Media attention, dependency, self-efficacy, and prosocial behaviours during the outbreak of COVID-19: A constructive journalism perspective

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Abstract
The COVID-19 pandemic has caused disruption not only in the global health and economic sectors, but also in the field of journalism. As media has played and continues to play a pivotal role in disseminating information during the pandemic crisis, it is critical to examine how media influences the behaviour of their target audience. Subsequently, this study aimed to examine the relationship between media attention, dependency, self-efficacy, and prosocial behaviours amid the COVID-19 pandemic. A total of 905 participants from China responded to the survey questionnaire, the data from which was analysed via SPSS-AMOS v.23. The results indicated a significant correlation between media attention and self-efficacy. Likewise, media dependency is correlated with self-efficacy. Media attention, dependency, and self-efficacy demonstrated significant effects on prosocial attitudes and behaviours. Subsequently, this study showed that self-efficacy mediates the effects of media attention and dependency on prosocial behaviour. At the time of the COVID-19 pandemic, the findings of this study could serve as a guide to media practitioners in shaping the behaviour of their audience through meaningful and responsible information dissemination.

Keywords
Constructive journalism, COVID-19, media attention, media dependency, prosocial behaviour

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Introduction

At the end of 2019, the COVID-19 pandemic befell the whole world. The World Health Organization (WHO, 2020) defined the severe acute respiratory syndrome, coronavirus 2 (SARS-CoV-2), outbreak as a global threat. This calamitous threat presented a significant challenge for humankind. Under insurmountable pressure, journalism since then has appeared to be dominated by a framework of conflict and negativity. Aslam et al.’s (2020) analysis of 141,208 headlines of global English news sources regarding COVID-19 revealed that 52% of the news headlines evoked negative sentiments while only 30% evoked positive sentiments and 18% were neutral. Consequently, the world has been pervaded by conspiracy, hopelessness, frustration, and xenophobia. However, these have been juxtaposed with positive news, emotional coverage, and topics like mutualism and altruism. It is not uncommon that newsrooms and journalists work constructively to craft and disseminate positive, productive news stories that engage readers in an effort to improve well-being and helping behaviour. Indeed, the topics of crisis and prosocial behaviour seem naturally linked (Jonas, 2012). Therefore, COVID-19 offers an ideal context to examine the interconnectedness between crisis and prosocial behaviours within the constructive journalism domain.

The study of individual behaviour is not new in the psychological domain. For example, a fruitful body of literature has persuasively documented how psychological factors like empathy and altruism affect individuals’ helping behaviours (Staub, 2013). In the social-cognition and communication domain, substantial research has suggested that more violent media exposure can engender an increased level of aggressive cognition and behaviour, thus decreasing altruistic behaviour (C. A. Anderson et al., 2010; Bushman & Anderson, 2002; Fischer et al., 2009). Subsequently, hindsight has provided us with a finer vantage point. Scholars have applied media use, dependency, behaviour, and attitude change to critical high-risk situations (Lowrey, 2004; Z. Tai & Sun, 2007; Zixue et al., 2018). However, the natural link between crisis and prosocial responses is much less established in social psychological research than one would expect (Jonas, 2010), and little is known about prosocial behaviour within the communication setting.

A review of extant research suggests that psychological variables may hinder or promote altruistic or aggressive behaviours (C. A. Anderson & Bushman, 2001; C. A. Anderson & Dill, 2000; McAuley & Blissmer, 2000). These findings mirror previous research evidence that self-efficacy, belief, and media exposure are antecedents of prosocial behaviours. However, the psychological variables studied in the past are more concerned with the internal values of individuals rather than their practical values. Consequently, governments, organisations, and newsrooms still find it hard to utilise such findings to exert their influence in mitigating crises. In addition, relatively few studies have examined issues regarding prosocial behaviour outside the context of Western societies. Researchers suggest that examining prosocial behaviour in non-Western societies would offer more in-depth insights into how cultural contexts and diverse societies can influence such behaviour (House et al., 2013; Trommsdorff et al., 2007). Thus, the multicultural background and different media environment in a non-Western context like China makes it worthwhile to examine the factors that motivate individuals to engage in prosocial behaviour during a crisis. Historically, China has had its share of natural disasters and hazards such as floods, earthquakes, droughts, and malaria. Against this backdrop, risk communication in China has recently garnered increased interest from researchers and practitioners alike.

This study mainly examined how media attention, dependency, and self-efficacy affect prosocial behaviours amid the worldwide pandemic. The purpose of this study is to provide a leverage point for governments and agencies to disseminate more information through media to promote
mitigation actions. Besides, this study serves as a weathervane to guide newsrooms to report news constructively. Finally, it proposes an analytical framework of the relationship between psychological and media use variables and their effects on prosocial behaviours.

**Contextual background: media coverage of COVID-19 in China**

To generate unique insights on crisis management, this study looked into prosocial behaviour in China, a densely populated and high-context culture country in Asia. High-context cultures are typically relational and collectivist; Hall identifies high-context cultures as those in which harmony and group well-being is preferred over individual achievement (Hall & Hall, 1959). China’s high-context culture is evident in how its ruling party, the Chinese Communist Party, values social harmony, consensus, collective well-being of the country, and respect for authority and nation (Sundararajan, 2020).

More importantly, China’s media landscape is distinctive due to its state-controlled policy. As Zhao (2006) put it: ‘the Chinese media is undergoing a process of rapid transformation. This transformation is messy, protracted, confused, and multifaced, littered with odd, even counterintuitive institutions, structures, and practices’. Although the Party has engineered a market rationalisation campaign and pushed for press conglomeration since the 1900s, state power and ideological control still pervade the media ecosystem. The aforementioned socio-structural environment and media ecosystem are not conducive to the free flow of information during a major public health crisis (Z. Tai & Sun, 2007). However, fuelled by the explosive nature of the Internet and the advancement of state-of-the-art technologies, a fundamental transformation can be seen in the media landscape, where traditional media has made room for the emerging media; nevertheless, the Chinese government has unveiled ongoing policies to toughen its restrictions on social media (Willnat et al., 2015).

The sudden outbreak of COVID-19 in Wuhan, China, while unfortunate, is an opportunity and ideal context to re-examine media exposure and individual behaviour in the digitalised age. To date, some fruits have been borne in fighting against the pandemic in China, as a result of effective communication being an aspiration of the Chinese government and media outlets. A global survey by leading social research agency Blackbox in Singapore measured citizens’ sentiments regarding their nation’s COVID-19 crisis management efforts via the criterion of national political leadership, corporate leadership, community, and media. Of the 23 countries surveyed, China ranked first, by virtue of its solidarity between rank-and-file members and the authorities throughout this extraordinary situation (Gilchrest, 2020). Thus, it is pertinent to examine how positive media reporting motivates prosocial behaviour in this context. The findings of this study may benefit relevant government bodies and authorities in effectively managing crisis situations and calling for *en masse* actions to battle emergencies. This study also serves as a reminder to newsrooms to craft news with a constructive approach so as to eventually contribute to individual and societal well-being.

**Theoretical background and hypotheses**

Behaviour is the product of an organism and its environment (Hagger et al., 2020; Huang, 2016). Prosocial behaviour constitutes a broad category of behaviours that are identified by a large segment of society and/or a social community as generally helpful to others. McDougall (1908) defined prosocial behaviour as the result of ‘tender emotions’ created by parental instinct. Later,
the concept evolved to entail a broad range of biological, motivational, cognitive, and social processes (Caprara et al., 2012). Dovidio et al. (2017) then provided a multilevel framework for prosocial behaviour. Nevertheless, due to its multidimensionality and heterogeneity, it is hard to detail prosocial behaviour or prosociality in a more coherent gestalt. Generally, prosocial behaviour can be contextually defined as involving costs for the self and benefits for others, which refers to mutualism and altruism. Subsequently, it includes a helping attitude, volunteerism, cooperation, sharing behaviour, affective relationships, and normative behaviour. To examine prosocial behaviour during the pandemic, theoretical foundations intersect at the theories and concepts discussed in the following sections.

The General Learning Model (hereafter GLM) proposed by Buckley and Anderson (2006) is used to study the influence of media on behaviour, as well as the different routes through which this influence occurs. One of the main tenets of the GLM is that media products exert both short-term effects and long-term effects due to repeated exposure to the same or similar stimuli. Specifically, this model indicates two input variables: (1) personal variables related to attitudes, beliefs, goals, previous experiences, and emotional states; and (2) situational variables related to the environment, such as social situations, peer groups, jobs, media, and so forth.

The GLM is consistent with the ABC theory, which is employed to understand certain behaviours. The ABC theory illustrates that behaviour (B) is the product of personal attitudinal variables (A) and contextual factors (C). However, these models focus more on psychological variables and learning processes, thereby failing to accentuate the role of media. Some researchers suggest using synthetic models by incorporating variables from more than one broad model to examine different behaviours (Elaheebocus et al., 2018; Naslund et al., 2017). Ergo, in line with this perspective, this study amalgamated a personal variable (self-efficacy) and two situational variables (media attention, dependency) to examine prosocial behaviours. Media exposure can be an important predictor of behaviour-changing and action-taking. During the outbreak of a pandemic like COVID-19, there is an unprecedented high need for information and sense-making by individuals (Kaya, 2020; Ni et al., 2020). Prosocial messages from the media might thus affect people’s prosocial behaviour. As such, the role of media attention and media dependency on people’s prosocial behaviours needs further exploration. Self-efficacy was selected as a mediating construct because the extant literature has demonstrated it to be positively related to prosocial behaviour (Patrick et al., 2018). Therefore, this study designed a conceptual framework in line with the aforementioned theoretical assumptions (see Figure 1) and attempted to explore the relationships among the constructs, which are subsequently discussed.

**Constructive journalism**

Constructive journalism is an emerging concept that involves applying positive psychology techniques to news reporting in an effort to craft productive and engaging news coverage, while holding true to journalism’s core functions (McIntyre, 2015; McIntyre & Gyldensted, 2018). It is a solution-based approach where journalists employ multiple themes to understand problems, engage affected people and officials to discuss possible solutions, and eventually celebrate achievements in a bid to inspire others in a similar situation (Yanqiu & Matingwina, 2016). Some empirical studies have demonstrated that positive information and emotions can trigger corresponding positive effects among the general public. McIntyre (2015) found that those who read constructive news about homeless people, by evoking emotions and empathy, are more likely to report intentions to ‘like’ the story on Facebook, sign a petition to support the homeless, and donate money to charity.
to help them. Likewise, Baden et al. (2019) recently found that compared to negative and conflict-ridden news framing and representation, positive news coverage of solution-oriented reporting triggers audience’s emotion as well as their prosocial intention and behaviours.

Hitherto, during the pandemic, a majority of news coverage has centred on negative reporting like stigma, conspiracy, and anecdotes (Bagcchi, 2020; Reny & Barreto, 2020; Shahsavari et al., 2020). Few have put major focus into positive and prosocial messages. Thus, based on the concept of constructive journalism, we explored the extent of attention people pay to prosocial messages (media attention); the extent to which news reporting helps people (media dependency); the degree to which media exposure triggers perceived self-efficacy; and the likelihood of people taking prosocial actions (prosocial behaviour). Ultimately, the interplay between media attention, dependency, and self-efficacy is believed to produce media effects (intentions and behaviours) via the perception of constructive journalism.

**Media attention and prosocial behaviour**

Broadly, media attention refers to exposure to or use of certain media types, most commonly television, newspaper, the Internet, or social media. Slater et al. (2009) explained it as ‘people’s tendency to devote cognitive effort to particular types of media messages consciously’. Some information-processing models, like the elaboration likelihood model of persuasion, opined that both exposure and attention are necessary conditions for persuasive and learning effects (McGuire, 1989). Thus, media attention has increasingly been regarded as an indicator of message influence.

In behaviour studies, prior research has shown a positive relationship between media attention and behavioural change. Many disciplines, including paediatrics, psychology, and sociology, have weighed in on this notion using a variety of methods, such as experimental, correlative, longitudinal, and meta-analytic. It is observed, for example, that violent gameplay heightens the frequency of aggressive behaviour (Verheijen et al., 2018; Zhang et al., 2021). Another recent longitudinal study demonstrated that children’s exposure to video game violence is indirectly associated with lower levels of prosocial behaviour through the mediation of lower levels of benevolence (Coyne, Warburton, et al., 2018). Regarding prosocial behaviour, Coyne, Padilla-Walker, et al. (2018) indicated that exposure to prosocial media is related to higher levels of prosocial behaviour and empathic concern as well as lower levels of aggressive behaviour. Similarly, Delhove and Greitemeyer (2020) found that playing a violent video game increases the accessibility of antisocial thoughts and consequently decreases prosocial behaviour. Apparently, both violent or prosocial content and the amount of exposure play important roles in the outcome of behaviours. Overall, these studies indicate that different media exposure to different types of content can positively affect the adoption of certain actions.

Accordingly, a rich vein of research implies that high exposure to media and high frequency of Internet use give rise to online prosocial behaviour (Erreygers et al., 2018). Some latest articles indicate that exposure to online social messages increase individuals’ willingness to self-isolate during the COVID-19 pandemic (Heffner et al., 2021) while happy message appeals increase prosocial behaviour (Septianto & Paramita, 2021). Also, online participation, to some extent, extends offline participation. Wellman et al. (2001) found that heavy Internet use is associated with increased participation in volunteer organisations and politics. K.-T. Tai et al. (2020) stated that greater e-participation, operationalised using different forms of online expression and interaction, is associated with greater offline citizen participation. Admittedly, a handful of research has revealed a disconnect between online participation and offline actions. These diverse and conflicting findings could be attributed to the studies’ contexts, demographics, and other factors. Overall, it can be assumed that media attention influences prosocial behaviours to a certain degree.
Media dependency and prosocial behaviour

It should be noted that dependency on media and usage of media have been shown to be empirically distinct. They correlate positively but are explained by different sets of factors (Jung, 2017; Morton & Duck, 2000). Thus, media attention alone is insufficient to model the effects of media on prosocial behaviours; rather, media attention is treated as a predictor of later dependency. The media system dependency (MSD) theory constructs a framework to understand the complex relationships among people, media, and other social systems (Ball-Rokeach & DeFleur, 1976). The original tripartite audience-media-society is divided into macro (i.e. structural dependency relations between audiences, mass media, political systems, and other social institutions) and micro (i.e. an asymmetrical effect from individuals’ needs and goals being controlled by social and media institutions) levels. It further assumes that the impact of media messages on audience perceptions is a function of how dependent audiences are on mass media as sources of goal satisfaction. Morton and Duck (2000) also conceptualised media as society’s primary information systems that link individuals to social structures.

Empirical research abounds about how media dependency affects individuals’ behaviours. Ball-Rokeach et al. (1984) conducted quasi-experimental research to examine Americans’ political beliefs and behaviours, where media dependencies were employed as independent variables to predict both selective exposure to television content and its long-term effects. This study indicated that media exposure is a predictor of targeted attitudes and behaviours, but the observed effects are more intense when linked to message content. From there, scholars examined media use, dependency, behaviour, and attitude change in critical high-risk situations (Melki & Kozman, 2019; Zixue et al., 2018). Lowrey (2004) employed the MSD theory to examine dependencies on media after the September 11 terrorist attacks in America. Findings suggest that the degree of dependency is a significant predictor of attitude and behaviour. Z. Tai and Sun (2007) explored media dependencies in a changing media environment during the outbreak of SARS in China. They found that during that major public health crisis, people were involved in creating alternative information and the Internet was a particular empowering tool. Ho et al. (2015) also revealed that media dependency, traditional media attention, and interpersonal communication are positively associated with green-buying behaviour. Nonetheless, knowledge on the impacts of media attention and prosocial message dependency on prosocial behaviour in the context of crises remains incomplete. In this digitalised age, countless prosocial messages are disseminated by newspapers, television, and the Internet. State-of-the-art technology enables people to access more messages on, for example, volunteering behaviour, online monetary donations, allocations, public health messages from experts, user-generated online support signals, and petitions. Thus, this study generally summarised prosocial messages as those which fulfil the aforementioned aspects. In this sense, it is necessary to understand how media attention and media dependency on prosocial messages affect subsequent behaviours.

In line with the discussion on media attention and media dependency above, we posited that:

H1. The more media attention to prosocial messages, the greater the media dependency.

H2. The more media attention to prosocial messages, the more likely prosocial attitude and behaviour will reflect the domain portrayal of the crisis.

H3. The greater the media dependency, the more likely prosocial attitude and behaviour will reflect the domain portrayal of the crisis.
Self-efficacy and prosocial behaviour

Perceived self-efficacy refers to people’s beliefs about their capabilities to produce designated performance levels that influence events affecting their lives. Bandura (1997) specified three dimensions of self-efficacy: level, generality, and strength. Level refers to the degree to which people believe they can perform specific tasks. Strength is related to the amount of confidence in an individual’s capabilities. The strength of self-efficacy generally predicts performance, whereby individuals reporting stronger self-efficacy (more confident) are more likely to behave better in subsequent tests on related activities. Generality refers to the degree of specificity or the range of activities in which people judge themselves to be efficacious. Self-efficacy beliefs determine how people feel, think, behave, and motivate themselves. Therefore, it plays a vital role in self-regulation and self-assessment by altering actions directly as well as through its impact on cognitive, motivational, decisional, and affective determinants (Panadero et al., 2017).

The extant literature has scrutinised four major psychological processes, i.e. cognitive, motivational, affective, and selective, through which self-efficacy affect humans functioning. Although most previous scholarly works studied these processes, recent research has broadened and extended into the functional properties of perceived self-efficacy and its ramifications on one’s affective life and social well-being. Subsequently, findings from diverse lines of study suggest that a high level of self-efficacy in the social realm represents individuals’ confidence in performing prosocial acts, such as cooperativeness, helpfulness, and sharing, with a vested interest in each other’s welfare (Caprara et al., 2012; Patrick et al., 2018). In addition, perceived self-regulatory efficacy can promote prosociality while minimising moral disengagement. A survey of older adolescents found that perceived self-efficacy operates as a mediator of behaviour rather than a direct determinant of prosocial behaviour (Bandura et al., 2003). Thus, we posited that:

H4a. Media attention has a positive effect on self-efficacy.
H4b. Media dependency has a positive effect on self-efficacy.
H5. Self-efficacy mediates the relationship between media exposure (attention and dependency) and prosocial behaviour

In line with this discussion, we proposed our conceptual framework in Figure 1:

![Figure 1. Conceptual framework.](image-url)
Research methodology

Sample, ethical approval and recruitment procedure

This quantitative study collected data using computer-assisted online surveys administered in mainland China for two weeks in September 2020. Sample data was weighted by gender, age, level of education, and income. Table 1 presents the demographic profile of the participants of this study (N = 905).

Participants who gave consent to willingly participate in the survey would click the ‘Continue’ button and would then be directed to complete the self-administered questionnaire. The questionnaire consisted of five parts: (1) Demographics, which solicited participants’ age, gender, household income, and education level; (2) Media attention; (3) Media dependency; (4) Efficacy; and (5) Prosocial behaviour. The survey was presented in the Chinese language. The backward translation approach was used to translate the items from English to Chinese and vice versa, so as to ensure linguistic and conceptual equivalence. Discrepancies between the two versions were rectified, and the uniformity of item measures was ensured through consultations with bilingual researchers (Brislin, 1970). For the pre-test (N = 75), a call for participation was made through social media platforms like WeChat and Sina Weibo. The final data (N = 905) was from the official dataset of Wen Juanxing, a well-known survey platform in China. The benefits of using this official dataset are the reduction of sample homogeneity as well as the guarantee of quality responses, since Wen Juanxing has quality control measures to exclude invalid responses.

Table 1. Demographic profile (N = 905).

|       | Frequency | Percent | Valid percent | Cumulative percent |
|-------|-----------|---------|---------------|--------------------|
| Gender |           |         |               |                    |
| Male   | 409       | 45.219  | 45.193        | 45.219             |
| Female | 496       | 54.807  | 54.806        | 100                |
| Age    |           |         |               |                    |
| 18–29  | 445       | 49.171  | 49.171        | 49.171             |
| 30–49  | 405       | 44.751  | 44.751        | 93.923             |
| Beyond 50 | 55     | 6.077   | 6.077         | 100                |
| Edu    |           |         |               |                    |
| Junior | 223       | 24.641  | 24.641        | 24.641             |
| Undergraduate | 444 | 49.061  | 49.061       | 73.702             |
| Graduate | 117    | 12.928  | 12.928        | 86.63              |
| Others | 121       | 13.37   | 13.37         | 100                |
| Occupation |    |         |               |                    |
| Working | 235       | 25.967  | 25.967        | 25.967             |
| Self-employed | 59  | 6.519   | 6.519         | 32.486             |
| National service | 295 | 32.597  | 32.597        | 65.083             |
| Housewife | 16      | 1.768   | 1.768         | 66.851             |
| Student | 230       | 25.414  | 25.414        | 92.265             |
| Retirement | 11     | 1.215   | 1.215         | 93.481             |
| Unemployment | 8      | 0.884   | 0.884         | 94.365             |
| Others | 51        | 5.635   | 5.635         | 100                |
| Total  | 905       | 100     | 100           | 100                |
Measures
To measure the respondents’ prosocial behavioural intentions during the global COVID-19 pandemic, personal variables and situational variables were adapted from the GLM (Buckley & Anderson, 2006). Media attention and media dependency were determined as independent variables, self-efficacy was set as the mediator, and prosocial behaviour was fixed as the dependent variable.

Media attention. This study used a 7-point Likert-type scale (1 = no attention at all, 7 = very close attention) to ask respondents how much attention they pay to prosocial messages from three types of media, i.e. television, newspapers and the Internet. This study combined the product of the exposure and attention variables for each type of media to measure audience’s prosocial media attention.

Media dependency. Four items were adopted from Loges (1994) to reflect the four dimensions of informative goals, which are social understanding, self-understanding, interaction, and action-orientation. These items measured respondents’ reliance on media during the COVID-19 pandemic. Respondents answered their agreement with the statements on a 7-point Likert-type scale (1 = strongly disagree, 7 = strongly agree). The items solicited whether reading newspapers, watching television, or surfing the Internet: helps them find out about COVID-19; helps them observe how others deal with COVID-19; helps them figure out how they can react to COVID-19; and gives them ideas about how to help others during COVID-19.

Self-efficacy. To measure perceived self-efficacy, this study constructed four items on a 5-point Likert-type scale (1 = strongly disagree, 5 = strongly agree). The items included: (a) I have experience handling an emergency; (b) I can solve problems I meet (previous experience); (c) As long as measures are taken, COVID-19 can be effectively halted (belief); and (d) Although it is tough, I can still change my behaviour to prevent the disease around me (level).

Prosocial behaviour. Prosocial behavioural tendency was measured with a newly constructed instrument, the Prosocial Orientation Questionnaire (POQ). There are four subscales in the POQ: (a) Helping Behaviour–I would spend time and money helping those in need; (b) Cooperation and Sharing–Sharing something that belongs to me with someone else is a pleasure; (c) Affective Relationship–When a Chinese is in trouble during COVID-19, I feel very unhappy; and (d) Normative Behaviour–If necessary, I would volunteer in the frontline. The average of the four subscales’ scores is a measure of the general tendency to perform prosocial acts. Therefore, it is called general prosocial orientation.

Results
Data was analysed using SPSS ver25.0 and AMOS ver23.0. Specifically, this study employed structural equation modelling, proposed by J. C. Anderson and Gerbing (1988) to conduct data analysis. For the first step, we performed Confirmatory Factor Analysis (CFA) to certify our measurement model. Subsequently, a structural equation model (SEM) was constructed to examine the relationships among the constructs. Finally, in order to examine the multiple indices of model fit, we verified the goodness of fit of each model using the indicators of chi-square, goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI) and root-mean-square error of approximation (RMSEA).
Prior to the CFA, we conducted a pre-test of the sample (N = 75), where the measurement model was assessed for construct reliability and validity. Cronbach’s alpha was employed as an indicator of reliability. The Cronbach’s alpha values of the constructs were above the acceptable value of 0.6 (see Table 2), which indicated that the items and the questionnaire were reliable to achieve the aims of this study.

Subsequently, our CFA analysis (Table 3) showed that the measurement model had good fit with the data, since the CFI of 0.931, AGFI of 0.931, and NFI of 0.916 exceeded the critical value of 0.9 (Kline, 2015). Likewise, convergent validity was assessed through the Average Variance Extracted (AVE), which rendered results higher than the acceptable value of 0.5.

Furthermore, the discriminant validity test results, presented in Table 4, demonstrated that all the correlations between the constructs were not equal to one, indicating that the constructs had different validities. From the above analysis, it can be seen that the internal reliability, structural validity, and discriminant validity of the questionnaire met the requirements. Each item also loaded significantly on its respective construct, indicating that the measurement scales for each construct had high convergent validity. Thus, we proceeded to conduct the SEM analysis to examine the relationships among the constructs.

Using SEM, we tested the significance of the relationships and the variance among the multiple variables in our model (N = 905). This model had a high significance level as shown in Table 5, where the x2 was 347.5, the degree of freedom was 71, and the Normed Chi-square was 4.894. Moreover, the statistical analysis showed a good model fit according to fit standards; all the values were within their respective reasonable range. In particular, the goodness of fit index (GFI) of 0.944, the non-normed fit Index (NNFI) of 0.912, and the comparative fix index (CFI) of 0.931 were above the acceptable value of 0.9. In addition, the RMSEA of 0.066 and the standardised root mean residual (SRMR) of 0.058 met the threshold value of less than 0.08 (Piccolo & Colquitt, 2006).

For H1, which stipulates the relationship between media attention and media dependency (see Table 6), the correlation value was 0.60 with a p-value less than 0.001. This demonstrates that H1 was supported, meaning that media attention is a predictor of later dependency.

From the structural equation model results in Figure 2 and the model significance test results (see Table 7), it was observed that when self-efficacy and prosocial behaviour were used as dependent variables, the R² values of the model were 0.282 and 0.492, respectively, showing that the model had better explanatory power. The standardised estimate between media dependency and prosocial behaviour supported H3, as the value of 0.274 was significant and indicative that media dependency enhances prosocial behaviour. Next, the standardised estimate between media attention and prosocial behaviour was 0.199 with a p-value less than 0.001, implying that

| Construct         | Abbr | Cronbach’s alpha | St. Cronbach’s alpha | Items |
|-------------------|------|------------------|----------------------|-------|
| Media attention   | MedA | .601             | .591                 | 3     |
| Media dependency  | MedD | .894             | .897                 | 4     |
| Self-efficacy     | SelE | .701             | .698                 | 3     |
| Prosocial behaviour | POQ  | .765             | .789                 | 4     |

POQ: Prosocial Orientation Questionnaire.
media attention has a positive impact on prosocial behaviour; thus, H2 was supported. Further, the standardised estimate between media attention and self-efficacy was positive and significant at 0.203, indicating that media attention positively affects self-efficacy, thereby supporting H4a. H4b was also supported, as the standardised estimate between media dependency and self-efficacy was 0.401 with a significant p-value, corroborating that media dependency positively affects self-efficacy.

Finally, in examining the mediating effect of self-efficacy between media exposure and prosocial behaviour, Table 8 shows the results of the bootstrapping procedure testing the total, indirect, and direct effects of self-efficacy on the relationship between media attention (MedA), media dependency (MedD), and prosocial behaviour (POQ). Since the z-values were above the
acceptable values, it can be seen that when media attention was the independent variable, the mediation effect of self-efficacy on prosocial behaviour displayed a partial mediation effect; when media dependency was the independent variable, the mediation effect of self-efficacy on prosocial behaviour was supported with a full mediation effect. Therefore, H5 was supported.

**Discussion**

One year into the outbreak of COVID-19, this calamitous disease still poses threats to humankind. Not only is COVID-19 a medical and biological problem, it is a social problem penetrating every field and layer of society. At a time when the world is rife with conflict and negativity, fear, discrimination, and polarisation have been perpetuated by the media rather than useful messages and information. The bombardment of COVID-19 news, especially with misinformation and conspiracy, has exacerbated the cracks in society in the form of distrust, tribalism, and self-centredness, which has tremendous negative effects on social and individual wellbeing. Taking a different approach, this study gravitated towards positive news influenced by constructive journalism. In
doing so, this study hopes to iterate the beneficial effects of news media during such crises. Upon analysing 905 survey responses, the relationships among media attention, media dependence, self-efficacy, and prosocial behaviour were revealed. That is, media attention and media dependence increase individuals’ prosocial behaviour in times of crisis, with self-efficacy mediating these relationships. The practical implications of these findings can be generalised at micro, meso, and macro levels. On a micro level, this study rekindles mutualism and altruism to improve social well-being during a global crisis. On a meso level, it has established the antecedents of prosocial behaviour and proposed a synthetic model which provides practical insights for newsrooms and journalists to evaluate their state of journalism, abide by journalism standards (Weaver & Willnat, 2020), and fine-tune their journalistic practices to be constructive in critical situations. On a macro level, this study elucidates how prosocial messages motivate people’s ‘prosociality’, which can be a leverage point for relevant government bodies to mitigate current and future crises.
Conclusion

Through the perspective of constructive journalism, this study set out to examine media attention, media dependency, and prosocial behaviour among the Chinese audience in the face of the COVID-19 epidemic. Contrasting the significant attention to negativity in media, this research distinctively explored how media exposure to positive news affects individual’s prosocial behaviour. The results support the proposed hypotheses and the structural model that media attention and dependency act through self-efficacy to unfurl prosocial behaviour during the worldwide pandemic. This is consistent with previous media research findings that attention to and dependency on media can motivate the adoption of desirable behaviours amid crises (C. A. Anderson & Dill, 2000; Lowrey, 2004). Concurrently, a high degree of media attention and media dependency could trigger increased perceived self-efficacy, which in turn, partially mediates the link between media attention and prosocial behaviour but fully mediates the link between media dependency and prosocial behaviour. Interestingly, this research established that media attention is a predictor of later media dependency. These results add new knowledge to the understanding of the evolving tripartite media attention-dependency-prosociality relationship.

This study, however, has some limitations. First, this study failed to separate and categorise different prosocial messages, thus neglecting the nuances of messages across the three types of media (newspaper, television, and the Internet). This may sabotage the validity of the research findings. Future research should separately examine different mediums with multilevel prosocial messages based on the mediums’ unique characteristics, which would capture a more comprehensive picture of the concepts under study. Second, although it investigated prosocial behaviour in China, a high-context culture with salient collectivism, it is imperative to explore this situation in low-context countries classified under individualism. In addition, comparative analysis should be conducted between high-context and low-context cultures. Also, this study employed the short versions of the POQ and media attention scale, which may have impacted the results of the factor analysis. Future studies should use more comprehensive scales to conduct similar research. More importantly,
future studies should analyse prosocial coverage on traditional media and social media via a content analysis approach. This may offer more detailed and specific segments for relevant bodies to adjust their strategies to achieve different mitigation goals.

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