The mothers' level of education and attitude towards spanking were not significantly associated with the dependent variable.

**Table 2**

Results of the logistic regression examining recall + intended messages understood (N = 849).

Factors	Wald	S.E.	p	OR	95% C.I.
Community	3.49	0.20	.000	2.02	1.36–3.00
Family income	2.51	0.06	.012	1.16	1.03–1.31
Education	–1.72	0.34	.085	–	–
Att. spanking	–1.77	0.72	.076	–	–
Psych. aggr.	2.30	0.19	.022	1.53	1.06–2.20

Notes: confidence intervals are for odds ratios.

## 4. Discussion

Our findings showed that a minority of the mothers surveyed (32.1%) recalled the communication campaign two years after its initial launch. Given that recall of the campaign was assessed several months after the most active communication activities had taken place (in winter, summer and fall, 2015), this modest effect was not unexpected. It may, in fact, reflect a fairly high level of long-term retention of the campaign messages, despite the restricted budget and the diffusion strategy that relied on printed documents only. Previous research has found that the reach of communication campaigns increases as the diffusion strategy is intensified or integrates new technologies to amplify diffusion (Berkowitz et al., 2008; Davis et al., 2016; Randolph and Viswanath, 2004). The cost of the present campaign was estimated at \$106,000 CAD. This includes the fees of the marketing firm that developed the communication strategy and campaign material, the creation, hosting and maintenance of the website and its video content, as well as the printing, display and distribution of posters and flyers. The time and expertise of project partners were also called upon for content development and promotion activities, but were not quantified per se. Although no formal cost-effectiveness analyses were conducted, it is noteworthy that a third of the target population was reached in such a way that they recalled the campaign long after its launch.

As this is the first report of long-term recall of a communication campaign aimed at preventing CM, it is not possible to make comparisons with previous estimations. Such comparisons are further complicated by the fact that campaign topics, diffusion strategies, and types and timelines of measures of recall have varied significantly across studies. For instance, although Wilkinson (2018) reported that 50% of surveyed parents spontaneously recalled having seen the *Stay Positive* campaign, recall of this campaign was assessed early in the process, possibly while the campaign was ongoing – the available literature is not clear on this point (Wilkinson, 2018). Similarly, the high recall (85%) of the *It's not OK* campaign aimed at preventing family violence was assessed as the campaign unfolded (Centre for Social Research and Evaluation, 2010). Awareness of the *Breaking the Cycle* campaign, aimed at changing violent, neglectful, or inappropriate parenting behaviors, was 79% and 91% following the first and second television ad, respectively (Hall and Stannard, 1997; Saunders and Goddard, 2002); however, awareness of radio advertising reached only 39%. When evaluating the campaign *Alcohol Abuse, Drug Abuse, Child Abuse, One Thing Leads to Another*, Andrews et al. (1995) also observed that 89% of the respondents recalled the television ads, while fewer than 20% remembered seeing the campaign through another medium.

The present findings reveal that very high proportions of the mothers who recalled the campaign reported retaining the intended campaign messages (82.5% to 92.9%). On the other hand, quite a disturbing proportion of respondents retained some blaming messages, thus mitigating these positive findings. However, only a small proportion of mothers reported retaining only unintended messages from the campaign, with almost half of the respondents having retained mixed messages. These findings suggest that the messages presented some ambiguities for a number of individuals in the target audience. Although it is generally recommended to develop simple, easy to



understand, and straightforward messages to increase persuasiveness, some authors have suggested that the strategic use of ambiguity might be a relevant strategy for limiting psychological reactance and counterarguing (Atkin, 2000). In the context of preventing CM, however, this approach should be examined in greater depth because a misunderstanding of the messages (e.g., endorsement of spanking) could lead to significant negative consequences for families experiencing conflict or difficult relationships.

The most ambiguous message was probably “Some parents go too far with their children”. Considering the high prevalence of coercive parenting in North American families (Clément et al., 2013; Finkelhor et al., 2014), the 34.2% of respondents who understood this message from the campaign were not mistaken. However, the aim of the campaign was not to raise awareness about this social problem; it was to validate the challenges of parenting, to promote positive parenting practices, and to encourage parents to seek help if needed. Literature on social marketing applied to the prevention of CM suggests that blaming messages for parents are counter-productive (Gagné et al., 2014). This is why, in this particular context, this message was unintended.

Overall, respondents' recall and understanding of the campaign messages were not associated with child behavior, and were weakly associated with sociodemographic, attitudinal, or parenting variables. This finding suggests that the reach of the campaign and understanding of its intended messages were comparable across segments of the target population. However, three significant correlates of recall + intended messages understood were found: community of residence, household annual income, and psychological aggression towards the child at home. To examine potential communication inequalities with regard to the campaign's effectiveness, it will be necessary to take into account the influence of these factors on the more distal campaign outcomes (e.g., help seeking, positive parenting practices).

The observed neighborhood effect on recall and understanding of the campaign suggests that mothers living in the suburban community were more likely to recall and correctly understand the campaign's messages compared to mothers living in the urban community (OR = 2.02). Although the explanation for this effect remains elusive, it might be suggested that local differences in the diffusion strategies influenced the reach of the campaign. In accordance with CBPM principles, both communities had the flexibility to choose the means of diffusion that appeared most appropriate to them. The diffusion strategy in the suburban community, relying on systematic distribution of the flyer, especially in disadvantaged areas, might have improved the coverage of the campaign compared to the diffusion strategy adopted in the urban community, which relied more heavily on public relations.

The observed neighborhood effect might also be explained by the high proportion of immigrant families living in the urban community. Census data (Dorval and Lavoie, 2012) reveals that 25.6% of families living with 0–17 year-old children in this community were immigrant families (parents born outside of Canada). Although this information is not specifically available for the suburban community involved in this study, this community is part of a larger administrative region hosting only 2.7% of all immigrant families living in the province of Quebec (Ministère de la Famille, 2016). It may be more difficult for mothers from different cultures, and sometimes languages, to grasp the meaning of social messages related to parenting. Indeed, both parenting and communication effects are largely influenced by culture (Rubin and Chung, 2006; Viswanath and Ackerson, 2011).

Above and beyond neighborhood effects, our findings suggest potential communication inequalities due to socioeconomic disadvantage. Recall and a correct understanding of the intended campaign messages were more likely to be reported by mothers with higher annual household income. However, the odds ratio was small (OR = 1.16) and level of education was not associated with this indicator of exposure. Overall, social inequities do not appear to have been a major hindrance to recall and understanding of the campaign.

Mothers who reported psychological aggression towards the child in

their household appeared to be more likely to recall the campaign and understand its intended messages (OR = 1.53). Because of their challenging family situation, these mothers may have been particularly sensitive to social messages related to parenting, and more likely to retain positive and supportive messages. From the perspective of CM prevention, this finding suggests that the campaign was effective in reaching (certainly not all but some) at-risk families without stigmatizing them (Bales, 2004; Tucci et al., 2005), which is promising in terms of the campaign's outcomes. Finally, given the well-known communication bias of selective exposure (Slater, 2015), the fact that the other examined risk factors of CM were not associated with a specific pattern of results suggests that the campaign was successful in reaching those who might benefit from Triple P.

The major strengths of this study include its large sample size and the random selection of participants. However, given that the sample was solely composed of mothers, these findings may not represent the point of view of fathers. Two innovative features of this study are the examination of a neighborhood effect by comparing two distinct communities, and the examination of long-term recall of the campaign. Another strength is the examination of respondents' understanding of the campaign messages as well as their recall. Moreover, the assessment of the retaining of unintended messages allowed for the evaluation of potential iatrogenic effects. Among the limitations of this study, recall and understanding of the campaign were not measured shortly after the campaign was launched, which precludes the possibility of evaluating the short-term reach of the campaign or any temporal variations. Other limitations include the absence of a spontaneous measure of recall, and thus the potential overestimation of recall, as well as the impossibility, given the use of telephone interviews, of providing a visual support for recall, which would have made it possible to assess confirmed recall, for instance (Luxenberg et al., 2016; Niederdeppe, 2014). Finally the response rate is modest. However, it is in the acceptable range according to current survey standards (Babbie, 2013). The response rates in telephone surveys have diminished over the last decades (Curtin et al., 2005), but there is no evidence that a low response rate automatically equates to lower study validity (Holbrook et al., 2007; Morton et al., 2012).

## 5. Conclusion

In the domain of positive parenting promotion and CM prevention, very few media campaigns have been evaluated in terms of recall and the retaining of both intended and unintended messages. Rarer still is the identification of correlates of such recall and understanding. Relying on a randomized sample from the target population, the present study was designed to fill these gaps. Although it is impossible to assume that the findings are generalizable to other populations, they apply to occidental, high-income countries where mothers are similarly educated.

Findings show that a relatively modest media campaign can achieve long-lasting recall in the target population, especially when a striking visual is used (in the present case, a child taped to the wall). However, they also suggest that even a thoughtfully planned and designed campaign produces unintended outcomes in some people. In order to reduce this risk, service providers who consider incorporating such a campaign in their work or community should make sure to know their target audience well, be very clear about the objectives of the campaign and the messages they want to convey, bring in social marketing experts to make this happen, and carefully pretest their material (see Charest et al., 2017 for an example).

The present findings suggest that the assessment of potential iatrogenic effects of communication campaigns should be part of future evaluation research, especially when vulnerable populations are targeted or socially sensitive topic are addressed. Although it is important to pay attention to proximal campaign outcomes, future research should not overlook outcomes that are more distal. For instance, a time-

series analysis of proximal (e.g.: recall and understanding), intermediate (e.g.: attitudes), and distal (e.g.: behaviors) outcomes as a campaign unfolds would allow more sophisticated modeling of the effects of a campaign and their variations over time.

## Acknowledgements

The authors would like to thank Sophie Léveillé for data collection, Hélène Paradis for statistical support, and Catherine M. Lee for final linguistic revision. This research was funded by the Social Sciences and Humanities Research Council of Canada.

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